

**Criteria Grid**  
**Hepatitis C Research Studies, Tools, and Surveillance Systems**

<b>Best Practice/Intervention:</b>	Beckwith CG. et al. (2015) A pilot study of rapid hepatitis C virus testing in the Rhode Island Department of Corrections. <i>J Public Health (Oxf)</i> , 1-8.			
<b>Date of Review:</b>	March 5, 2016			
<b>Reviewer(s):</b>	Christine Hu			
<b>Part A</b>				
<b>Category:</b>	Basic Science <input type="checkbox"/> Clinical Science <input type="checkbox"/> Public Health/Epidemiology <input checked="" type="checkbox"/> Social Science <input type="checkbox"/> Programmatic Review <input type="checkbox"/>			
<b>Best Practice/Intervention:</b>	<b>Focus:</b> Hepatitis C <input checked="" type="checkbox"/> Hepatitis C/HIV <input type="checkbox"/> Other: _____ <b>Level:</b> Group <input checked="" type="checkbox"/> Individual <input type="checkbox"/> Other: _____ <b>Target Population:</b> <u>short-term inmates with unknown HCV status</u> <b>Setting:</b> Health care setting/Clinic <input type="checkbox"/> Home <input type="checkbox"/> Other: <u>Correctional facilities</u> <b>Country of Origin:</b> <u>USA</u> <b>Language:</b> English <input checked="" type="checkbox"/> French <input type="checkbox"/> Other: _____			
<b>Part B</b>				
	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>COMMENTS</b>
<i>Is the best practice/intervention a meta-analysis or primary research?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Primary research; use a comprehensive rapid HCV testing algorithm to assess the feasibility of using rapid HCV testing inside correctional facilities.
<i>Has the data/information been used for decision-making (e.g. program funding developments, policies, treatment guidelines, defining research priorities and funding)?</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Information was not used for decision-making. Author did state that the result of this study can help to serve as an initial step toward implementation of rapid HCV testing among incarcerated populations.
<i>Do the methodology/results described allow the reviewer(s) to assess the generalizability of the results?</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Generalization of the results may be limited since other correctional facilities may vary with aspects of delivering HCV services.

<i>Are the best practices/methodology/results described applicable in developed countries?</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	This study is not applicable to other locations given the difference in HCV testing services in correctional centers of other countries.
	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>COMMENTS</b>
<i>Are the best practices/methodology/results described applicable in developing countries?</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<i>The research study/tool/data dictionary is easily accessed/available electronically</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Purchase or subscription to the journal is required for access at <a href="http://jpubhealth.oxfordjournals.org/">http://jpubhealth.oxfordjournals.org/</a>
<i>Is there evidence of cost effective analysis with regard to interventions, diagnosis, treatment, or surveillance methodologies? If so, what does the evidence say? <b>Please go to Comments section</b></i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cost effectiveness analysis was not conducted.
<i>Are there increased costs (infrastructure, manpower, skills/training, analysis of data) to using the research study/tool/data dictionary?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cost of HCV rapid antibody testing.
<i>How is the research study/tool funded? <b>Please got to Comments section</b></i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This study is supported by the NIH and the District of Columbia Development Center for AIDS Research.
<i>Is the best practice/intervention dependent on external funds?</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<i>Other relevant criteria:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>WITHIN THE SURVEILLANCE SYSTEM FOR REVIEW</b>				
<i>Are these data regularly collected?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Study was conducted at the Rhode Island Department of Corrections between August 2012 and January 2014.
<i>Are these data regularly collected at and/or below a national level?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are these data collected manually or electronically?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manually
<b>RESEARCH REPORTS</b>				

<i>Has this research been published in a juried journal?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Journal of Public Health
<i>Does the evidence utilize the existing data/surveillance information or has it generated new data and/or information?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New data/information

# A pilot study of rapid hepatitis C virus testing in the Rhode Island Department of Corrections

Curt G. Beckwith<sup>1</sup>, Ann E. Kurth<sup>2</sup>, Lauri B. Bazerman<sup>3</sup>, Emily J. Patry<sup>3</sup>, Alice Cates<sup>4</sup>, Liem Tran<sup>3</sup>, Amanda Noska<sup>1</sup>, Irene Kuo<sup>4</sup>

