

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

|  |  |                                     |                          |   |
|--|--|-------------------------------------|--------------------------|---|
| <b>Best Practice/Intervention:</b>   | Beckwith CG. et al. (2015) Survey of US Correctional Institutions for Routine HCV Testing. <i>Am J Public Health</i> , 105(1): 68-71.  |                                     |                          |   |
| <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"/><br>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: _____<br><b>Level:</b> Group <input checked="" type="checkbox"/> Individual <input type="checkbox"/> Other: _____<br><b>Target Population:</b> <u>incarcerated individuals in US jails</u><br><b>Setting:</b> Health care setting/Clinic <input type="checkbox"/> Home <input type="checkbox"/> Other: <u>state prisons</u><br><b>Country of Origin:</b> <u>United States</u><br><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; a survey study conducted among US prisons and jails to understand the current HCV testing practices within 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 checked="" type="checkbox"/>  | <input type="checkbox"/>            | <input type="checkbox"/> | Study urges the Centers for Disease Control and Prevention to develop policy guidance for correctional facilities to utilize routine voluntary HCV screening for persons with undiagnosed HCV status. |
| <i>Do the methodology/results described allow the reviewer(s) to assess the generalizability of the results?</i>   | <input checked="" type="checkbox"/>  | <input type="checkbox"/>            | <input type="checkbox"/> |   |
| <i>Are the best practices/methodology/results described applicable in developed countries?</i>   | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Results are only applicable in US.  |

|   | YES                                 | NO                                  | N/A                      | COMMENTS  |
|---|-------------------------------------|-------------------------------------|--------------------------|---|
| Are the best practices/methodology/results described applicable in developing countries?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |   |
| The research study/tool/data dictionary is easily accessed/available electronically   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | Open access can be found at <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4265939/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4265939/</a>   |
| 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> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Cost effective analysis was not conducted.  |
| Are there increased costs (infrastructure, manpower, skills/training, analysis of data) to using the research study/tool/data dictionary?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |   |
| How is the research study/tool funded?<br><b>Please go to Comments section</b>  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | Study is funded by grants from the National Institute on Drug Abuse, the Lifespan/Tufts/Brown Center for AIDS Research and the District of Columbia Developmental Center for ADIS Research. |
| Is the best practice/intervention dependent on external funds?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |   |
| Other relevant criteria:<br>_____   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | Only 11 prisons and 1 jail facility in US provided routine HCV testing to inmate.   |
| WITHIN THE SURVEILLANCE SYSTEM FOR REVIEW   |                                     |                                     |                          |   |
| Are these data regularly collected?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Survey was send to state prisons and jails requesting for response.   |
| Are these data regularly collected at and/or below a national level?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |   |
| Are these data collected manually or electronically?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | Manually<br>- Non-responders were asked o complete interview over the phone   |
| RESEARCH REPORTS  |                                     |                                     |                          |   |

|  |                                     |                          |                          |                                   |
|--|-------------------------------------|--------------------------|--------------------------|-----------------------------------|
| <i>Has this research been published in a juried journal?</i>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | American 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              |

outcomes. Similarly, Osypuk et al. found immigrant Chinese enclaves to be associated positively with diet, but not with physical activity.<sup>17</sup> Studies using thresholds were similarly mixed. Haas et al. observed that Latinos in highly concordant areas ( $\geq 40\%$ ) had less difficulty obtaining care but no difference in financial barriers<sup>4</sup>; Gaskin et al. observed that Latinos in highly concordant areas ( $\geq 50\%$ ) generally had lower access to ambulatory services except for office-based physician services.<sup>2</sup> Our mixed findings suggest the presence of cultural preferences, possibly including placing a lower value on having a USC and having a more crisis-oriented perspective on health care access.<sup>18,19</sup> Because of the importance of care continuity, campaigns are needed to educate Asian Americans in highly concordant neighborhoods on the benefits of having a USC.

We observed substantial subgroup variations in associations between concordance level and care access outcomes. Because aggregate analyses would have masked these differences, future disaggregated analyses are essential for understanding subgroups.

Study limitations include potential lack of generalizability because data are from California and several subgroups and analyses were excluded because of small sample size. Analyses in other geographic locations and increased funding and data collection to support future disaggregated studies would address these limitations.

Neighborhood concordance levels are associated with health care access and utilization among Asian Americans. Mixed findings by outcomes and subgroups emphasize the need for detailed exploration of how factors such as social networks, cultural preferences, and availability of linguistically concordant providers influence care access in different Asian subgroups. ■

### About the Authors

At the time of this research, Eva Chang was first with the Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, and then the Group Health Cooperative, Group Health Research Institute, Seattle, WA. Kitty S. Chan is with the Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health.

Correspondence should be sent to Eva Chang, PhD, MPH, Group Health Cooperative, Group Health Research Institute, 1730 Minor Ave, Ste 1600, Seattle, WA 98101 (e-mail: chang.eva@ghc.org). Reprints can be ordered at <http://www.ajph.org> by clicking the "Reprints" link.

This article was accepted August 19, 2014.

