Appendix B. Evidence-Informed Interventions (EIs) for Linkage to, Retention in, and Re-engagement in HIV Care (LRC)

Quality–Study design

- Evaluates data before and after intervention implementation in studies without a comparison arm

Quality–Study implementation and analysis

- For pre-post intervention changes, analysis based on a 2-sided test with a p value of $< .05$

Strength of Evidence–Significant positive intervention effects

- Statistically significant ($p < .05$) positive pre-post intervention effect for ≥ 1 relevant outcome measure
    - A positive intervention effect is defined as an improvement in linking to, retention in, or re-engagement in HIV medical care from pre to post intervention
    - A relevant outcome is defined as an actual/completed outpatient primary HIV medical care visit or HIV viral load and/ or CD4 counts when used as proxies
        - For *linkage to care*, a relevant outcome is the actual/completed first HIV medical visit for newly-diagnosed HIV-positive persons
        - For *retention in care*, a relevant outcome is having actual/completed multiple HIV medical visits over a period of time
        - For *re-engagement in care*, a relevant outcome is the actual/completed initial HIV medical visit for HIV-positive persons who have fallen out of, but have returned to, HIV care
    - A positive intervention effect must be documented in medical records, administrative or agency records, or surveillance reports
    - Self-reports of medical visits validated by medical records, administrative or agency records are also acceptable

Strength of Evidence– Significant negative intervention effects

- No statistically significant ($p < .05$) negative pre-post intervention effect for any relevant outcome
    - A negative intervention effect is defined as a worsening in linkage to, retention in, or re-engagement in HIV medical care post intervention compared to the pre-intervention
- No other statistically significant harmful intervention effect that causes substantial concern

Additional Limitations to Evaluate

- No evidence that additional limitations resulted in considerable bias that reduces the confidence of the findings
    - Examples of limitations
        - Too many post-hoc analyses
        - Inconsistent evidence between effects
        - Inappropriate subset analyses
        - Not accounting for various reasons why participants were not included in the LRC outcome
        - For serial cross-sectional studies, there are statistically significant differences in demographic characteristics between “pre” and “post” samples that may introduce bias

        - Other notable biases threatening internal or external validity

All criteria must be satisfied for an intervention to be considered as a LRC Evidence-informed intervention (EI).

Additional Study Strengths

All Evidence-informed studies that exhibit additional strengths will have those strengths noted on all summary documentation. These strengths include:

- Study design-related strengths:
    - For studies using serial cross-sectional designs in a clinic setting, having comparable clinic samples across different times
- Implementation-related strengths:
    - Outcomes occur within or exceed optimal follow-up assessment time points
        - Linkage or entry to care outcomes occur ≤ 3 months (follow up time point of at least 3 months)
        - Retention in care outcomes occur ≥12 months (follow up time point of at least 12 months)
        - Re-engagement outcomes that re-engage persons within 6 months of intervention initiation or retain persons re-engaged in care for 2 visits for at least 12 months after intervention initiation
        - Targeting persons who have been lost to care at least 12 months
        - Re-engagement studies that attempt to re-engage persons who have been lost to care 12 months or longer
    - Sample size
        - Linkage, retention, and re-engagement studies with sample sizes equal to or above 100
- Impact-related strengths:
    - Post-intervention data or levels meet the National HIV/AIDS Strategy objectives
        - Percent of persons linked to HIV care post-intervention is at least 85%
        - Percent of persons retained in HIV care post-intervention is at least 80%
    - Study shows evidence of ART initiation from pre- to post-intervention[1]
        - Linkage, retention, and re-engagement studies that demonstrate a statistically significant positive change or at least a 10% increase in the percent of persons who initiate ART from pre- to post- intervention
    - The study shows evidence of improvements in viral load suppression from pre- to post-intervention[2]
        - Linkage, retention, and re-engagement studies that demonstrate a statistically significant positive change or at least a 10% increase in the percent of persons who are virally suppressed from pre- to post- intervention

[1] *Although initiating ART is dependent on a health care professional, this element is an important step in the care continuum and demonstrates additional evidence of engagement in care.*

[2] *Given that viral load suppression is considered the ultimate goal in the continuum of care, interventions demonstrating evidence of improvements in viral load suppression may be more effective than studies that do not.*