

The Hepatitis C Cascade of Care in a Women-Centered HIV Clinic in Canada

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**BC WOMEN'S
HOSPITAL+
HEALTH CENTRE**

An agency of the Provincial Health Services Authority



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Disclosures

- None



HCV in British Columbia and Canada

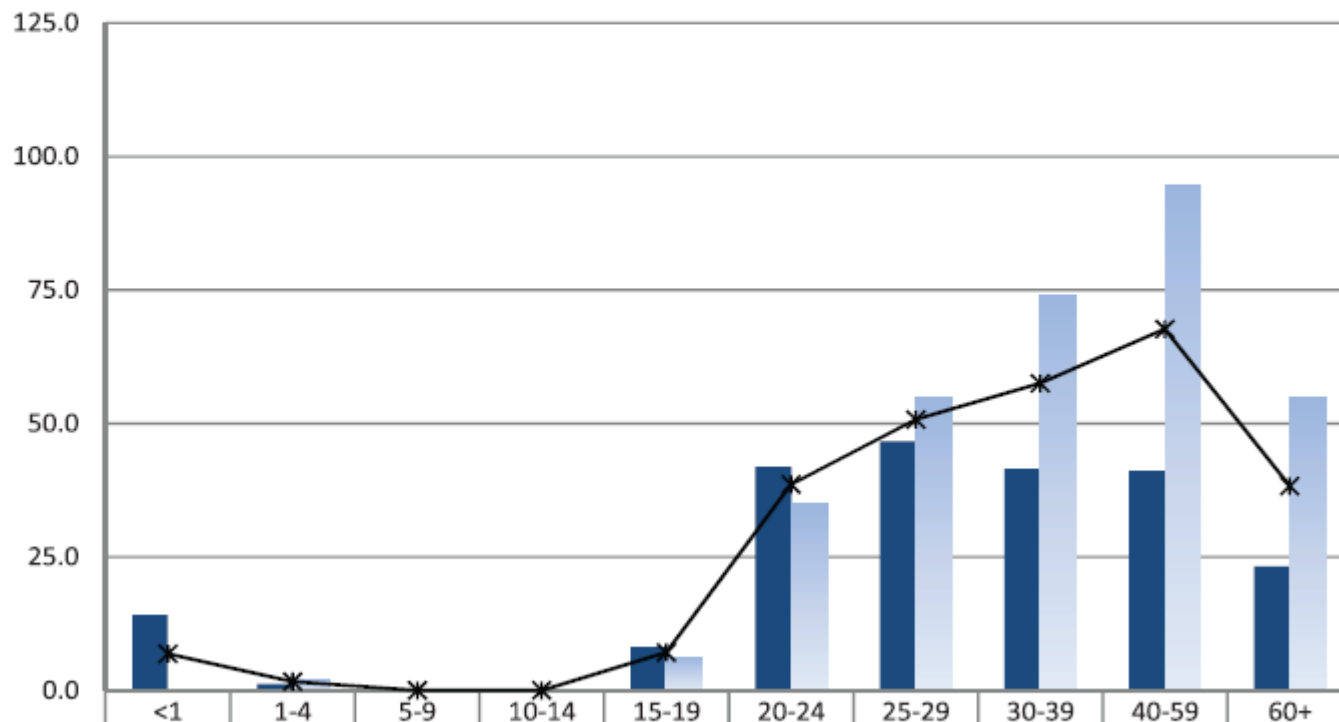


- **220,697 – 245,987** (0.6-0.7%) Canadians have chronic HCV infection³
- Incidence **29.6 cases**/100,000 in Canada
- Incidence **42.9 cases**/100,000 in British Columbia⁴
- Treatment in Canada is provided through the Provinces
- BC Pharmacare will currently cover treatment in individuals with evidence of \geq F2 fibrosis⁵

³Trubinokov M. et al. Canada Communicable Disease Report 2014, ⁴BCCDC 2014 Annual Report, ⁵www.pacifichepc.org/hepctip/pharmacare-covered/

15.3 Hepatitis C Rates by Age Group and Sex, 2014

Rate per
100,000
population



 Hepatitis C Rate - Female	14.2	1.2	0.0	0.0	8.2	41.9	46.7	41.5	41.2	23.2
 Hepatitis C Rate - Male	0.0	2.2	0.0	0.0	6.2	35.0	54.8	73.8	94.7	54.9
 Hepatitis C Rate	6.9	1.7	0.0	0.0	7.1	38.6	50.7	57.5	67.7	38.3

