



# **HIV INFECTION RISK IN HOMELESS PARTICIPANTS IN COMMUNITY PORTABLE CLINICS**

## **A MULTIDISCIPLINARY APPROACH TO ENGAGE IN CARE HIV-INFECTED INDIVIDUALS WITH UNSTABLE HOUSING**

The North American Housing and HIV/AIDS  
Research Summit VIII: Tackling the Social Drivers of HIV  
September 14-16, 2015, Washington DC

**SYUNÉ HAKOBYAN MD, MHSc**

**VANCOUVER ID RESEARCH AND CARE CENTRE SOCIETY**



# BACKGROUND:

- The Downtown East Side (DTES) of Vancouver (population 18,000, with 12,000 active/recent illicit drug users - IDUs) is well known for its high prevalence of HIV and HCV infections, as well as a number of other social challenges, including high rates of poverty, prostitution, homelessness, and crime.
- Despite widespread availability of services to treat PLWHIV, many individuals remain undiagnosed or unengaged in care.





# METHODS:

- The model of the community portable clinic (CPC) was developed by VIDC team
- Implemented on the DTES
- HIV and HCV Point-of-care testing were offered
- Participants were invited to complete a survey
- A \$10 incentive was offered
- A subset of study participants identifying themselves as homeless were included in this analysis