<sup>1</sup>The Miriam Hospital/Alpert Medical School of Brown University, Providence, Rhode Island 02906, USA

<sup>2</sup>New York University, New York, NY, USA

<sup>3</sup>The Miriam Hospital, Providence, Rhode Island, USA

<sup>4</sup>George Washington University, Washington, DC, USA

Address correspondence to Curt G. Beckwith, E-mail: CBeckwith@Lifespan.org

## ABSTRACT

**Background** The correctional population bears a heavy burden of hepatitis C virus (HCV) infection necessitating expansion of HCV testing and treatment opportunities. Rapid HCV testing provides point-of-care antibody results and may be ideal for correctional facilities, particularly jails, where persons are often incarcerated for short periods of time, yet feasibility has not been established.

**Methods** We conducted a pilot study of a rapid HCV testing algorithm among short-term inmates with unknown HCV status. Participants completed a questionnaire, viewed an informational video and underwent rapid HCV testing and confirmatory testing, when indicated. Persons with chronic infection were referred to community care after release. Baseline characteristics, risk behaviors, test results and linkage were examined by descriptive analyses.

**Results** Two hundred and fifty-two inmates were enrolled and 249 completed all study activities. Twenty-five participants (10%) had reactive rapid tests and 23 (92%) completed confirmatory testing. 15/23 (65%) had detectable HCV RNA, but only 4 linked to care after release. Persons with reactive HCV tests were more likely to be White ( $P = 0.01$ ) and to have ever injected ( $P < 0.0001$ ) and/or recently injected ( $P < 0.0001$ ) drugs.

**Conclusions** Rapid HCV testing within jails is feasible, identifies previously unrecognized cases of HCV infection, and implementation should be considered. Low rates of linkage to care after release remain a barrier to care.

**Keywords** hepatitis C virus, jail/prison, linkage to care, rapid HCV antibody test

## Introduction

In the USA, there are an estimated 2–3 million persons living with hepatitis C virus (HCV) infection.<sup>1</sup> This estimate increases to 5–7 million when institutionalized persons, including those who are incarcerated within the US correctional system, are included in the analysis.<sup>2</sup> Among persons infected with HCV, 75–85% will develop chronic infection which can lead to liver disease, cirrhosis and hepatocellular carcinoma.<sup>3</sup> HCV infection is the leading cause of liver transplantation in the USA,<sup>4,5</sup> and in 2007, the death rate from HCV surpassed human immunodeficiency virus (HIV) in the USA for the first time.<sup>6</sup> Alarming, more than one-half of those living with HCV remain unaware of their infection.<sup>7</sup> In response to

this, the Centers for Disease Control and Prevention (CDC) in 2012 released updated recommendations for HCV testing which called for one-time testing, regardless of risk factors,

Curt G. Beckwith, Associate Professor of Medicine

Ann E. Kurth, Professor of Nursing and Population Health

Lauri B. Bazerman, Senior Project Director

Emily J. Patry, Senior Research Assistant

Alice Cates, Data Manager

Liem Tran, Data Manager

Amanda Noska, Infectious Disease Fellow

Irene Kuo, Associate Research Professor of Epidemiology and Biostatistics

for all persons born between 1945 and 1965 given the majority of persons with HCV infection are from this birth cohort.<sup>8</sup> In addition, the CDC recommends that all persons who have risk factors for HCV, such as a history of injection drug use, should be tested. The US Preventive Services Task Force likewise recommends screening for HCV infection in persons at high risk for infection as well as offering one-time screening for HCV infection to adults born between 1945 and 1965.<sup>9</sup> Newer treatments for HCV infection are shorter in duration and are more effective, adding to the benefits, and urgency, on expanding HCV testing efforts.