HCV in Mono-infected Women



- **1/3** of chronic HCV infections⁶
- In BC **35%** of new cases reported being in women⁴
- Mono-infected women → higher rate of spontaneous HCV clearance and slower rates of progression to liver fibrosis and death compared to men^{7,8,9}
- **5.8%** risk of HCV transmission from a mono-infected mother to child¹⁰
- Women may be less likely to receive treatment for chronic HCV infection¹¹

HIV/HCV Coinfection



- **15 - 30%** of HIV positive individuals are co-infected with HCV^{12,13}
- Studies of the new direct acting antivirals (DAAs) for HCV have found similar sustained virologic response (SVR) rates in mono-infected and co-infected individuals¹⁴

Data in Co-infected Women



- HIV/HCV co-infected women have a **greater risk of progression to liver fibrosis and death compared to men**¹⁵
- Risk of vertical transmission of HCV is **10.8%** in co-infected women¹⁰
- Data on HCV treatment in co-infected women is lacking

¹⁰Benova CID 2014 , ¹⁵Rollet-Kurhajec K.C. PLoS ONE 2015

Oak Tree Clinic



Women and Family-centered Care

- HIV+ women
- HIV+ and HIV-exposed children
- HIV+ partners
- Pregnancy and pre-conception counseling
- Research, advocacy and education

Interdisciplinary Team:

- Adult and Pediatric ID Specialists
- Obstetrics and Gynecology Specialists
- Psychiatrists
- Nurses and Nurse Practitioner
- Addictions and Trauma Counselor
- Dietician-infant formula program
- Pharmacists
- Social and Outreach Workers/nurse
- Peer support

Since 1994:

- > 5500 patients
- 570 pregnancies-NO transmission for women engaged in our care+ on HAART >4 weeks since 1997
- 81 HIV+ children
- 480 HIV exposed children
- >600 patients engaged in care
- 2300 annual patient visits

Objective



Given the renewed interest around **HCV treatment** with the advent of direct acting antivirals, we proposed to undertake a **descriptive analysis** of our patient population in order to assess the **areas to focus** in order to **support our patients** through all steps of the HCV treatment **cascade of care**

Methods



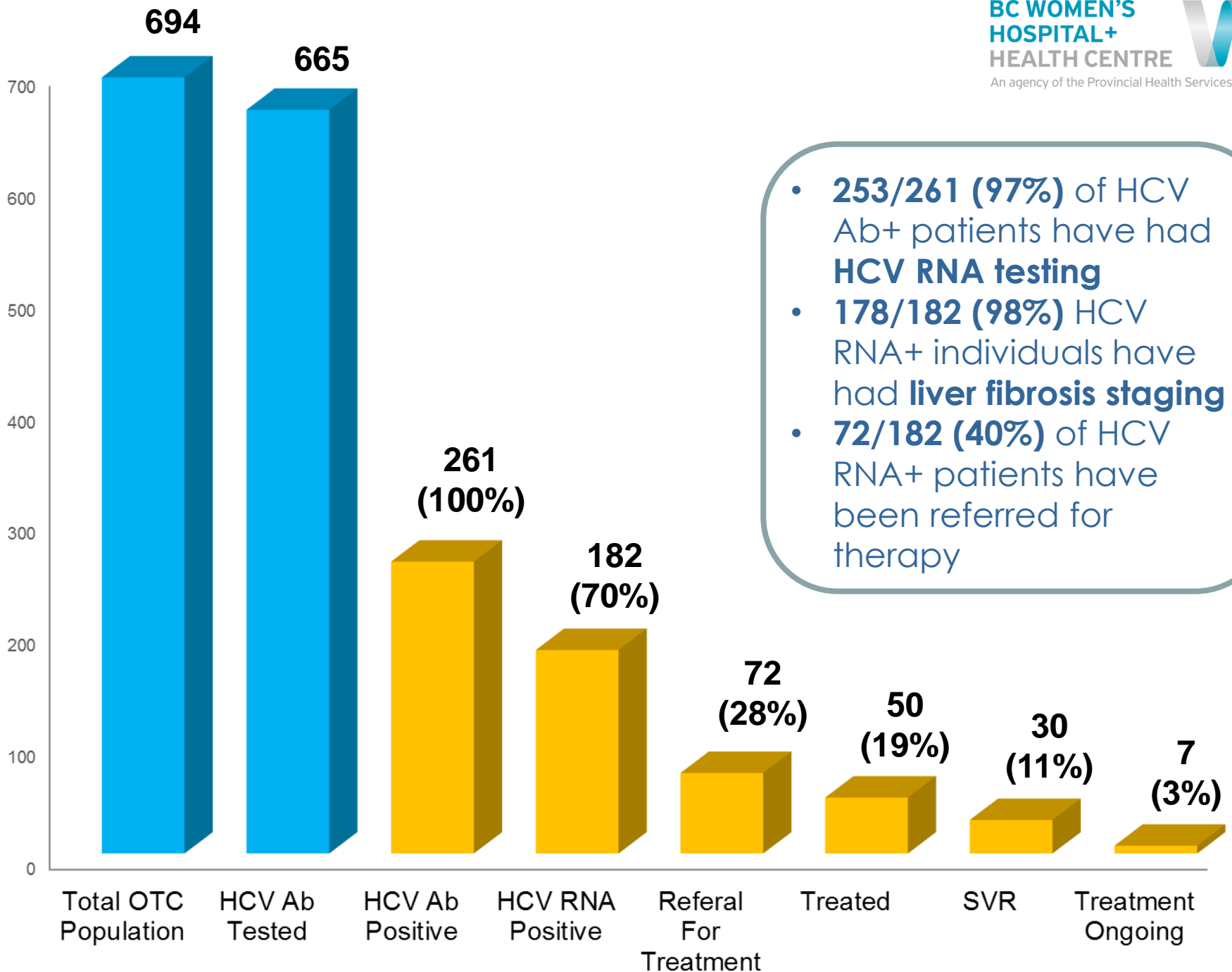
- As part of a Quality Improvement Assessment we undertook a **cross-sectional analysis** of our clinic population
- All **HIV+ active Oak Tree Clinic patients'** records were queried
- Data was extracted from EMR and paper charts on **demographic variables** including age, sex, ethnicity, and drug and alcohol use
- **HIV related information** including CD4 counts, viral loads and cART regimens was obtained
- **HCV related data** including HCV antibody and RNA status, HCV genotype, liver fibrosis staging and HCV treatment history were obtained