### Contributors

E. Chang conceptualized and designed the study, analyzed the data, and drafted the article. K. S. Chan contributed to the study's design and to the interpretation of study findings. Both authors reviewed drafts of the article.

### Acknowledgments

This research was supported in part by the Agency for Healthcare Research and Quality (grant R36 HS021684-01).

An earlier version of this brief was presented orally at the 141st American Public Health Association annual meeting; November 2–6, 2013; Boston, MA.

The authors thank the University of California, Los Angeles, Center for Health Policy Research for providing access to the California Health Interview Survey confidential data and Melissa L. Anderson for her statistical advice.

### Human Participant Protection

This study received an exemption from the Johns Hopkins Bloomberg School of Public Health institutional review board because it was an analysis of secondary data.

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## Survey of US Correctional Institutions for Routine HCV Testing

Curt G. Beckwith, MD, Ann E. Kurth, PhD, Lauri Bazerman, MS, Liza Solomon, DrPH, Emily Patry, BS, Josiah D. Rich, MD, MPH, and Irene Kuo, PhD

To ascertain HCV testing practices among US prisons and jails, we conducted a survey study in 2012, consisting of medical directors of all US state prisons and 40 of the largest US jails, that demonstrated a minority of US prisons and jails conduct routine HCV testing. Routine voluntary HCV testing in correctional facilities is urgently needed to increase diagnosis, enable risk-reduction counseling and preventive health care, and facilitate evaluation for antiviral treatment. (*Am J Public Health*. 2015;105:68–71. doi:10.2105/AJPH.2014.302071)

There are an estimated 4 to 7 million persons in the United States infected with HCV.<sup>1,2</sup> Morbidity and mortality from HCV are

increasing and in 2007, death from HCV exceeded that from HIV infection for the first time.<sup>3,4</sup> Persons who inject drugs are at increased risk for HCV infection and for being incarcerated. Multiple studies have demonstrated high HCV prevalence rates among persons behind bars.<sup>5-7</sup> In 2010, the Institute of Medicine (IOM) called for the development of comprehensive viral hepatitis services for incarcerated populations including offering testing, hepatitis B virus vaccination, education, and medical management in partnership with community providers.<sup>8</sup>

Despite the Centers for Disease Control and Prevention (CDC) releasing HCV testing recommendations in 1998 and subsequent recommendations for prevention and control of viral hepatitis within correctional facilities in 2003,<sup>9-10</sup> recent studies estimate that 50% of persons infected with HCV are unaware of their infection,<sup>11-14</sup> thus reducing opportunities for risk-reduction counseling and treatment. In response to this, the CDC updated HCV testing recommendations for the US general population in 2012, which added at least 1-time testing among persons born between 1945 and 1965, now commonly referred to as the “birth cohort” screening recommendations.<sup>15</sup> However, the 2012 recommendations did not provide a specific testing recommendation for incarcerated individuals. Given the increased prevalence of HCV among criminal justice populations, we conducted a survey among US prisons and jails to gain a better understanding of current HCV testing practices within correctional facilities.

## METHODS

In 2012, we surveyed Medical Directors of all state prison systems and 40 of the largest US jails. The survey included 5 items regarding HCV testing to determine if facilities provided any HCV testing, and if so, what approaches were used (routine including opt-in, opt-out, and mandatory; inmate request; physician order; and court or facility order). Routine testing was defined as providing a screening test to all persons in custody who are not known to be HCV-infected; definitions for opt-in, opt-out, and mandatory testing were provided. In the survey instructions, we acknowledged that within a correctional system, there may be

different testing policies between facilities. Therefore, we requested that survey responses should describe the most common practice within the system. An introductory e-mail describing the project included a unique link to the survey. Nonresponders were asked to complete the interview by telephone.

## RESULTS

Forty-three of the 50 state prisons (86%) and 23 of the 40 jails (58%) responded (Table 1). The majority of prisons and jails provided HCV testing when requested by an inmate or ordered by a physician and among the systems reporting HCV testing, 60% and 35% of prisons and jails, respectively, provided HCV testing when court or facility-ordered. Only 11 prisons and 1 jail facility provided routine HCV testing to inmates. The jail facility provided HCV testing on an opt-in basis, and among the prison systems, routine testing was conducted using opt-in (n = 3), opt-out (n = 3), and mandatory (n = 5) approaches.

## DISCUSSION

Despite the high prevalence of HCV among incarcerated populations and the fact that expanded HCV testing would yield significant numbers of new diagnoses,<sup>16</sup> few facilities in this study conducted routine HCV testing. HCV testing among high prevalence populations improves cost-effectiveness.<sup>17</sup> HCV testing that depends on recognition of risk by health care providers and reporting of risk by inmates is inadequate and will not decrease the burden of undiagnosed infection.<sup>18</sup> A more comprehensive approach to HCV, as recommended by the IOM, is urgently needed that includes routine voluntary HCV testing for all inmates. The success of routine HCV testing in the Pennsylvania state prison system was recently reported.<sup>19</sup>

