

Hepatitis C continuum of care outcomes among South Central First Nations communities in Saskatchewan, Canada, 2015-2019

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Background

- In Canada, First Nations communities have historically faced disproportionately high rates of Hepatitis C (HCV). In 2019, rates of HCV diagnoses for First Nations communities in SK were 5 times the national rate.
- Advances in Direct Acting Agents (DAA) HCV treatment has led to the opportunity to cure infections and has introduced the possibility of HCV elimination.
- As of 2015, Status First Nations people in Canada with severe HCV disease were covered for select DAA HCV treatments.
- As of April 2018, Status First Nations people in Canada are covered for HCV treatment with no restrictions based on fibrosis level.

Study Objective:

- To assess the HCV continuum of care from diagnosis to cure for South Central First Nations communities in Saskatchewan (SK).
- To identify improvements to more effectively and efficiently support clients through the HCV continuum of care.

Methodology

- HCV cases newly diagnosed and previously reported in another province who resided in a South Central First Nation community at the time of diagnosis and reported to First Nations and Inuit Health Branch Saskatchewan region (FNIHB-SK), between January 1, 2015 and June 30, 2019 were included in the study.

Methodology cont'd

- Cases were identified through Panorama, the provincial public health surveillance system.
- Data on laboratory results (HCV antigen, viral load, and genotype) and HCV prescription fills were extracted from the provincial electronic Health Records system in July of 2019.
- Continuum of care was assessed based on the proportion of HCV cases that:
 1. Received a HCV RNA test;
 2. Received a HCV genotype test;
 3. Initiated treatment (i.e. filled prescription for DAA); and
 4. Were cured (i.e. achieved an undetectable viral load 12 weeks after treatment completion)
- Active HCV infection was defined as having a detectable HCV RNA result or a reactive HCV Antigen. A cleared infection was defined as an undetectable HCV RNA result.

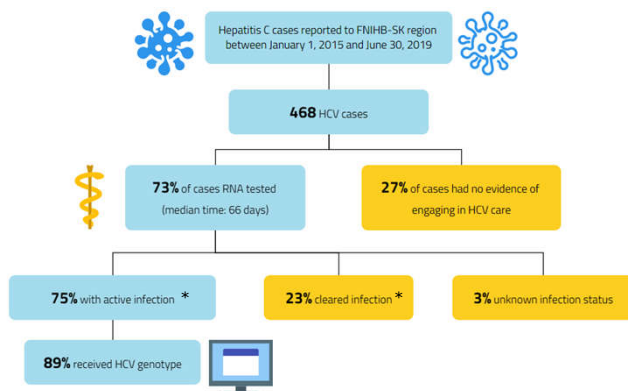


Results

- Total of 468 HCV cases were included in the study, of which 60% were males and 53% and 33% were between the ages of 20-39 years old and 40-55 years of age, respectively.
- 73% (n=342) of cases had received an RNA test at some point during the study period. Subanalysis including only newly diagnosed HCV cases between 2015-2018 (n=379) to allow for 6 month follow-up, showed that 75% had completed HCV RNA testing.

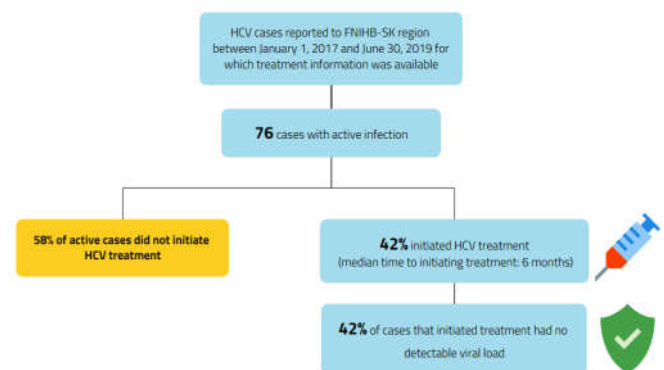
- Based on the last available HCV RNA test for those that had an RNA test, the proportion that had cleared HCV infection, due to either treatment or a spontaneous clearance, increased from 23% (at time of diagnosis) to 46% (at most recent RNA result).
- 7% of cases with at least two RNA tests (n=213) had evidence of HCV reinfection.
- Median time from date of diagnosis to treatment initiation (based on date the prescription was filled) was 192 days (~6 months).

Fig. 1. HCV Continuum of care from diagnosis to genotyping for South Central First Nations Communities, Jan 2015-Jun 2019



*Represents infection status at earliest RNA test following diagnosis

Fig. 2. HCV Continuum of care from treatment to cure for South Central First Nations Communities, Jan 2017-June 2019



Conclusion

- Approximately three-quarters of HCV cases had subsequent HCV RNA tests, a proxy for linkage to care, highlighting the incredible work by communities and physicians.
- Nevertheless, approximately one-quarter of cases have no evidence of engaging in HCV care, which highlights a significant gap.
- While a lower proportion of HCV cases initiated treatment and were cured as of July 2019, this is likely an underestimate due to the recency of the diagnosis at the time of the review.
- The large proportion of cases who completed genotype (which at the time of the study was required to select and initiate treatment) is a promising finding.
- A significant proportion (46%) of individuals had cleared their HCV infection based on the last available RNA result. These clients would be at risk of reinfection and may benefit from preventative supports.

Implications

- Changes to **reflexive HCV RNA testing in Saskatchewan** (completing an HCV viral load at the time of initial diagnosis) **would** allow for cases with active infection to be identified promptly, prioritized by both public health and the testing physician, and **reduce the time from diagnosis to cure**.
- This study highlights the risk of re-infection for HCV and the **importance** of having a **provincial process to support the role of public health in managing and reporting re-infections**.

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