Table 1a: Oak Tree Clinic Population Demographics

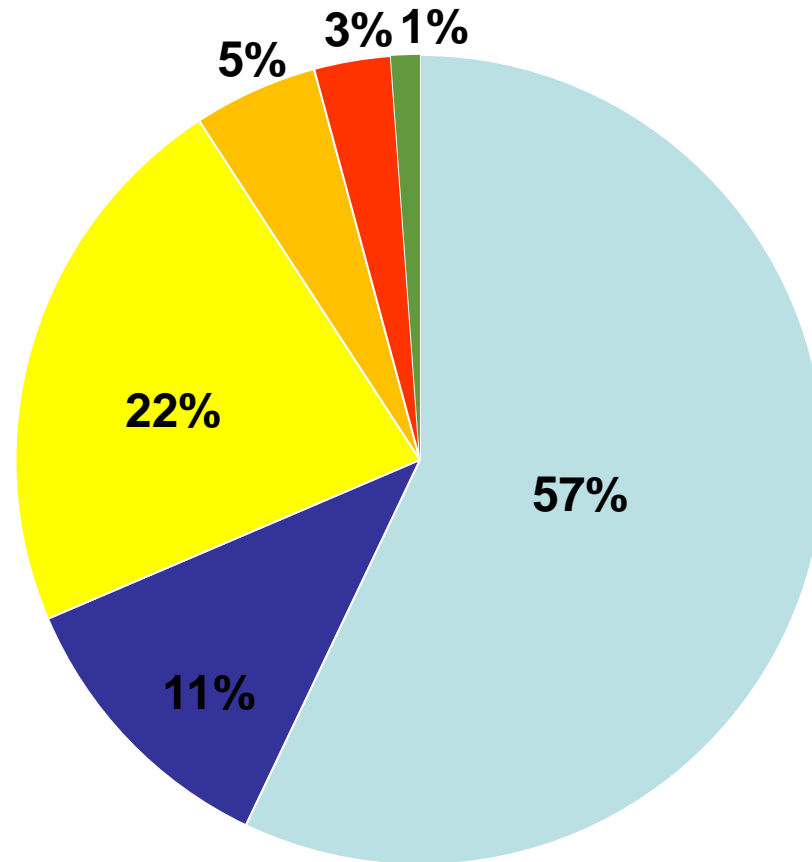
Characteristics	OTC Population (n=694)
Mean Age – yr (IQR)	42 (36-50)
Female Sex – no. (%)	565 (81%)
Median CD4 count – cells/ μ L (IQR)	557 (350-720)
Undetectable HIV viral load – no. (%)	526 (76%)

