

Correlates of HCV Reinfection Among Active Drug Users

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Background

To achieve HCV elimination by 2030, strategies will be required to address all priority populations, including active drug users. Some providers are still reluctant to initiate treatment due to the perceived risk of recurrent viremia after successful treatment. As we treat patients at higher risk of reinfection, it will be important to document its rate and to identify factors associated with this outcome.

Methods

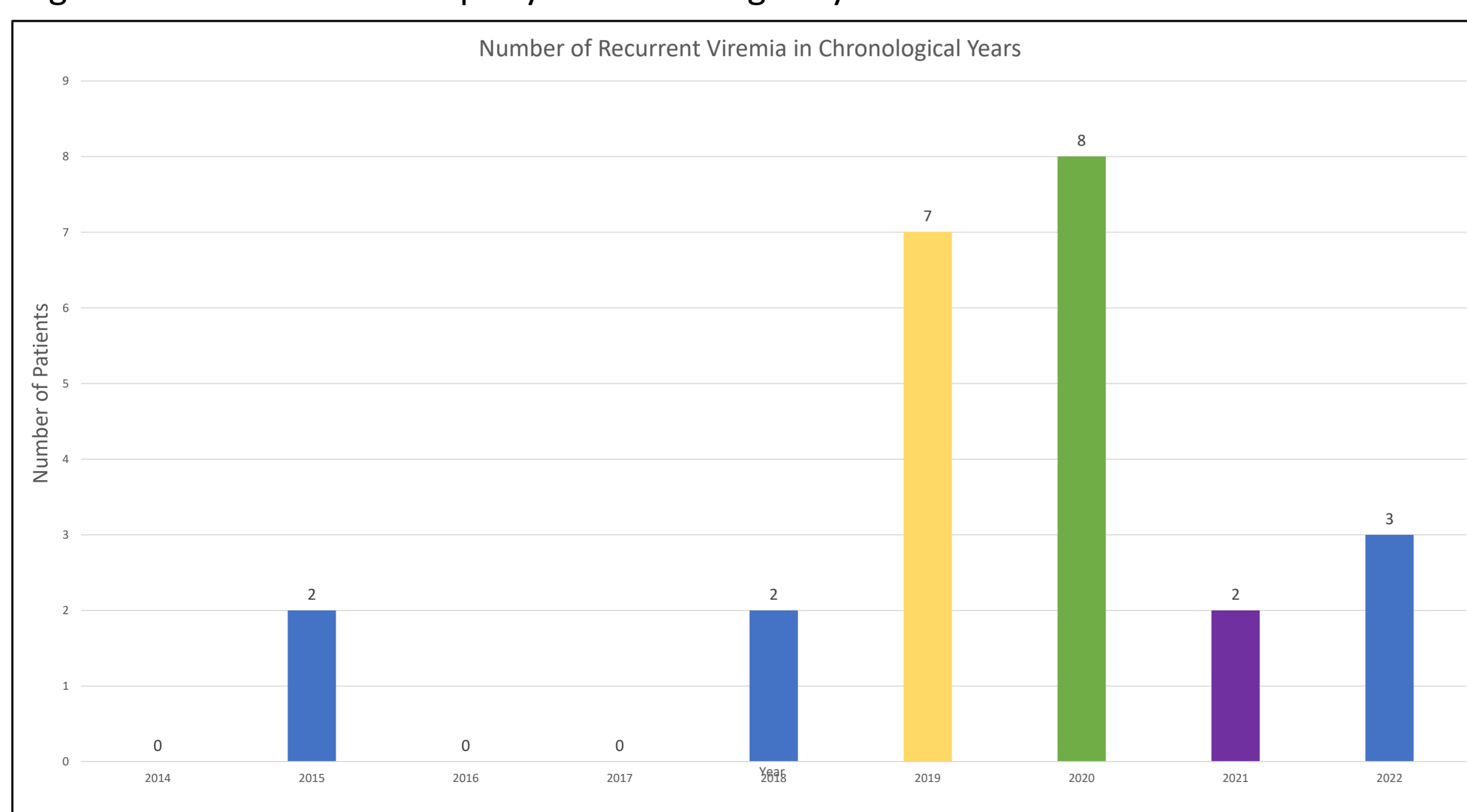
We have reviewed the database of the Vancouver Infectious Diseases Centre from 2014-2022, among patients receiving HCV therapy within the context of a comprehensive, multidisciplinary model of care, and identified all the cases of HCV reinfection that we have documented among active drug users. We have compared key demographic characteristics among those with and without reinfection, with an emphasis on those that, by literature review, have been associated with a higher incidence of HCV reinfection such as: active opiate/fentanyl use; housing status; engagement in care (defined as active prescriptions over the month preceding the reinfection event).

Results

Table 1. Demographics of Re-infect cohort

Demographic	Total reinfected patients (n= 24)
Male (n, %)	(21, 88.5%)
Age (median, range)	(48, 32-81)
Unstable Housing Status (n, %)	(14, 58.3%)
Ethnicity	
Indigenous (n, %)	(4, 20.8%)
Caucasian (n, %)	(20, 87.5%)
Engagement in Care	(19, 83.3%)
Active Opiate/fentanyl use	(23, 95.8%)

Figure 1. Reinfection cases per year chronologically



Results continued

Among 393 patients with active drug use successfully treated for HCV infection at our centre over the period of intervention, we have identified 24 cases of reinfection, accounting for 6.1% of the cohort population. Characteristics of those in whom reinfection was documented include: median age 48(range 32-81); male 21(88.5%); Caucasian 20 (87.5%); active opiate/fentanyl use 23(95.8%); unstable housing status 14(58.3%); and disengagement from care 5 (16.7%). Figure 1 shows the chronological order of re-infect cases per year. It is important to note that 15/24 reinfection cases occurred during the COVID pandemic, associated with evidence of increased and uncontrolled transmission of not only HCV but also HIV infections within the PWID population within the inner city of Vancouver. Reinfection rates overall were 4.76/100 person-years in the entire cohort, and 2.2/100 person-years excluding cases in the COVID era.

Conclusion

At our centre, even among active drug users with higher risk behaviors, reinfection rates remain modest despite a significant increase associated with the COVID pandemic. Compared to our overall cohort population, reinfected individuals were more often male, Caucasian, active fentanyl users and less stably housed. As public health restrictions are lifted and more options for care and services are available to inner city populations, it is expected that HCV transmission events (and reinfection events) will decrease over time, back to pre-COVID baseline levels in our community.

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Disclosures

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