## FIRST UNITED CHURCH



## THE SALVATION ARMY



## THE CARNEGIE HALL



## UNION GOSPEL MISSION



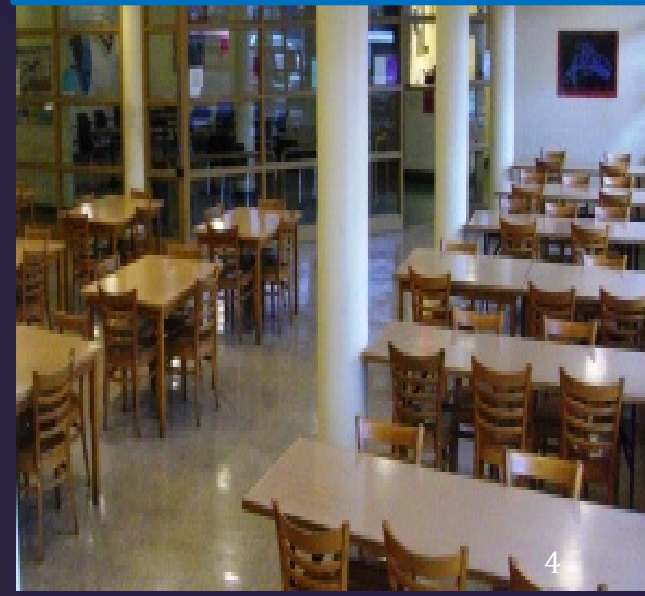
## THE DUGOUT



## INSITE



## EVELLYNE SALLER CENTRE



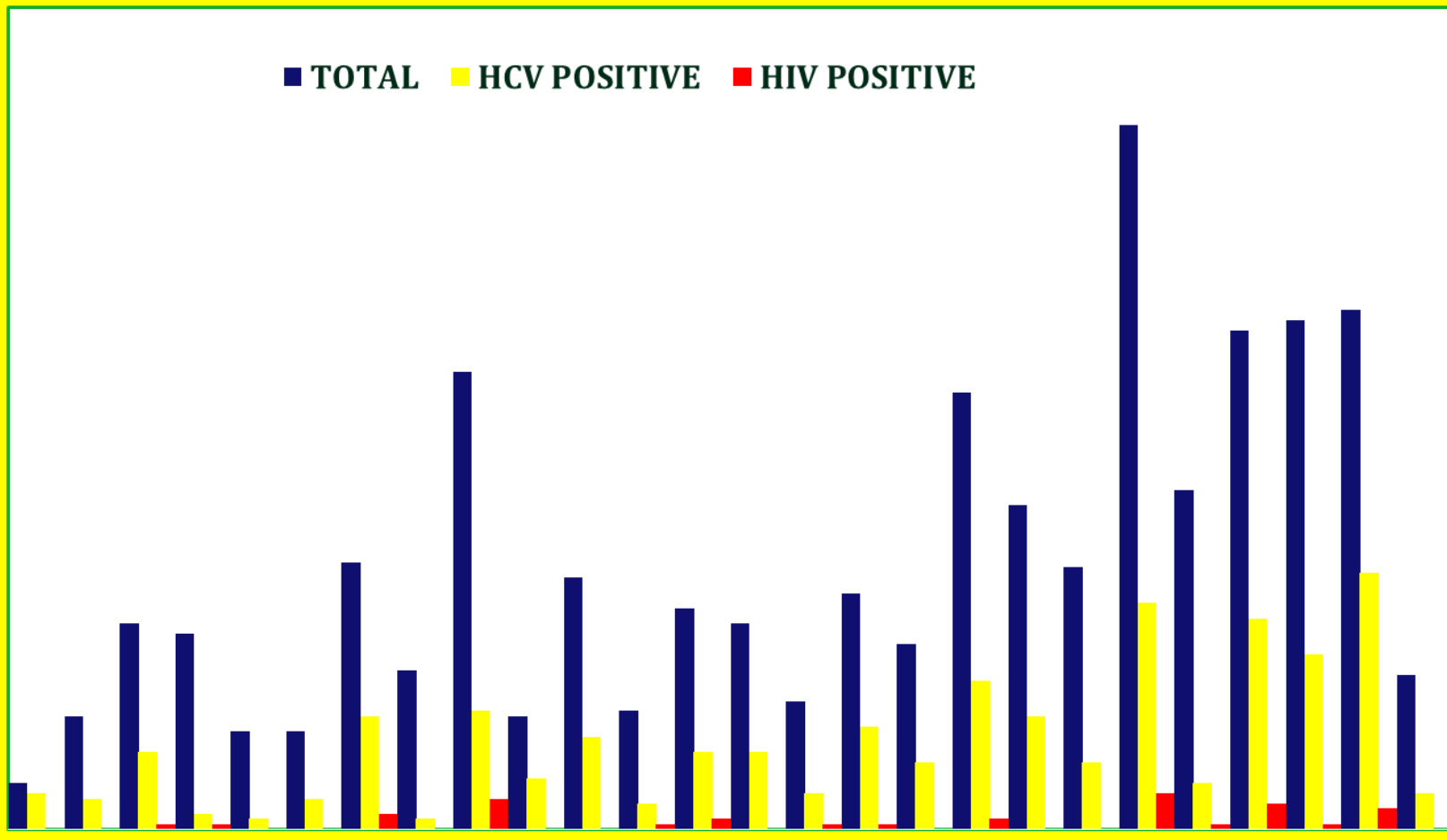


# ORAQUICK HIV AND HCV TESTS



160  
140  
120  
100  
80  
60  
40  
20  
0

■ TOTAL ■ HCV POSITIVE ■ HIV POSITIVE



Mar-13 Apr-13 May-13 Jun-13 Jul-13 Aug-13 Sep-13 Oct-13 Nov-13 Dec-13 Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14 Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15

	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	01-Sep	01-Oct	01-Nov	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15
■ TOTAL	9	22	40	38	19	19	52	31	89	22	49	23	43	40	25	46	36	85	63	51	137	66	97	99	101	30
■ HCV POSITIVE	7	6	15	3	2	6	22	2	23	10	18	5	15	15	7	20	13	29	22	13	44	9	41	34	50	7
■ HIV POSITIVE	0	0	1	1	0	0	3	0	6	0	0	1	2	0	1	1	0	2	0	0	7	1	5	1	4	0