Table 1b: Oak Tree Clinic Population Demographics

Characteristics – n (%)	OTC Population (n=229)
Ethnicity	
Indigenous	64 (28%)
Caucasian	93 (41%)
African/Caribbean/Black	38 (17%)
Asian	17 (7%)
Other/missing	17 (7%)
Active IDU	85 (38%)
Lifetime IDU	129 (56%)
Current Alcohol Use	117 (51%)

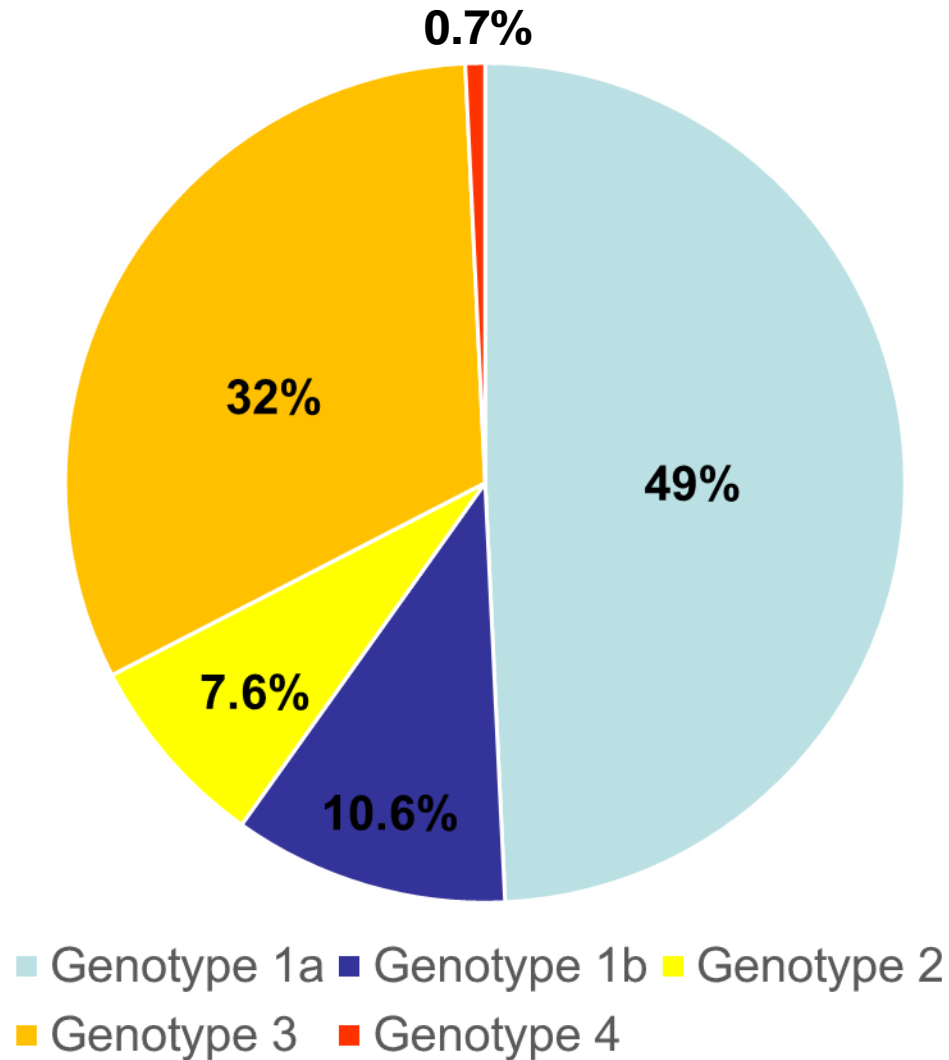


HCV RNA Status n=261



- RNA Positive
- Spontaneous Clearance
- Unknown RNA Status
- Treated with SVR
- Unknown Method of Clearance
- Undetectable on Treatment

