STREAMLINED CARE

Evidence-Based for Engagement in HIV Care
Evidence-Based for Retention in HIV Care
Evidence-Based Structural Intervention

INTERVENTION DESCRIPTION

Goals of Intervention
- Improve engagement in HIV care
- Improve retention in HIV care
- Improve viral suppression

Intended Population
- People with HIV (PWH) who are ART eligible in SEARCH trial communities

Brief Description

Streamlined Care is a differentiated service delivery model conducted within the SEARCH (Sustainable East Africa Research in Community Health) study, a cluster-randomized, universal test-and-treat trial in rural Kenya and Uganda. Streamlined Care improves patient-provider relationships and increases patient and provider HIV-related knowledge and skills. In addition, the intervention addresses structural barriers including long wait times, fixed clinic hours, lack of efficient appointment reminder and tracing mechanisms, and transportation cost and inconvenience associated with accessing care. A nurse-driven triage system is implemented to efficiently tailor clinic visits to what patients need to reduce wait times. Scheduled visit intervals and ART pick-up are lengthened to every 3 months for stable patients to decrease wait times by reducing patient volume and increase convenience associated with less frequent clinic visits. The intervention integrates multi-disease care for hypertension and diabetes and includes appointment reminders and phone access for health-related questions or appointment rescheduling. Off-hours clinic access is also offered. For patients who missed an appointment, re-engagement efforts of increasing intensity are offered, including an initial phone call followed by physical tracing and facilitated transportation to return to care. Streamlined Care also includes provider and staff training on providing care. Individuals identified as HIV positive in both the intervention and control group receive baseline CD4 and viral load testing, are introduced to a clinic staff member in person or by phone, are scheduled for an appointment at the local HIV clinic within 1 week or, if pregnant, within 2 days or with CD4<220/μL and are given a one-time transport to facilitate linkage to care. Intervention participants are additionally given a phone number (staffed 24 hours/day) to call if they have questions.

Theoretical Basis
- None reported

Intervention Duration
- Ongoing

Intervention Settings
- HIV clinics in rural Kenya and Uganda

Deliverers
- Clinic staff
- Healthcare providers
- Nurses

Delivery Methods
- For patients
  - Appointment reminders
  - Differentiated service delivery model
  - Enhanced patient tracking
  - Flexible clinic hours
  - Integrated multi-disease care
  - Nurse driven triage system
  - Phone access to clinic/phone contact
  - Transportation
- For health care providers and staff
  - Didactic lectures
  - Case-based training
  - Role playing

Structural Components
- Access – HIV medical care
  - Increased access by lengthening visit intervals and ART pick-up to decrease wait times through reduced patient volume and increased patient convenience
  - Expansion of clinic access for patients through phone access, and flexible appointments.
  - Increased re-engagement efforts through phone contact followed by physical tracing and facilitated transport to return to care
- Capacity Building – Provider/staff training
  - Trained providers and staff on providing friendly care to improve relations with patients
- Physical Structure – Services provided in non-traditional settings
  - Off-hours clinic access was offered
- Policy/Procedure – Institutional policy/procedure
  - Implemented differentiated service delivery model to 1) reduce structural barriers to care, 2) improve relationships between patients and clinic, and 3) enhance patient and clinician knowledge of HIV and ART
  - Introduced integrated multi-disease care for hypertension and diabetes to reduce opportunity cost associated with accessing non-integrated care

INTERVENTION PACKAGE INFORMATION

An intervention package is not available at this time. Please contact **Matt Hickey**, University of California at San Francisco, Division of HIV, ID, and Global Medicine, Department of Medicine, 995 Potrero Avenue, Building 80, Ward 84, San Francisco, California 94110.

Email: matt.hickey@ucsf.edu for details on intervention materials.

EVALUATION STUDY AND RESULTS

Study Location Information
The original evaluation study was conducted in rural Kenya and Uganda between 2013 and 2017.