The correctional population in the USA bears a heavy burden of HCV infection. A recent meta-analysis estimated that the HCV antibody prevalence among incarcerated adults in North America was 29%, and the prevalence among incarcerated adults with a history of injection drug use (IDU) was 67%.<sup>10</sup> One-third of all HCV-infected individuals in the USA pass through the criminal justice system each year,<sup>11</sup> and correctional facilities have been identified as an important venue for case identification and linkage to HCV evaluation and treatment.<sup>12,13</sup> There is a growing recognition that HCV testing needs to be expanded in conjunction with more accessible treatment opportunities within correctional facilities, including both prisons and jails.<sup>14–16</sup>

Recently, the Massachusetts Department of Public Health reported the results of a pilot HCV testing program within a short-term correctional facility.<sup>17</sup> Conventional laboratory-based HCV antibody testing was offered in conjunction with routine HIV screening during the intake orientation session and was also available upon request. Persons who tested positive for HCV antibody were referred for further medical evaluation after release, including confirmatory HCV testing. Among 2716 individuals offered testing, 21.9% completed testing and of those, 20.5% were antibody reactive. Among 82 persons who were newly diagnosed and referred to community medical providers, 38% linked to follow-up care. This study highlights the success in HCV case identification yet also demonstrates the challenges with completion of confirmatory testing, which is necessary to identify persons with chronic infection, and with linkage to community care after release from a correctional facility.

Rapid antibody tests for HCV have been developed and have performance characteristics consistent with other commonly used point-of-care assays.<sup>18–20</sup> The use of rapid HCV tests has been evaluated in both urban sexually transmitted diseases (STD) clinics and community-based organizations that service high-risk clientele.<sup>21,22</sup> These assays have the advantage of real-time test result delivery allowing testing and referral to be completed in a single visit which is important for persons who do not have regular access to health care.

Correctional facilities may prove to be an ideal venue to offer rapid HCV testing, particularly jails where persons are often incarcerated for short periods of time (hours to days) prior to be release back to the community, thus limiting the use of standard tests that have a multi-day turnaround time for delivery of results. To assess the feasibility of using rapid HCV testing inside correctional facilities, we conducted a pilot study of a comprehensive rapid HCV testing algorithm that included the use of a pre-test educational video designed to increase HCV knowledge and the importance of testing, rapid testing, confirmatory testing for persons with reactive rapid tests and referral to community care after release for persons newly diagnosed with HCV infection.

## Methods

The study was conducted at the Rhode Island Department of Corrections (RIDOC) which comprises eight facilities with an approximate daily inmate population of 3100. In fiscal year 2013, there were 12 570 commitments to the Intake Service Center (ISC) which is the central jail for the system.<sup>23</sup> This study was conducted between August 2012 and January 2014 in the Minimum Security Facility, Women's Facility and the ISC jail based on our ability to gain access for study activities. Male and female inmates who were English speaking, 18 years of age or older, no previous history of being HCV antibody positive and who had an anticipated release from the correctional facility within 12 weeks of study enrollment were eligible. Persons who were known to be HCV antibody positive based on medical record review were excluded. In each facility, research staff created a list of potential participants who were individually called to the medical clinic to learn about the study and to confirm eligibility criteria in person. Informed consent was obtained from eligible persons who elected to participate.

After enrollment, participants completed a staff-administered computerized questionnaire that assessed demographics, criminal justice history, healthcare utilization, and drug and alcohol use. The research assistant then showed each participant an 8-min informational video that reviewed HCV transmission, rapid HCV testing procedures and a brief overview of HCV care and treatment (available at [www.prisonerhealth.org](http://www.prisonerhealth.org)). Participants were then offered the OraQuick<sup>®</sup> HCV Rapid Antibody Test [OraSure Technologies, Bethlehem, PA, USA] using a blood specimen obtained from a fingerstick. The sensitivity and specificity of the OraQuick<sup>®</sup> rapid HCV test using whole blood and serum specimens have been reported to be >97% on both performance measures, comparable with laboratory-based testing.<sup>24,25</sup> Results were obtained in ~20 min and were delivered to the participant in conjunction with

post-test counseling. Those with a reactive result were referred to the RIDOC medical staff for phlebotomy, and blood specimens were sent for HCV RNA plasma viral load testing. Participants who had a positive confirmatory test were notified in person by research staff and were referred to the Miriam Hospital for HCV evaluation in the community after release. Research staff notified participants of community appointment details and provided an appointment reminder card. The RIDOC medical staff was informed of participants who were confirmed to have chronic HCV infection, and these results were entered into the RIDOC medical record. Research staff collected community locator information and authorization to release medical information from the inmate. Miriam Hospital medical records were reviewed to assess linkage to care and completion of the initial community evaluation after release. All study activities, including HCV testing and referral to care, were provided free of charge to participants.