<b>1. AGE</b>	<b>AVERAGE AGE</b>	46.3	
<b>2. ETHNICITY</b>	<b>ASIAN</b>	26	2.31%
	<b>BLACK</b>	26	2.31%
	<b>FIRST NATIONS</b>	320	28.44%
	<b>WHITE</b>	640	56.89%
	<b>OTHERS</b>	110	9.78%
<b>3. GENDER</b>	<b>MALE</b>	831	73.87%
	<b>FEMALE</b>	271	24.09%
	<b>TRANSGENDER</b>	7	0.62%
<b>4. MARITAL STATUS</b>	<b>SINGLE</b>	823	73.16%
	<b>MARRIED/COMMON LAW PARTNERSHIP</b>	155	13.78%
	<b>WIDOWED</b>	35	3.11%
	<b>DIVORCED</b>	113	10.04%
<b>5. CURRENT LIVING CONDITION</b>	<b>LIVE ALONE (HOUSE, APARTMENT)</b>	501	44.53%
	<b>SHARE ACCOMMODATION (HOUSE, APARTMENT)</b>	172	15.29%
	<b>LIVE IN RESIDENCE OR SHELTER</b>	214	19.02%
	<b>HOMELESS</b>	248	22.04%
<b>6. EDUCATION COMPLETED</b>	<b>LESS THAN ELEMENTARY SCHOOL</b>	39	3.47%
	<b>ELEMENTARY SCHOOL</b>	128	11.38%
	<b>HIGH SCHOOL</b>	658	58.49%
	<b>COLLEGE OR UNIVERSITY</b>	294	26.13%
<b>7. CURRENTLY</b>	<b>WORKING</b>	157	13.96%
	<b>NOT WORKING</b>	702	62.40%
	<b>STUDYING</b>	43	3.82%
	<b>RETIRED</b>	132	11.73%
<b>8. INCARCERATED</b>	<b>NO</b>	480	42.67%
	<b>YES</b>	591	52.53%
<b>9. GENERAL HEALTH</b>	<b>EXCELLENT</b>	81	7.20%
	<b>VERY GOOD</b>	215	19.11%
	<b>GOOD</b>	389	34.58%
	<b>FAIR</b>	332	29.51%
	<b>POOR</b>	98	8.71%
<b>10. TESTED FOR HCV</b>	<b>YES</b>	777	69.07%
	<b>NO</b>	221	19.64%
	<b>I DO NOT KNOW</b>	113	10.04%
<b>11. TESTED FOR HIV</b>	<b>YES</b>	837	74.40%
	<b>NO</b>	199	17.69%
	<b>I DO NOT KNOW</b>	60	5.33%
<b>12. HEALTH CONDITIONS</b>	<b>HEPATITIS B</b>	71	6.31%
	<b>HEPATITIS C</b>	326	28.98%
	<b>HIV/AIDS</b>	41	3.64%
	<b>CHLAMYDIA</b>	86	7.64%
	<b>HERPES</b>	57	5.07%
	<b>SYPHILIS</b>	39	3.47%
	<b>WARTS</b>	51	4.53%
<b>GONORRHOEA</b>	87	7.73%	

			<b>TOTAL -1125</b>
<b>13. DRINKING ALCOHOL</b>	<b>NEVER</b>	387	34.40%
	<b>LESS THAN ONCE A DAY</b>	477	42.40%
	<b>1-2 TIMES PER DAY</b>	88	7.82%
	<b>3-4 TIMES PER DAY</b>	65	5.78%
	<b>MORE THAN 4 TIMES PER DAY</b>	68	6.04%
<b>14. PREVIOUS OR CURRENT</b>	<b>INJECTED DRUGS</b>	497	44.18%
	<b>SHARED NEEDLES</b>	112	9.96%
	<b>SHARED OTHER INJECTION EQUIPMENT</b>	165	14.67%
	<b>NEVER INJECTED OR SHARED</b>	468	41.60%
<b>15. HAVING SEX</b>	<b>WITH WOMEN</b>	650	57.78%
	<b>WITH MEN</b>	200	17.78%
	<b>BOTH</b>	94	8.36%
<b>16. PROTECTIVE MEASURES</b>	<b>ALWAYS</b>	380	33.78%
	<b>MOST OF THE TIME</b>	247	21.96%
	<b>SOMETIMES</b>	225	20.00%
	<b>NEVER</b>	203	18.04%
<b>17. HCV IS TRANSMITTED</b>	<b>BY TOUCHING/KISSING/COUGHING/SNEEZING</b>	234	20.80%
	<b>BY HAVING UNPROTECTED SEX</b>	633	56.27%
	<b>BY SHARING NEEDLES</b>	783	69.60%
	<b>BY SHARING EQUIPMENT</b>	618	54.93%
	<b>BY BLOOD TRANSFUSION</b>	724	64.36%
<b>18. HIV IS TRANSMITTED</b>	<b>BY TOUCHING/KISSING/COUGHING/SNEEZING</b>	158	14.04%
	<b>BY HAVING UNPROTECTED SEX</b>	832	73.96%
	<b>BY SHARING NEEDLES</b>	795	70.67%
	<b>BY BLOOD TRANSFUSION</b>	750	66.67%
<b>19. IS THERE CURE FOR HCV</b>	<b>YES</b>	629	55.91%
	<b>NO</b>	181	16.09%
	<b>I DO NOT KNOW</b>	280	24.89%
<b>20. CONSIDER HCV TREATMENT</b>	<b>YES</b>	908	80.71%
	<b>NO</b>	63	5.60%
	<b>I DO NOT KNOW</b>	93	8.27%
<b>21. HCV TREATMENT</b>	<b>I DO NOT NEED TREATMENT</b>	398	35.38%
	<b>I DO NOT KNOW WHERE TO GET TREATED</b>	218	19.38%
	<b>I DO NOT LIKE VISITING DOCTORS OR NURSES</b>	121	10.76%
	<b>I CAN NOT PAY FOR THE TREATMENT</b>	228	20.27%
	<b>I AM WORRIED ABOUT SIDE EFFECTS</b>	289	25.69%
<b>22. I AM GETTING TESTED</b>	<b>I WANT TO KNOW IF I AM INFECTED</b>	669	59.47%
	<b>I HAVE BEEN TOLD I AM INFECTED</b>	71	6.31%
	<b>I AM JUST PARTICIPATING</b>	516	45.87%





