DUAL-ROUTINE HCV/HIV TESTING AND LINKAGE TO CARE

Evidence-Informed Structural Intervention

INTERVENTION DESCRIPTION

Goal of Intervention
- Increase dual-routine Hepatitis C virus (HCV)/HIV testing rates
- Increase seroprevalence detection rates
- Improve linkage to HIV care

Target Population
- Clinic patients
- HIV-risk patients

Brief Description

Dual-Routine HCV/HIV Testing and Linkage to Care is a testing model that added routine, opt-out annual HIV testing to routine, opt-out HCV testing, opt-in HIV testing and linkage to care for patients in four community health centers. Implementation of dual routine, opt-out HCV/HIV testing includes updating the existing electronic medical record (EMR) system to generate automatic reminders for patients eligible for HCV/HIV tests, and educating and training staff. At check-in, medical assistants determined HCV/HIV testing eligibility and offered opt-out HCV and/or HIV tests. Patients' responses to the test offers were recorded in the EMR system, and tests were provided to those who consented. Prior to the implementation of the dual routine model, the health centers provided medical assistant-initiated opt-out HCV testing and opt-in HIV testing.

Intervention Duration
- Ongoing

Intervention Setting
- Community health centers

Deliverer
- Health care staff
- Electronic medical record (EMR) system

Structural Components
- Access
  - Increased access to HIV testing, HCV testing and linkage to medical care
- Capacity building – Provider/supervisor training
  - Trained staff on opt-out testing, project goals and protocols, novel treatments, and case studies of routine HIV screening success

- Capacity building – Technology
  - Modified existing EMR system to generate automatic reminder determined by daily query that scanned charts of patient with appointments the following day, ≥13 years of age, and without an HIV diagnosis or test result in medical chart for the past 12 months
- Policy/Procedure – Institutional policy/procedure
  - Implemented dual routine HCV/HIV testing model in clinics

INTERVENTION PACKAGE INFORMATION

For intervention materials, please contact Catelyn Coyle, National Nursing Centers Consortium, Center Square East, 1500 Market Street, Philadelphia, PA 19102.

Email: ccoyle@nncc.us for details on intervention materials.

EVALUATION STUDY AND RESULTS

Study Location Information
The original evaluation study was conducted in Philadelphia, Pennsylvania between September 1, 2013 and May 31, 2014.

Study Sample
Participants in the post-implementation cohort (i.e., individuals who received an HCV or HIV test after implementation of dual-routine HCV/HIV testing) had the following characteristics:

- Participants receiving an HCV test (n=1888):
  - *64.0% Black or African American, 12.6% Hispanic/Latino, 12.6% White, 4.9% Asian, 0.5% Native Hawaiian/other Pacific Islander, 0.1% American Indian/Alaska Native, 1.5% Multiracial*
  - *59.2% male, 40.8% female*
  - *17.8% 18-29 years old, 18.4% 30-39 years old, 26.1% 40-49 years old, 27.4% 50-59 years old, 9.1% 60-69 years old, 1.3% ≥70 years old*
- Participants receiving an HIV test (n=3890):
  - *68.1% Black or African American, 11.0% Hispanic/Latino, 10.9% White, 3.7% Asian, 0.4% Native Hawaiian/other Pacific Islander, 0.1% American Indian/Alaska Native, 1.6% Multiracial*
  - *49.8% male, 50.2% female*
  - *29.6% 18-29 years old, 20.3% 30-39 years old, 21.0% 40-49 years old, 20.6% 50-59 years old, 7.6% 60-69 years old, 1.0% ≥70 years old*

Recruitment Settings
Community health centers

Eligibility Criteria
Persons aged ≥ 18 years, unaware of HCV or HIV status, and eligible for HCV testing or annual HIV testing were included in the analysis. Eligibility for HCV testing was based on the following: people born between 1945 and 1965, those who were homeless, and those who had risk factors as defined by CDC (e.g., injection/intranasal drug use, piercings/tattoos from non-licensed locations, blood transfusion before 1994, or dialysis). Eligibility

for annual HIV testing included those who did not have an HIV diagnosis or test result in their medical chart within the past 12 months.

Comparison Group

The comparison group included participants in the pre-implementation cohort (i.e., individuals who received routine HCV testing and opt-in HIV testing in the 9-month period prior to the implementation of dual-routine HCV/HIV testing).

Relevant Outcomes Measured

- HIV testing was measured as the number or proportion of patients who received HIV testing.
- HIV incidence was measured as the number or proportion of newly identified patients testing positive for HIV.
- Linkage to care was measured as the number or proportion of HIV positive patients who were linked to medical care.

Significant Findings on Relevant Outcomes

- There was a 124.7% difference in the annualized number of patients who received HIV testing from pre- to post-implementation (HIV tests pre-implementation = 1731; HIV tests post-implementation = 3890; $z = 28.80$, $p < 0.001$). °
- There was a 225.0% increase in the annualized number of patients who were newly identified as HIV-positive from pre- to post-implementation (newly identified HIV-positive patients pre-implementation = 4; newly identified HIV-positive patients post-implementation = 13; $z = 2.18$, $p = 0.03$). °

Considerations

- The linkage to care outcome did not meet evidence-informed criteria because the intervention effect was not statistically significant, based on the Fisher's exact test (linkage to care pre-implementation n = 1; linkage to care post-implementation n = 9; Fisher's exact test = 0.25, $p > 0.05$).
- There were statistically significant differences in the pre-/post-comparison for the following:
  - Patients who received HCV testing (HCV tests pre-implementation = 1526; HCV tests post-implementation = 1888; $z = 6.20$, $p < 0.001$) °
  - HCV positive tests (HCV positive tests pre-implementation = 115; HCV positive tests post-implementation = 168; $z = 3.15$, $p < 0.01$) °
  - HCV and HCV ribonucleic acid (RNA) positive tests (HCV and RNA positive tests pre-implementation = 70; HCV and RNA positive tests post-implementation = 101; $z = 2.37$, $p = 0.02$) °
  - Dual HCV/HIV tests (dual HCV/HIV tests pre-implementation = 626; dual HCV/HIV tests post-implementation = 1904; $z = 25.41$, $p < 0.001$) °

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°Poisson regression analysis was conducted by a CDC statistician.

REFERENCES AND CONTACT INFORMATION

Coyle, C., & Kwakwa, H. (2016). Dual-Routine HCV/HIV Testing: Seroprevalence and Linkage to Care in Four Community Health Centers in Philadelphia, Pennsylvania. *Public Health Reports, 131*, 41-52.

Researcher: **Catelyn Coyle, Med, MPH**
National Nursing Centers Consortium
Center Square East
1500 Market Street
Philadelphia, PA 19102
Email: ccoyle@nncc.us