HCV Genotypes n=132

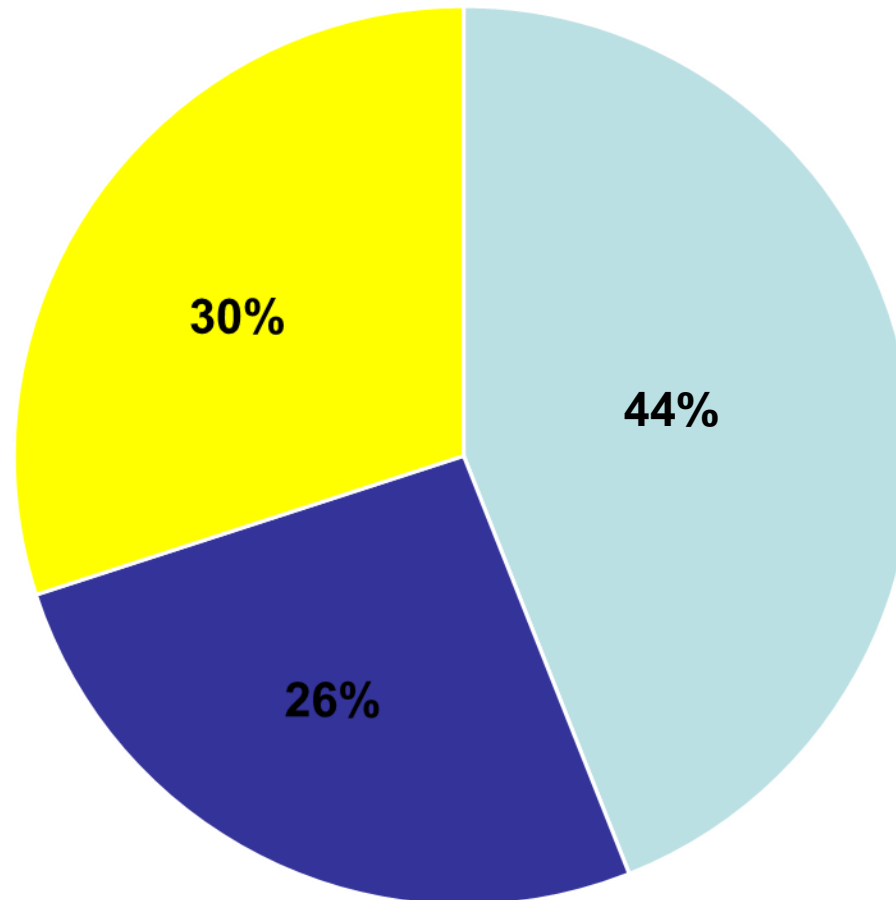


Liver Fibrosis Staging



- **97%** of HCV RNA positive patients had **liver fibrosis staging** by aspartate aminotransferase to platelet ratio index (APRI) or Fibrosis-4 (Fib4)
- Of currently HCV RNA+ patients, **77/149 (52%)** had APRI or Fib4 score corresponding to **≥F2 fibrosis**
- Based on **local guidelines** requiring **≥F2 fibrosis** and HIV VL <40 copies/mL, **39% of our cohort are candidates for government funded HCV therapy**

Treatment Received n=50



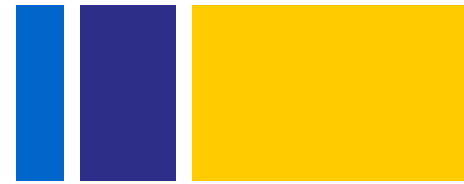
■ Pegylated IFN + Riba ■ DAA Regimen (+/- Peg IFN) ■ Unknown

Summary



- Our clinic population is **predominantly female** (81%) and **relatively young** (mean 42 years)
- Most patients (**96%**) have been **screened for HCV** antibody with subsequent RNA testing and fibrosis staging
- Despite the young age of our cohort, **52% had evidence of significant fibrosis (\geq F2)**
- Currently, **39%** of our patients are **candidates for government funded HCV treatment**

Future Directions



- Explore **barriers to treatment** in our population
 - Funding** for treatment
 - Patient **readiness** and loss to follow-up
 - Competing **health priorities**
- **Expand HCV therapy** to co-infected patients within the HIV clinic care model
- Expand treatment to **HCV mono-infected** women
 - Treating women between pregnancies to **eliminate transmission rates**

Acknowledgements



Zahra Pakzad*

Dr. Melanie Murray

Dr. Mary Kestler

Alicia Hornsberger

Karen Friesen

Meaghan Thumath

Evelyn Maan

Dr. Deborah Money

Dr. Neora Pick

All of the Oak Tree Clinic Patients and Families

Thank You



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