

# An On-Site Nurse-Led Protocol-Driven Model of Care Improves Access to HCV Treatment for Transiently Incarcerated Persons in a Provincial Correctional Facility in Saskatchewan, Canada

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## BACKGROUND

The province of Saskatchewan is located in the Canadian Prairies and faces a unique hepatitis C (HCV) epidemic characterized by disproportionate numbers of persons of Indigenous heritage, persons under the age of 45, and women. The epidemic is driven by high rates of injection drug use, and geographically disparate access to harm reduction services and treatment expertise in both addictions medicine and viral hepatitis.

The Infectious Diseases Clinic (ID Clinic) at Regina General Hospital is a tertiary-level clinic that provides care for the majority of persons with viral hepatitis in southern Saskatchewan, a catchment area of ~400,000 persons. The clinic has expertise in care delivery to vulnerable and marginalized populations including persons who inject drugs, persons who are incarcerated, and persons receiving opioid agonist therapy.

Team members from the ID Clinic have been providing services for HIV- and HCV-positive persons at Regina Provincial Correctional Center (RPCC) for nearly 5 years. RPCC is a men's facility which houses anywhere from 650 to 800 individuals at any time. Length of stays vary widely and range from less than a day to as long as 2 years less a day. To expand access to HCV treatment services for clients at RPCC, we trialed an iterative model of care centered around a protocol-driven on-site nurse-led approach to improve all steps of the HCV cascade.

## METHODS

We reviewed all persons treated with direct-acting anti-viral therapy for HCV at RPCC beginning with our first on-site clinic in March 2015 through the end of February 2019 via retrospective analysis (n=73). Baseline demographic and clinical data is presented, as well as total numbers of persons who received therapy, and treatment outcomes including persons lost-to-follow-up (LTFU) and SVR12 data as available.

## DEMOGRAPHICS

	Total (n=73)
<b>Gender</b>	
Male	73 (100%)
Female	0 (0%)
<b>Self-Declared Ethnicity</b>	
Indigenous/Métis	51 (69.8%)
Caucasian	18 (24.7%)
Other/Unknown	4 (5.5%)
<b>Age (Years)</b>	
19-25	7 (9.6%)
26-35	24 (32.9%)
36-45	32 (43.8%)
46-55	7 (9.6%)
55+	3 (4.1%)

## MODEL OF CARE



Figure 1: Iterative model of care schematic for HCV care provision at RPCC.

We instituted a multi-step process to address gaps in the HCV cascade of care at RPCC:

**Opt-In Blood-Borne Infection Testing:** Standardized questionnaire provided upon intake. If individuals self-declare as HCV positive, they are offered immediate referral, otherwise can request standard blood-borne infection testing facilitated by referral to primary care provider at RPCC who provides pre-test counselling and review as required.

**Expedited Pre-Treatment Review:** Referrals are expedited through pre-treatment review with any required investigations completed prior to on-site clinical review by the RN / NP.

**On-Site RN / NP Review:** An RN/NP team attend on-site clinics at RPCC twice monthly to review patients for treatment and follow-up. HCV treatment may be initiated for non-complicated persons via protocol-driven order sets. If needed, review occurs with the supervising physician prior to treatment initiation. Open lines of communication with RPCC administrators allows treatment planning around planned court, hearing, and release dates for clients. Virtually all HCV therapy is completed prior to release from the facility. We facilitated free same-day access to HCV therapy for all persons incarcerated in provincial facilities in collaboration with the Saskatchewan Ministry of Health Drug Plan.

## CLINICAL CHARACTERISTICS

	Total (n=73)
<b>Genotype</b>	
1a	41 (56.2%)
1b	2 (2.7%)
2	2 (2.7%)
3	28 (38.4%)
<b>Baseline Fibrosis (Fibroscan)</b>	
F0	5 (6.8%)
F1	24 (32.9%)
F2	10 (13.7%)
F3	14 (19.2%)
F4	14 (19.2%)
Not Done	6 (8.2%)
<b>Baseline Viral Load (IU/mL)</b>	
< 10,000	2 (2.7%)
10,001 – 100,000	14 (19.2%)
100,001 – 1,000,000	29 (39.7%)
1,000,001 – 6,000,000	22 (30.2%)
> 6,000,000	6 (8.2%)
<b>HIV Co-Infection</b>	
Yes	16 (21.9%)
No	57 (78.1%)

## EFFECTIVENESS

### TREATMENT NUMBERS BY YEAR

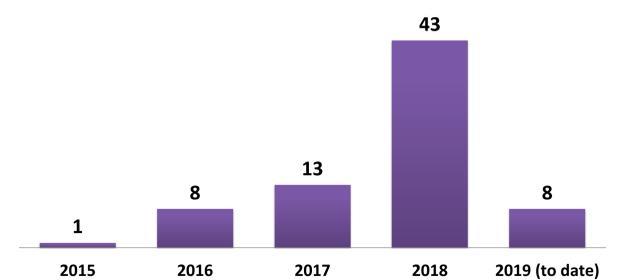
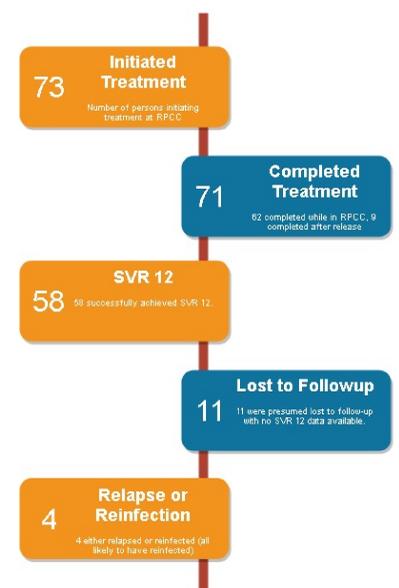


Figure 2: The number of persons initiating HCV treatment at RPCC increased from 2015 to 2018 as a direct result of iterative changes implemented to improve care. 2019 figures are as of February 28.

### PATIENT DISPOSITION



## CONCLUSIONS

Iterative improvements in the processes of HCV care centered around a protocol-driven RN/NP on-site care model in a provincial correctional facility facilitated a significant increase in the number of persons initiating treatment, nearly all of whom complete treatment. Keys to success include collaboration with officials at RPCC and the Ministry of Health Drug Plan, and increasing the frequency of on-site review by RN/NP led teams to facilitate treatment. Like other correctional settings, lost-to-follow-up rates are high in persons who are released prior to SVR 12. Further work including advocacy for opt-out blood-borne infection testing and next-day treatment starts are planned. A similar approach can be implemented in other correctional settings worldwide.

## ACKNOWLEDGMENTS

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