

Acceptability of point of care finger-stick capillary whole blood and venepuncture hepatitis C virus testing among people who inject drugs in Australia

Sahar Bajis¹, Lisa Maher¹, Carla Treloar², Behzad Hajarizadeh¹, Francois MJ Lamoury¹, Yasmin Mowat¹, Marcel Schulz¹, Alison D Marshall¹, Evan B Cunningham¹, Victoria Cock³, Nadine Ezard^{4,5}, Carla Gorton⁶, Jeremy Hayllar⁷, Julie Smith⁸, Marianne Martinello¹, Tanya L Applegate¹, Gregory J Dore¹, Jason Grebely¹ on behalf of the LiveRLife Study Group

¹The Kirby Institute, UNSW Sydney, Sydney, New South Wales, Australia; ²Centre for Social Research in Health, UNSW Sydney, New South Wales, Australia; ³Drug and Alcohol Services of South Australia, Adelaide, South Australia, Australia; ⁴Alcohol and Drug Service, St Vincent's Hospital, Sydney, New South Wales, Australia; ⁵Faculty of Medicine, UNSW Sydney, Sydney, Australia; ⁶Cairns Sexual Health Service, Cairns, Queensland, Australia; ⁷Alcohol and Drug Service, Metro North Mental Health, Metro North Hospital and Health Service, Brisbane, Queensland, Australia; ⁸Matthew Talbot Hostel, St Vincent de Paul Society NSW Support Services, Sydney, New South Wales, Australia

Introduction

- Uptake of Hepatitis C virus (HCV) testing remains inadequate globally.
- Although, in high income countries, people who inject drugs (PWID) are likely to be tested for HCV antibodies, the majority do not receive HCV RNA confirmatory testing.
- Barriers to accessing testing services among PWID include difficulty of venous access for blood collection.
- The use of finger-stick capillary whole blood collection for a point of care HCV RNA test may enhance testing and linkage to care among PWID.
- Little is known about the acceptability of point of care finger-stick capillary whole blood HCV testing method.

Aims

- To determine the acceptability of finger-stick capillary whole blood and venepuncture HCV testing methods, and factors associated with the preference for finger-stick capillary whole blood HCV testing among PWID.

Methods

Study design and participants

- The LiveRLife Study is an open, observational cohort study. Participants were enrolled at six sites in Australia between June and December 2016.
- Inclusion criteria were age of 18 years or older, written informed consent and a history of injecting drug use. Current pregnancy was the only exclusion criterion.
- Capillary whole blood collected by finger-stick and plasma collected by venepuncture were for point of care Xpert[®] HCV viral load testing. Participants completed a questionnaire on acceptability and preference of blood collection methods for HCV testing.

Statistical analyses

- Baseline characteristics of participants enrolled in the study and have completed HCV testing acceptability questionnaire were tabulated.
- Proportions of participants selecting one of the five-points along the Likert scale for acceptability were calculated. Proportions of participants preferring finger-stick or venepuncture with test results in 2 weeks, 120 minutes or 60 minutes respectively, were calculated.
- An unadjusted logistic regression model with odds ratios and 95% confidence intervals were generated to assess factors associated with preference for finger-stick testing over venepuncture with significance defined at P<0.05.



Figure 1. Point of care finger-stick capillary whole-blood collection for Xpert[®] HCV viral load testing

Results



Figure 2. Acceptability of finger-stick testing among participants

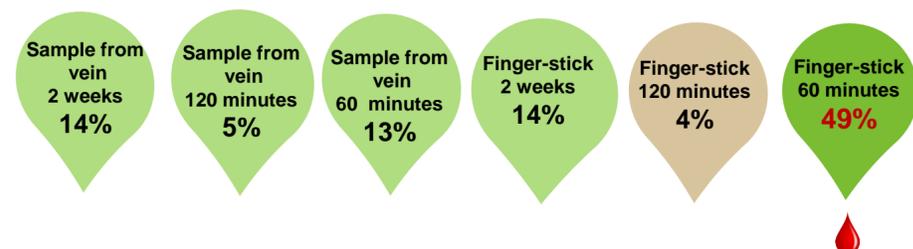


Figure 3. HCV testing preferences

Results continued

Table 1. Baseline characteristics of participants enrolled in LiveRLife study and completing acceptability questionnaire