### Statistical analysis

Baseline characteristics and behaviors were examined by descriptive analyses. Reported *P*-values were calculated using two-sample *t*-tests for difference of population means (equal variances), Pearson  $\chi^2$  tests and Fisher's exact tests for  $n < 5$  subsamples. All reported *P*-values are two-sided with 95% confidence intervals. Statistical analyses were conducted using SAS software, Version 9.3 of the SAS System for Windows. Copyright © 2002–10 SAS Institute Inc. SAS and all other

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The study was reviewed and approved by the Miriam Hospital Institutional Review Board (IRB), the Medical Research Advisory Group of the RIDOC and the Office for Human Research Protections, Department of Health and Human Services.

### Results

Nine hundred and fifty-seven inmates were assessed for study participation (Fig. 1). Seven hundred and five did not participate for the following reasons: 183 were ineligible for participation (169 were identified as already positive for HCV antibody; 14 were non-English speaking); 418 declined study participation prior to completing the eligibility screening process; and we were unable to offer participation to 104 inmates due to logistical reasons (e.g. inmates were off-site at court appearances) and were therefore unable to complete eligibility screening. Two hundred and fifty-two inmates completed informed consent and were enrolled. Subsequently, two participants were unable to participate in research activities, and an additional participant completed the baseline evaluation but did not consent to rapid HCV testing. The analysis was limited to the two hundred and forty-nine participants who completed all study activities. One hundred eighty-nine (76%) males were recruited from Minimum Security, 44 (18%) males from the Intake Services Center and

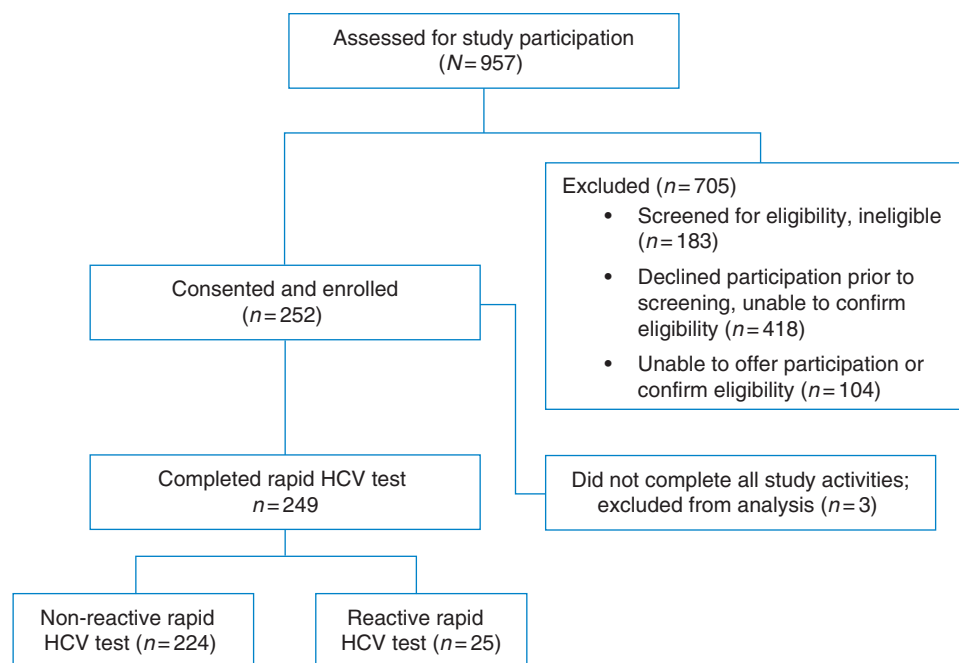


Fig. 1 Study enrollment and rapid HCV testing in the RIDOC between August 2012 and January 2014.

16 (6%) females from the Women's Facility. The median age was 31 (IQR: 40–24 = 16 years); 46% were White/non-Hispanic, 14% were Black/non-Hispanic and 23% were Hispanic. Among the 249 participants who completed rapid HCV testing, 25 participants (10%) had a reactive rapid HCV test, and among these, 23 (92%) completed confirmatory HCV RNA testing.