# RESULTS:

Survey Participants: 1125

Homeless: 22.0%

Live in Residence or Shelter: 19.0%

Share Accommodation: 15%

Aboriginal: 32.3%

Single: 78.6%

Graduated High School: 82.6%

Not Working: 73.8%

Previously Incarcerated: 64.5%

Previously Tested for HCV and HIV: 79.0% and 82.7%

Injecting Drugs: 75.4%

Infected with HCV or HIV: 50.3% and 3.2%



# CARE AT VIDC:

- Ongoing improvements in antiretroviral (ARV) treatment have transformed HIV into a chronic, manageable condition, but this benefit may be mitigated in vulnerable individuals with unstable housing.



# METHODS:

- The further analysis included PLHIV who have been attending an inner city clinic on a regular basis for management of their HIV infection since 2013
- Data were collected retrospectively by chart review
- Absolute homeless and precariously housed individuals were included



# RESULTS:

- Stably engaged in care Since 2013: 430 PLHIV
- Homeless PLHIV: 52 (12.1%) (mean age 51, 82.7% males, 90.4% injection drug users, 23.1% on methadone maintenance therapy)
- HCV Co-infected: 86.5%
- Attended Weekly Support Group on a Regular Basis: 57.7%
- On ARV: 98.1%
- Undetectable HIV plasma VL measures (<40 copies/mL): 58.8%
- Virologic Blips (<250 copies/mL): 21.6%
- Less Favourable Virologic Responses: 19.6%
- Increase in median CD4 count from 420 to 520 cells/mm<sup>3</sup>
- Received HCV treatment: 37.0% (47.0% used illicit drug )
- SVR: 57.9%
- Recurrent HCV Viremia: 18%



# CONCLUSIONS:

- Despite the widespread availability about **ONE IN FIVE HOMELESS INDIVIDUALS ON THE DTES DO NOT APPEAR TO HAVE EVER BEEN TESTED FOR HIV** and HCV, with many exhibiting significant risk behaviors for disease acquisition.
- Through VIDC program, small numbers have already been successfully engaged in care. New approaches to the diagnosis and treatment of HIV and HCV infection are urgently needed in this community.



# CONCLUSIONS:

- Despite multiple competing social and medical issues, PLHIV with many vulnerabilities and housing instability can be engaged in health care and manage HIV and HCV infections, with over 98% on ARV treatment, and a significant number having received HCV therapy.
- Additional measures for housing issues must be considered to enhance engagement in care of these particularly vulnerable individuals to optimize adherence to ARV agents to optimize virologic efficacy and to reduce the risk of HCV re-infection following its successful treatment.





# ACKNOWLEDGEMENTS:

- Dr. Brian Conway and VIDC Team
- Sponsors
- Organizers



THANK YOU!

QUESTIONS?