Key Intervention Effects
- Improved engagement in HIV care (time in care)
- Improved retention in HIV care (reduced missed visits)
- Improved viral suppression

Study Sample
The intervention study sample of 3,394 was characterized by the following:
- *33% male persons*
- *10% persons 15-24 years old; 71% persons 25-49 years old; 19% persons ≥ 50 years old*
- *Time since ART initiation median (interquartile interval) 3.2 years (2.6-3.7)*
- *Baseline care status*
  - *10% ART-experienced persons, baseline viremia*
  - *48% ART-experienced persons, baseline suppression*
  - *27% ART-experienced persons, baseline VL missing*
  - *15% ART-naïve persons, CD4≤350*

The control (standard of care) sample of 2,796 was characterized by the following:
- *34% male persons*
- *8% persons 15-24 years old; 74% persons 25-49 years old; 19% persons≥ 50 years old*
- *Time since ART initiation was median (interquartile interval) 3.5 years (3.1-3.8)*
- *Baseline care status*
  - *9% ART-experienced persons, baseline viremia*
  - *47% ART-experienced persons, baseline suppression*
  - *32% ART-experienced persons, baseline VL missing*
  - *13% ART-naïve, CD4≤350*

Note: Percentages may not add up to 100% due to rounding.

Recruitment Settings
- Baseline HIV testing and enrollment was conducted in 16 intervention and 16 control communities in rural Kenya and Uganda through community health fairs, with health fair non-attendees receiving home visits during which HIV testing was offered.

Eligibility Criteria
Adolescents and adults (age≥ 15 years) in all 32 SEARCH communities who: (1) were HIV infected at study baseline, (2) had at least 1 post-baseline HIV care visit at a SEARCH-supported health facility, and (3) were ART eligible based on either previous ART experience or CD4 count of ≤350 at study baseline.

Assignment Method
Thirty-two rural communities were randomly assigned to either the control (n = 16 communities with 2,796 participants) or intervention arm (n = 16 with 3,394 participants). Randomization was performed at a participatory public event attended by community leaders and members.

Comparison
The study is a cluster randomized control trial. Control communities were provided standard HIV care according to country ART guidelines. Recommended monitoring frequency included clinical evaluation monthly for the first 6 months after ART initiation, followed by return visits for ART refill and clinical

evaluation over 1-2 months thereafter. Optional HIV viral load testing was conducted over 12 months or when viral failure was suspected.

Relevant Outcomes Measured
- Engagement in care was measured by time in care (proportion of follow-up time that patients were in care)
- Retention in care was measured by missed visits of ≥ 90 days (occurrence of a missed visit without a return to care at 3 months)
- Viral suppression was measured as having < 500 copies/mL

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
- The proportion of virally suppressed at year 3 was higher among intervention participants (Streamlined Care) compared to the control participants (90% vs 87%; relative risk [RR] = 1.03, 95% confidence interval [CI]): 1.01 - 1.06).
    - Among ART-experienced persons with baseline viremia, intervention arm participants had substantially higher % of virally suppressed at year 3 compared to the control participants (67% vs 47%, RR = 1.41, 95% CI: 1.05 to 1.91).
    - Among ART-experienced persons with baseline viral suppression, both arms maintained high levels of viral suppression at year 3 (97% vs 95%, RR = 1.01; 95% CI: 1.00 – 1.03).
    - Among participants who remained on first-line ART, % of virally suppressed at year 3 was 65% in intervention arm and 46% in control (RR = 1.43, 95% CI: 1.09 to 1.87).
    - Among those switched to second-line ART, % of virally suppressed at year 3 was 78% in the intervention arm and 58% in the control (RR = 1.35, 95% CI: 0.83 to 2.21).
- Among ART-experienced persons with baseline viremia, time to care improved in the intervention arm compared to the control arm (RR = 1.11, 95% CI: 1.02 - 1.19).
- Among ART-experienced persons with baseline viremia, the proportion of participants with missed visits > 90 days was 25% lower in the intervention arm compared to the control arm (RR = 0.75, 95% CI: 0.58 - 0.98).

Considerations
Additional significant positive findings on non-relevant outcomes
- None reported

Non-significant findings on relevant outcomes
- None reported

Negative findings
- None reported

Other related findings
- This intervention is also determined to be evidence-based for the Structural Interventions chapter.
- Among participants on first-line ART at baseline, 17% of intervention participants and 10% of control participants switched to second-line therapy by year 3 (RR = 1.61, 95% CI: 0.81 to 3.32).

Implementation research-related findings
- None reported

Process/study execution findings
- The estimated cost of Streamlined Care was $291 USD per-patient per-year. The estimated cost was similar or lower than that of PEPFAR-supported care elsewhere in sub-Saharan Africa.

Adverse events
- None reported

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- Gilead Sciences

REFERENCES AND CONTACT INFORMATION

Primary Study

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Additional Studies

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