Table 1 includes demographics and selected healthcare-related variables, stratified by rapid HCV test result. Table 2

**Table 1** Comparison of study population characteristics according to rapid HCV test result

	Non-reactive (n = 224) n (c%)	Reactive (n = 25) n (c%)	Total (n = 249) n (c%)	P-value
<b>Age</b>				
Mean (SD)	32.9 (10.2)	33.4 (9.8)	32.9 (10.2)	0.8009 <sup>a</sup>
Median	31	32	31	
Min, Max	19, 58	20, 53	19, 58	
30 and under	109 (48.7)	11 (44.0)	120 (48.2)	0.6582 <sup>b</sup>
31 and older	115 (51.3)	14 (56.0)	129 (51.8)	
19–47 (born after 1965)	195 (87.1)	22 (88.0)	217 (87.2)	1.0000 <sup>c</sup>
48–58 (born between 1945 and 1965)	29 (13.0)	3 (12.0)	32 (12.9)	
<b>Gender</b>				
				0.6671 <sup>c</sup>
Male	210 (93.8)	23 (92.0)	233 (93.6)	
Female	14 (6.3)	2 (8.0)	16 (6.4)	
<b>Race/ethnicity</b>				
				<b>0.0107<sup>c</sup></b>
White (non-Hispanic)	96 (42.9)	19 (76.0)	115 (46.2)	
Black/African American (non-Hispanic)	34 (15.2)	0 (0.0)	34 (13.7)	
Hispanic	53 (23.7)	3 (12.0)	56 (22.5)	
Other <sup>d</sup>	41 (18.3)	3 (12.0)	44 (17.7)	
<b>Health insurance before incarceration (n = 247)</b>				
				0.0910 <sup>b</sup>
No	130 (58.6)	19 (76.0)	149 (60.3)	
Yes	92 (41.4)	6 (24.0)	98 (39.7)	
<b>Primary healthcare provider before incarceration</b>				
				0.7171 <sup>b</sup>
No	135 (60.3)	16 (64.0)	151 (60.6)	
Yes	89 (39.7)	9 (36.0)	98 (39.4)	
<b>Previous HCV test</b>				
				0.5009 <sup>b</sup>
No	133 (59.4)	12 (48.0)	145 (58.2)	
Yes	61 (27.2)	8 (32.0)	69 (27.7)	
Don't know	30 (13.4)	5 (20.0)	35 (14.1)	

<sup>a</sup>P-value calculated from *t*-test with equal variances.

<sup>b</sup>P-value calculated from  $\chi^2$  test.

<sup>c</sup>P-value calculated from Fisher's exact test.

<sup>d</sup>Race/ethnic category 'Other' includes non-Hispanic multiracial.

includes injection and non-injection drug use history, also stratified by rapid HCV test result. There were several significant differences between persons who had non-reactive and reactive rapid HCV test results. Persons with a reactive HCV test were more likely to be White and less likely to be Black/African American, Hispanic or another race ( $P = 0.0107$ ); were more likely to have ever injected drugs ( $P < 0.0001$ ); and were more likely to have recently injected drugs ( $P < 0.0001$ ). There were no significant differences in age, gender, health insurance status and having a primary care provider prior to incarceration, or previous HCV testing history. Additionally, there were no significant differences in lifetime or recent non-injection drug use between participants who had non-reactive and reactive rapid HCV test results.

Figure 2 includes the confirmatory HCV RNA testing and linkage to community care results. Among 23 participants who had a reactive rapid HCV test and completed confirmatory RNA testing, 15 of 23 (65%) had detectable HCV RNA indicating chronic infection and 8 had negative RNA testing suggestive of resolved HCV infection. Confirmatory test results were delivered to participants prior to release; median

