

LINC (LINKING INFECTIOUS AND NARCOLOGY CARE)

Evidence-Based for Engagement in HIV Care

INTERVENTION DESCRIPTION

Goal of Intervention

- Improve engagement in HIV care
- Improve retention in HIV care
- Improve CD4+ cell count
- Reduce self-reported hospitalizations

Target Population

- HIV-positive injecting drug users in treatment

Brief Description

LINC (Linking Infectious and Narcology Care) is an individual-level, strengths-based case management intervention for HIV-positive persons who inject drugs (PWID). It is adapted from the [Antiretroviral Treatment Access Study \(ARTAS\)](#). LINC involves coordination between the HIV and narcology systems of care to reduce barriers to HIV care and help motivate HIV-positive PWID to engage in care by supporting recognition of one's strengths to make positive life changes. The initial session is delivered in a narcology hospital (e.g., in-patient addiction treatment setting) and includes provision of CD4 test results to increase engagement in HIV medical care. After discharge, subsequent sessions are conducted in community or clinic locations over six months. LINC aims to build self-efficacy, enable self-management, and increase outcome expectancies regarding engaging in HIV care via education and social support.

Theoretical Basis

- Social Cognitive Theory (SCT)
- Psychological Empowerment Theory (PET)

Intervention Duration

- Five sessions delivered over six months

Intervention Settings

- Narcology hospital
- Community or clinic locations
- Phone

Deliverer

- Peer case managers (i.e., HIV-infected men and women in recovery from addiction)

Delivery Methods

- Case management
- Discussion
- Goal setting
- Printed materials
- Video

Structural Components

There are no reported structural components reported for this study.

INTERVENTION PACKAGE INFORMATION

An intervention package is not available at this time. Please contact **Jeffrey H. Samet**, Clinical Addiction Research and Education Unit, Boston University School of Medicine/Boston Medical Center, 801 Massachusetts Ave., 2nd floor, Boston, MA 02118.

Email: jsamet@bu.edu for details on intervention materials.

EVALUATION STUDY AND RESULTS

Study Location Information

The original evaluation study was conducted in St. Petersburg, Russia between 2012 and 2014.

Key Intervention Effects

- Increased engagement in HIV care

Recruitment Settings

- Inpatient wards in a narcology hospital (i.e., government-funded addiction hospital)

Eligibility Criteria

HIV-positive patients hospitalized at a narcology hospital with a history of injection drug use were eligible if they were between the ages of 18 and 70 years. Patients currently on anti-retroviral treatment (ART) were ineligible.

Study Sample

The baseline study sample of 349 HIV-positive people who inject drugs and not in HIV care is characterized by the following:

- 73% male, 27% female
- Mean age of 34 years
- Mean of 7 years since HIV diagnosis
- 57% CD4 cell count < 350
- 89% depressive symptoms (CES-D ≥ 16)
- 12% reported ART use history

Assignment Method

The unit of randomization was the patient. Randomization was stratified on two self-reported factors: first, whether an outpatient appointment with an infectious disease physician occurred in the 12 months prior to

enrollment; and second, whether the participant had ever been hospitalized for his or her HIV infection. Stratified randomization was used to ensure balance with respect to these potential confounding factors. Blocked randomization was used within each stratum. Randomization occurred via a custom web-application utilizing a computer-generated randomization table. In total, 349 patients were randomized to the LINC intervention (n = 174) or to usual care (n = 175).

Comparison

Participants randomized to the control condition received the narcology hospital's standard of care. All participants were provided with a resource card containing harm reduction information and contact information for the local HIV clinic.

Relevant Outcomes Measured

- Engagement in HIV care (defined as one or more visits to HIV medical care within six months of enrollment) was measured at 12 months follow-up.
- Retention in HIV care (defined as one or more visits to HIV medical care in two consecutive six-month periods within 12 months of enrollment) was measured at 12 months follow-up.

Participant Retention

Because participant retention is not a criterion for the Linkage to, Retention in and Re-engagement in HIV Care (LRC) chapter, the Prevention Research Synthesis project does not evaluate that information.

Significant Findings on Relevant Outcomes

- A significantly greater percentage of intervention participants engaged in HIV care within six months of enrollment compared to participants receiving usual care (51% vs. 31%; adjusted OR = 2.34, 95% CI = 1.49 – 3.67, $p < 0.001$).
 - The adjusted odds ratio (OR) for the comparison between attending two or more case management sessions vs. usual care was 2.57, 95% CI = 1.59 – 4.16, $p = 0.0001$.
 - The adjusted OR for the comparison between attending all five case management sessions vs. usual care was 2.91, 95% CI = 1.68 – 5.07, $p = 0.0002$.

Strengths

- None identified

Considerations

Additional significant positive findings on non-relevant outcomes

- A significantly greater percentage of intervention participants than comparison participants received appropriate HIV care within 12 months of enrollment (33% vs. 23%; adjusted OR = 1.69, 95% CI = 1.02 – 2.82), $p = 0.04$). Appropriate HIV care was defined as being prescribed ART or having a second CD4 cell count.

Non-significant findings on relevant outcomes

- There were no significant intervention effects at 12 months on retention in HIV care ($p = 0.31$).

Negative findings

- None reported

Other related findings

- None Reported

Implementation-related findings

- None reported

Adverse events

- None reported

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REFERENCES AND CONTACT INFORMATION

Samet, J. H., Blokhina, E., Cheng, D. M., Walley, A. Y., Lioznov, D., Gnatienco, N., . . . Krupitsky E. (2019). [A strengths-based case management intervention to link HIV-positive people who inject drugs in Russia to HIV care](#). *AIDS*, 33(9):1467–1476.

Researcher: Jeffrey H. Samet, MD, MA, MPH

Clinical Addiction Research and Education Unit
Section of General Internal Medicine, Department of Medicine
Boston University School of Medicine/Boston Medical Center
801 Massachusetts Ave., 2nd floor
Boston, MA 02118

Email: jsamet@bu.edu

