

# Public Health Conditions for Successful Broad-Scale Integration of HIV and HCV Screening in Emergency Departments

 See also Torian et al., p. 652.

In this issue of *AJPH*, Torian et al. (p. 652) describe the results of a well-conducted serosurvey in a single urban emergency department (ED) in the Bronx, New York. Their findings reinforce the fact that EDs provide care to patients with high rates of both undiagnosed and previously diagnosed HIV and HCV infection and are in line with similar seroprevalence studies from EDs in Baltimore, Maryland,<sup>1</sup> and Cincinnati, Ohio,<sup>2</sup> showing a high prevalence of undiagnosed HCV in all age groups and a lower prevalence of undiagnosed HIV. Their results highlight the opportunity for broad-scale public health interventions, such as The Bronx Knows, to focus on expanding HIV and HCV screening and linkage services beyond traditional venues (such as community health centers and sexually transmitted infection clinics) and to establish close partnerships with urban EDs.

## IMPACT OF ED-BASED SCREENING

The potential impact of ED-based screening on disease identification and linkage to treatment among patients with new diagnoses, as well as reengagement with care among those with known prior infections, must not be overlooked. In 2013, for example, 4 048 729 unique patients made 6.4 million ED visits in New York City alone.<sup>3</sup> If the

Torian et al. findings are generalized city-wide, this translates to 202 436 patients with HIV (of whom 9716 are unaware of their HIV diagnosis) and 157 900 patients with HCV (of whom 30 317 are unaware of their HCV diagnosis) who are interacting with the health care system via an ED.

## PREVIOUSLY DIAGNOSED PATIENTS

The Torian et al. study demonstrates that a large proportion of patients seeking care in urban EDs have a prior laboratory diagnosis of HIV or HCV infection, a finding commonly reported in screening programs. In fact, in our screening program at the Highland Hospital ED in Oakland, California, approximately 50% of patients with positive HIV antigens or antibodies or positive HCV antibody tests are ultimately determined to have a previous diagnosis. Importantly, many of these patients are either unaware of their infection (despite having serological evidence of an earlier diagnosis) or aware of their infection but not engaged in care. Although an unintended consequence of large-scale screening is repeated testing of patients with a prior HIV or HCV diagnosis, repeating a diagnosis may serve as an important teachable moment and offer a unique opportunity for reengagement. In fact, through the assistance of case managers, patients with a previous HIV diagnosis who

underwent repeated screening in a Houston, Texas, ED were shown to have improved linkage with and retention in primary care as well as virologic suppression.<sup>4</sup>

## STREAMLINING PROCESSES

A practical approach to HIV and HCV screening in EDs will need to balance screening the highest possible number of patients with work flow, length of stay, and provision of acute care. The only way to implement such a program will be through engagement with emergency physician champions who are familiar with the intricacies of ED patient throughput and the metrics to which EDs are held accountable. HIV screening may not be widespread in EDs, but there is a fairly large body of research to help guide the implementation of ED-based HIV screening programs. Screening should be nontargeted and integrated into standard processes, and it should include opt-out consent and electronic health record prompts or automated orders. We have also found, at least in our program, that screening patients already undergoing blood draws is not associated with increases in ED length of stay, a common

metric associated with increased morbidity.<sup>5</sup>

## NONTARGETED HCV SCREENING

In initial published reports of emergency department HCV screening programs, birth cohorts were screened alone or in combination with patients using injection drugs, alongside a pre-existing HIV screening program.<sup>6</sup> The Torian et al. serosurvey, in context with work from Baltimore<sup>1</sup> and Cincinnati,<sup>2</sup> suggests that 25% to 45% of patients will be missed through birth cohort screening alone and supports nontargeted HCV screening without age restrictions or risk identification. The few urban EDs currently conducting HCV screening have already modified their practices to screen all patients for HCV regardless of age or risk factors. Multisite ED collaborations designed to disseminate the findings of nontargeted HCV screening initiatives are under way (James Galbraith, MD, e-mail communication, January 15, 2018), as is a proposal to fund a multicenter randomized controlled trial comparing nontargeted with targeted HCV screening (Jason Haukoos, MD, e-mail communication, January 27, 2018).

Broadening HCV screening to include all adult patients, in a manner similar to Centers for Disease Control and Prevention guidelines for HIV screening, would also serve to streamline protocols and minimize testing stigma. With emergency department HIV screening as a model, non-risk-based approaches

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appear to be the most effective way to screen and identify the highest number of infected patients. The increase in younger patients with new HCV infections is reflective of the unabated opioid epidemic and will likely worsen before it improves, making a push for expanded screening an important tool to curb incident infections. We believe that a nontargeted approach to HCV screening will identify younger patients who use injection drugs and may otherwise be reticent to admit their risk if targeted for screening. Although experience in supporting this practice comes from urban settings, the widespread nature of the opioid epidemic in the United States may mean that many rural and suburban EDs could benefit from similar practices; however, local needs and disease prevalence rates will dictate appropriate approaches.

## SUPPORT FROM PUBLIC HEALTH DEPARTMENTS

Large-scale emergency department HIV and HCV screening programs will require external support and funding for administrative staff, case managers, and electronic health record modifications to ensure success and sustainability. Once in place, however, many health

centers may find these screening programs to be clinically indispensable, and even cost effective, if sufficient numbers of patients can be treated and cured of their disease.<sup>7</sup> Linking patients to care will be the greatest challenge facing ED screening programs, and concerns about patients successfully navigating the care cascade are valid.<sup>6</sup> Reactive HIV and HCV screening tests require disease confirmation (which can take several days to weeks), and patient follow-up occurs after patients are discharged from the ED (usually via telephone contact with outpatient clinic scheduling), a scenario that is both inefficient and often unsuccessful.

Furthermore, the sheer number of HCV patients diagnosed in an ED screening program may quickly overwhelm linkage staff and treating physicians. As treatment capacity increases, support from public health departments for linkage to care programs could facilitate treatment of hundreds to thousands of patients each year from a single ED.

## EVALUATION IS NEXT

The ED is a high-volume, high-yield setting for detecting patients with known and previously undiagnosed HIV and HCV infections. Including EDs as key

stakeholders in the fight against HIV and HCV is good medicine, and any public health effort to combat these diseases should involve close partnerships with regional EDs. Successful partnerships will require collaborations with emergency physician champions knowledgeable about ED operations, support for linkage to care staff and case managers, and mindfulness of ED throughput and provision of acute care services. Streamlining processes and using electronic health records to automate screening will be key to successful implementations. Future research should evaluate nontargeted HCV screening outcomes and focus on how to best link patients diagnosed in the ED setting to definitive care. **AJPH**

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Both authors contributed equally to this editorial.

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# A Science-Driven Model of Community Collaboration to Improve Youth Outcomes

 See also Oesterle et al., p. 659.

How do we create better outcomes for young people in American communities? Although the idea of community coalitions and collective action arose in the 1960s, there was a general lack of conceptual theory, epidemiological data, or empirical data to

demonstrate that communities could come together and reduce the effects of individual and community risk factors and increase the well-being of young people until the 1990s.<sup>1</sup> In spite of the early promise of community coalitions with respect to youth

development, evaluations involving randomized comparison groups showed little impact.<sup>2</sup> This may have been attributable to communities being fragmented in their responses to youth problems; specifically, community efforts overlapped, with agencies, schools, and local governments making uncoordinated decisions to fund programs that varied in quality, fidelity, and outcomes.

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