**Table 2** Comparison of substance use behaviors according to rapid HCV test result

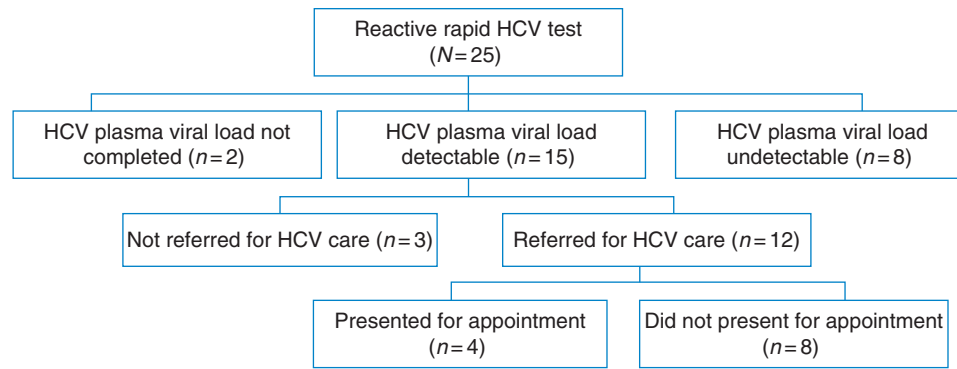
	Non-reactive (n = 224) n (c%)	Reactive (n = 25) n (c%)	Total (n = 249) n (c%)	P-value
<b>Injection drug use ever</b>				
				<b>&lt;0.0001<sup>a</sup></b>
No	199 (88.8)	6 (24.0)	205 (82.3)	
Yes	25 (11.2)	19 (76.0)	44 (17.7)	
<b>Injection drug use in 3 months before incarceration</b>				
				<b>&lt;0.0001<sup>a</sup></b>
No	214 (95.5)	10 (40.0)	224 (90.0)	
Yes	10 (4.5)	15 (60.0)	25 (10.0)	
<b>Non-injection drug use ever (n = 191)<sup>b</sup></b>				
				0.6130 <sup>c</sup>
No	12 (7.0)	0 (0.0)	12 (6.3)	
Yes	160 (93.0)	19 (100.0)	179 (93.7)	
<b>Non-injection drug use in 3 months before incarceration</b>				
				0.5626 <sup>a</sup>
No	68 (30.4)	9 (36.0)	77 (30.9)	
Yes	156 (69.6)	16 (64.0)	172 (69.1)	

The bold values denote significant *P*-values.

<sup>a</sup>P-value calculated from  $\chi^2$  test.

<sup>b</sup>Fifty eight participants who completed an early version of the survey were not asked whether they had ever used non-injection drugs.

<sup>c</sup>P-value calculated from Fisher's exact test.



**Fig. 2** HCV confirmatory testing and linkage to community care.

time to the delivery of results was 11 days (range 5–29 days). Among the 15 participants with chronic infection, one participant was released prior to delivery of HCV RNA test results and was not notified of the result despite multiple attempts to contact the participant in the community. Fourteen participants were offered referral to a community healthcare provider for HCV evaluation. Two participants, one from out of state, refused referral to a community provider for unknown reasons. The 12 participants who agreed to a community referral were informed prior to release from the RIDOC of their post-release appointments scheduled at the Miriam Hospital. Among these, four participants (33%) completed an initial evaluation in the community; three completed a provider visit within 90 days of release and one participant completed HCV-related blood work in the community at 270 days after release.

## Discussion

### Main finding of this study

This is the first study to investigate the use of rapid HCV testing inside a US correctional institution. We were able to successfully conduct rapid HCV testing in conjunction with risk assessment, video-facilitated pre-test counseling, confirmatory RNA testing and referral to community care after release from the correctional facility. We demonstrated the high HCV prevalence among the RIDOC population. Among persons with unknown HCV status, 10% had reactive rapid tests and these persons were more likely to be White, non-Hispanic compared with persons who tested negative for HCV antibody. Persons who were known to be positive for HCV antibody were not eligible for study participation, but if these persons were included in the seroprevalence estimate, the prevalence of HCV antibody among inmates in the RIDOC would have been ~20%. These results indicate a relatively stable HCV prevalence among the RIDOC

population compared with a blinded seroprevalence study conducted in the late 1990s that showed an HCV prevalence rate of 23%.<sup>26</sup>

### What is already known on this topic

Due to the high HCV prevalence among incarcerated populations in the USA, correctional facilities remain an essential venue for the provision of HCV testing, education and linkage to health services.<sup>12</sup> Rapid HCV testing will be most relevant to jail facilities where there is high turnover of inmates and where delivery of standard antibody test results will be difficult due to the short length of incarceration for the majority of detained persons. The use of rapid tests, as opposed to conventional laboratory-based enzyme immunoassays, enables the delivery of test results immediately in conjunction with post-test counseling. In a similar fashion, rapid HIV testing has been successfully implemented in multiple US jails.<sup>27–29</sup>