We acknowledge that there are barriers to HCV testing in this population, including the cost of antibody screening, confirmatory testing, and the need to provide medical care and treatment to persons identified as having chronic infection. Furthermore, routine HCV testing in jails presents additional challenges because of the transient nature of the jailed population,<sup>20</sup> which may limit the delivery of test results and referral for treatment

evaluation. However, treatment options for HCV infection are increasing with the development of new direct-acting antivirals.<sup>21,22</sup> We need to incentivize correctional systems to screen for, treat, and cure this disease, and sufficient resources and training must be made available. Treatment has been successfully delivered within prisons,<sup>23-26</sup> and incarceration may be the ideal time to treat some individuals who lack stable and adequate health care in the community. There are multiple benefits to HCV diagnosis even if treatment is not feasible, including risk-reduction counseling, vaccination for hepatitis A virus and hepatitis B virus when appropriate, and evaluation for antiviral treatment either within the correctional setting or in the community following release in partnership with community health care providers.

We urge the CDC to develop policy guidance for correctional facilities that calls for routine voluntary HCV screening for all persons with undiagnosed HCV status. Testing must be linked to counseling, primary health care including vaccination for hepatitis A and B, and evaluation for HCV treatment. Investment in HCV treatment networks that include correctional providers and community partners must be developed in conjunction with expanded testing. To remove the financial disincentives to HCV testing within correctional facilities, this investment needs to be coupled with a reallocation of health care resources that removes the financial burden of HCV treatment from the public safety domain and incorporates the cost into a broader public health strategy. ■

## About the Authors

Curt G. Beckwith and Josiah D. Rich are with the Alpert Medical School of Brown University/The Miriam Hospital, Providence, RI. Ann E. Kurth is with the College of Nursing, New York University, New York, NY. Lauri Bazerman and Emily Patry are with The Miriam Hospital. Liza Solomon is with Abt Associates, Bethesda, MD. Irene Kuo is with the School of Public Health, George Washington University, Washington, DC.

Correspondence should be sent to Curt G. Beckwith, MD, Alpert Medical School of Brown University, The Miriam Hospital, 164 Summit Avenue, Providence, Rhode Island 02906 (email: CBeckwith@Lifespan.org). Reprints can be ordered at <http://www.ajph.org> by clicking the “Reprints” link.

This article was accepted April 21, 2014.

## Contributors

All authors contributed to the conceptualization and design of the study, as well as analysis and interpretation

**TABLE 1—Survey Results Regarding HCV Testing in US Prisons and Jails: 2012**

| Survey Question   | Prisons (n = 43), No. (%) | Jails (n = 23), No.(%) |
|---|---------------------------|------------------------|
| Do the facilities under your jurisdiction provide any HCV testing to persons in custody?                                      |                           |                        |
| All facilities  | 40 (93.0)                 | 18 (78.3)              |
| Some facilities   | 2 (4.7)                   | 2 (8.7)                |
| No  | 0 (0.0)                   | 3 (13.0)               |
| Don't know  | 1 (2.3)                   | 0 (0.0)                |
| What approaches are used to determine when HCV testing is provided to persons in custody? (approaches not mutually exclusive) |                           |                        |
| Routine testing   | 11 (25.6)                 | 1 (4.3)                |
| Inmate request  | 32 (74.4)                 | 13 (56.5)              |
| Physician order   | 41 (95.3)                 | 19 (82.6)              |
| Court or facility order   | 25 (58.1)                 | 7 (30.4)               |
| Other   | 2 (4.7)                   | 0 (0.0)                |
| Not applicable  | 1 (2.3)                   | 3 (13.0)               |
| Is the routine HCV program in effect in all facilities or some facilities?  |                           |                        |
| All facilities  | 9 (20.9)                  | 1 (4.3)                |
| Some facilities   | 2 (4.7)                   | 0 (0.0)                |
| Not applicable  | 32 (74.4)                 | 22 (95.7)              |
| On what basis is the routine HCV testing offered in facilities under your jurisdiction?                                       |                           |                        |
| Opt-in  | 3 (7.0)                   | 1 (4.3)                |
| Opt-out   | 3 (7.0)                   | 0 (0.0)                |
| Mandatory   | 5 (11.6)                  | 0 (0.0)                |
| Not applicable  | 32 (74.4)                 | 22 (95.7)              |
| When is routine HCV testing provided to inmates? (approaches not mutually exclusive)  |                           |                        |
| Upon entrance   | 11 (25.6)                 | 1 (4.3)                |
| Upon exit   | 2 (4.7)                   | 0 (0.0)                |
| Not applicable  | 32 (74.4)                 | 22 (95.7)              |

of data, drafting and revising content, and approval of the final version to be published.

**Acknowledgments**

The authors acknowledge the support of the National Institute on Drug Abuse (R01DA030747 and R01DA030778), the Lifespan/Tufts/Brown Center for AIDS Research (P30AI042853) and the District of Columbia Developmental Center for AIDS Research (P30AI087714).

The authors also appreciate the cooperation of medical directors and designees from prison and jail systems participating in this project.

**Human Participant Protection**

This research was reviewed by the institutional review boards of The Miriam Hospital and Abt Associates.

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