

## Emergency Department versus Community Clinic Screening on Hepatitis C Linkage to Care

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**Objective:** It is unknown whether ED hepatitis C virus (HCV) screening is more effective than community-based approaches in linking patients to HCV specialty services. The objective was to conduct the first known study evaluating the effectiveness of ED opt-out screening in linking HCV+ patients to follow-up care, as compared to traditional community screening.

**Methods:** A retrospective cohort study was performed including patients screened HCV+ at twelve screening facilities in New Orleans, LA from March 2015 to August 2018. Patients screened HCV+ in the ED served as the exposed group and were compared to patients screened in the community. After screening HCV+, all patients followed the same continuum of care at a single medical center. Outcomes included: 1) RNA confirmation, 2) fibrosis staging, and 3) linkage to HCV specialty care. Analysis was conducted using generalized estimating equation log-binomial models clustering by screening location. Models were adjusted for insurance, race, intravenous drug use, and HCV testing history.

**Results:** A total of 3,330 patients (3,008 ED and 322 community) were screened HCV+. Compared to patients screened HCV+ in community clinics, those screened in the ED were more likely to be African American (56.3% vs. 26.1%;  $p < 0.01$ ) and possess health insurance (81.5% vs. 75.8%;  $p = 0.01$ ). ED patients were equally likely to have a history of intravenous drug use (42.1% vs. 46.6%;  $p = 0.12$ ) and less likely to have previous HCV testing (28.0% vs. 37.0%;  $p < 0.01$ ).

Confirmatory RNA testing occurred in 96.2% of ED and 49.1% of community patients. Those testing HCV+ in the ED were significantly more likely to complete RNA testing (adjusted risk ratio [aRR]=1.91 [1.54–2.37];  $p < 0.001$ ). Fibrosis staging occurred in 36.7% of ED and 60.6% of community patients. ED patients were significantly less likely to complete fibrosis staging (aRR=0.64 [0.51–0.81];  $p < 0.001$ ). Linkage to care was successful in 25.1% of ED and 23.5% of community patients (aRR=1.03 [0.69-1.53];  $p = 0.89$ ).

**Conclusions:** HCV screening in the ED improved patients' likelihood of receiving RNA confirmation, while ED screening decreased patients' likelihood of fibrosis staging. Linkage to an HCV specialist was not associated with screening location. HCV screening in the ED benefits from reflex confirmatory testing, providing superior retention at the first stage of the HCV evaluation. Expanding reflex ordering in the ED may improve fibrosis staging and linkage to HCV specialty care.