Characteristic	Overall (n=207), n (%)
Age, mean (SD)	44 (10)
Male	162 (78%)
Aboriginal/Torres Strait Islander ethnicity	31 (15%)
High school or higher education	70 (34%)
Housing	
Unstable	84 (41%)
Stable	123 (60%)
Incarceration	
Ever (not in past 12 months)	88 (43%)
Last 12 months	34 (16%)
Never	85 (41%)
Injected drugs in past one month	149 (72%)
Frequency of injection in past one month¹	
Daily or more	50 (30%)
<Daily	99 (60%)
None in the past month	17 (10%)
Last drug injected²	
Methamphetamines	72 (48%)
Heroin	38 (26%)
Cocaine	2 (1%)
Buprenorphine/Buprenorphine-Naloxone	7 (5%)
Methadone	3 (2%)
Other opioids	27 (18%)
Opioid substitution treatment	
Current treatment	103 (50%)
Previous treatment, not current	37 (18%)
Never	67 (32%)
Self-reported HCV RNA status	
Positive	114 (55%)
Negative	63 (30%)
Unknown	30 (14%)

¹Among participants who injected drugs in the past 6 months (n=166)

²Among participants who injected drugs in the past one month (n=149)

- 77% preferred to receive HCV test results on the same day, with 92% indicating that they would be willing to wait up to 120 minutes to receive test results.

- 74% indicated venepuncture testing to be very acceptable, 19% as somewhat acceptable, 2% as neither acceptable nor unacceptable, 3% as somewhat unacceptable, and 1% as not at all acceptable.

- Overall, 67% of participants preferred finger-stick testing over venepuncture (33%).

- Most common reason for preferring finger-stick testing over venepuncture was because it was quick (61%), followed by venous access difficulty (20%). Most common reason for preferring venepuncture was because it was quick (62%), followed by knowing that results would be accurate (29%).

- Female participants were more likely to prefer finger-stick testing method than male participants (Table 2.)

Table 2. Unadjusted logistic regression model assessing factors associated with preference for finger-stick HCV testing among participants (n=207)

	Finger-stick preference, n (%)	Unadjusted model OR (95% CI)	P	P overall
Age				
18 – 45 years	76 (64%)	1.00		
≥46 years	63 (72%)	1.43 (0.77, 2.59)	0.24	
Gender				0.01
Male	103 (64%)	1.00		
Female	36 (82%)	2.54 (1.12, 5.91)	0.02	
Transgender	-	-	-	-
Recent injecting				0.77
Not in the past 6 months	28 (68%)	1.00		
In the past 6 months	2 (50%)	0.46 (0.06, 3.67)	0.47	
In the past 1 month	109 (67%)	0.95 (0.46, 1.99)	0.90	
OST treatment				0.15
Never	40 (60%)	1.00		
Yes, previously received	26 (70%)	1.68 (0.76, 3.74)	0.20	
Yes, currently receiving	73 (70%)	1.68 (0.96, 2.94)	0.07	
High school or higher education				0.12
No	90 (66%)	1.00		
Yes	49 (70%)	1.09 (0.84, 1.40)	0.53	
Incarceration				0.12
Never	57 (67%)	1.00		
Not in the past 12 months	64 (73%)	1.31 (0.68, 2.51)	0.42	
Yes, in the past 12 months	18 (53%)	0.55 (0.25, 1.24)	0.15	

Conclusion

- Finger-stick capillary whole blood collection is highly acceptable to PWID.
- Finger-stick capillary whole blood collection with test results received in 60 minutes was preferred over venepuncture.
- The further evaluation of simplified point of care HCV testing as a single-visit opportunity to engage people in care is crucial for HCV treatment scale-up to achieve HCV elimination.

Contact information:

Name: Sahar Bajis
Tel no: +61 2 9385 9981
Email: sbajis@kirby.unsw.edu.au

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