Participants with reactive rapid HCV tests were more likely to be injecting drugs at any time in the past and within the immediate time period prior to incarceration compared with persons participants who tested negative for HCV. The association between HCV infection and IDU is well established and the vast majority of new HCV infections are linked to IDU.<sup>30</sup>

### What this study adds

Our study shows that persons newly diagnosed with HCV infection were young (60% were <35 years of age) and White/non-Hispanic (76%). These findings are consistent with the results of a recently conducted rapid HCV pilot program in Wisconsin that provided testing services to drug-dependent persons in the community.<sup>31</sup> HCV testing services must reach those at highest risk and several recent reports of HCV outbreaks in Wisconsin and Massachusetts among opioid-dependent young injection drug users highlight the need for



HCV services to reach substance users <35 years of age.<sup>32–34</sup> Reaching young substance users within correctional facilities and other venues such as syringe exchange programs, substance abuse treatment centers and emergency departments is of paramount importance given they may miss other opportunities for HCV testing if their injection drug use is not recognized and because persons who were born after 1965 will not be a priority population for HCV testing according to the recent CDC ‘birth cohort’ recommendations.<sup>8,35</sup> Importantly, 88% of participants testing positive in this study were born after 1965.

HCV testing within correctional facilities can be linked to immediate evaluation and consideration of HCV treatment, and there have been reports of successful HCV treatment of prisoners.<sup>36–39</sup> However, the cost of antiviral treatment is often prohibitive to many correctional institutions with constrained healthcare budgets. Because of the short length of incarceration in jails, it may be challenging to initiate treatment, but an initial evaluation to confirm HCV infection status, education and a referral to community care is warranted. Therefore, creating linkages to community HCV providers who can offer evaluation and treatment needs to be a priority. In 2010, the Institute of Medicine recommended ‘comprehensive viral hepatitis services’ for incarcerated populations and encouraged partnerships with community health providers.<sup>40</sup> For persons with previously identified HCV infection who require evaluation for treatment and for persons newly diagnosed with HCV inside a correctional facility, linkage to community providers is a critical step. In our study, only one-quarter of participants with newly identified chronic HCV infection completed a follow-up appointment in the community after release. This finding demonstrates the need for new and innovative approaches to facilitate successful linkage to care after release. Further research exploring the use of case management, peer navigators and possibly technology-assisted interventions to support linkage to care is needed.

### Limitations of this study

There were limitations to this study. We offered HCV testing as part of a research study and suspect this may have negatively affected the number of persons who participated and completed testing. Participants were required to spend ~60–90 min with the research staff person to complete all activities. Many of the 418 inmates who declined participation indicated they did not want to forego other activities (e.g. meals, work release, outdoor time, phone calls, classes) to complete the study, and this may have introduced selection bias. Furthermore, stigma associated with HCV infection may have also negatively impacted participation. Persons who did

not speak English were not eligible for study participation. In comparison to the general RIDOC inmate population,<sup>41</sup> study participants were more likely to be male, Hispanic or reported ‘other’ race and ethnicity categories. Women were underrepresented in the study due to low numbers of female inmates who met specific eligibility criteria and due to more limited access to the female inmate population. Furthermore, this study did not evaluate the implementation of rapid HCV testing from the perspective of RIDOC staff and medical providers, yet we hope our results will help facilitate the implementation of HCV testing programs by correctional institutions. Finally, our experience and results within the RIDOC may not be entirely generalizable to other correctional facilities since correctional facilities vary with respect to delivery of HCV services.<sup>42</sup>

### Conclusion

This study demonstrates that rapid HCV testing within these RIDOC prison and jail facilities is possible and identifies previously unrecognized cases of HCV infection. We hope this study will serve as an initial step toward broader implementation of rapid HCV testing among incarcerated populations with the goal of increasing knowledge of infection, dissemination of education regarding prevention counseling and chronic HCV infection and liver health, and access to evaluation for HCV treatment. Further research is needed to better understand barriers to and the cost effectiveness of HCV testing in correctional settings. Our results indicate that optimizing methods for linking persons with chronic HCV infection to community care after release is urgently needed.

### Funding

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