Linkage to Care

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Case Study

- 42 year-old man from sub-Saharan Africa, immigrated in 2011
- Hospitalized with community-acquired pneumonia
- HIV EIA+, WB+, CD4 160, VL >1 million
- Discharged with prescription for TMP-SMX and HIV Clinic appointment
- No-show for HIV clinic
- Called by public health partner services 2.5 months after diagnosis
- Counseled about care and medication assistance programs, timeline for HIV care, contemporary ART
- Completed appointment with case manager and HIV medical provider 3 days later
- HIV provider reviewed process of ART initiation and expected timeline of HIV care with the patient, arranged for expeditious ART start
- Patient has followed-up as scheduled with all appointments to date.
The Importance of Linkage to Care

• Crucial for successful HIV treatment
• Delayed linkage impacts medical outcomes and HIV transmission
  - Longer time to virologic suppression
  - Increased risk of hospitalization and death
  - Increased HIV transmission risk
• Linkage experience lays the groundwork for future retention in care
Linkage to Care: Definition & Target

- Linkage = initiation of HIV care
- Standard metric: completed visit with an HIV medical provider ≤ 90 days after HIV diagnosis
  - HRSA HIV/AIDS Bureau
  - Centers for Disease Control
  - Institute of Medicine
- U.S. National HIV/AIDS Strategy goal
  - 85% linkage within 3 months
Failure to Link is Common

HIV Care Cascade in the U.S., 2009 (N=1,148,200)

- 66% of all PLWHAs were HIV-infected
- 80% of those were HIV-diagnosed
- 66% of those were linked to care
- 80% of those were retained in care
- 25% of those were prescribed ART
- 25% of those had VL suppressed (<200)

Barriers

FINANCIAL
- Lack of insurance or underinsurance
- Competing subsistence needs: food, housing

STRUCTURAL/ADMINISTRATIVE
- Unavailable or inconveniently located services
- Long appointment wait times
- Language barriers

PERSONAL
- Stigma of HIV, sexual identity, drug use
- Lack of trust in medical system
- Difficulty accepting diagnosis
- Comorbid mental illness or substance abuse

# Risk Factors for Failure to Link

<table>
<thead>
<tr>
<th>Consistent across studies</th>
<th>Possible risk factors – inconsistent findings</th>
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<tbody>
<tr>
<td>African-American race</td>
<td>Gender</td>
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<tr>
<td>Residence in high-poverty area</td>
<td>Age</td>
</tr>
<tr>
<td>Lack of insurance or public insurance (vs. private insurance)</td>
<td>Higher CD4 count</td>
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<tr>
<td>Lack of primary care prior to HIV diagnosis</td>
<td>Birthplace outside of the U.S.</td>
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<tr>
<td>Substance use, h/o injection drug use</td>
<td>Latino ethnicity</td>
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<tr>
<td>Among crack users: Not being helped into care</td>
<td>Depression</td>
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<tr>
<td>Longer wait time for first appointment</td>
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## Does the Reason for HIV Testing or Diagnosis Setting Affect Linkage?

<table>
<thead>
<tr>
<th>South Carolina</th>
<th>New York City</th>
<th>Philadelphia</th>
<th>18 state sample</th>
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<tbody>
<tr>
<td>County health departments</td>
<td>Community testing site</td>
<td>Private clinic</td>
<td>Anonymous test</td>
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<tr>
<td>Private medical practice</td>
<td>Correctional system</td>
<td>Public clinic</td>
<td>Confidential test</td>
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<tr>
<td>State facility</td>
<td>STD clinic</td>
<td>Hospital</td>
<td></td>
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<tr>
<td>Hospital</td>
<td>Site with co-located HIV care</td>
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**Sources:**
- Bamford LP, et al. AIDS. 2010; 24: 928-30
- Reed JB, et al. AIDS Pat Care STDs. 2009;23:765-773
Strategies to Improve Linkage
• Systematic **monitoring** of successful entry into HIV care is recommended for all individuals diagnosed with HIV (II A)

• Brief, **strengths-based case management** for individuals with a new HIV diagnosis is recommended (II B)

• Use of peer or paraprofessional **patient navigators** may be considered (III C)

• Intensive **outreach** for individuals not engaged in care within 6 months of a new HIV diagnosis may be considered (III C)
Monitoring

• Shared responsibility of testing site, HIV clinic, public health
• Roles and accountability should be established locally
  - Requires data sharing to be effective
• Clinics and providers can monitor and improve no-show rates for new patients
• In clinic, no-shows for new patients should trigger an intervention
  - Intensity will depend on clinic resources
  - Notification of missed appointment & reschedule to more intense outreach
Case Management

• Helps clients navigate complex medical care systems
• Provision of or linkage to counseling and psychological support
• HIV education
• Strongest evidence for “strengths-based” approach
ARTAS

• Antiretroviral Treatment Access Study
  • Trained social workers delivered the intervention
    - Identify internal strengths and assets to facilitate linkage
    - Identify and address client needs
    - Encourage contact with an HIV medical care provider
    - Accompany to medical and other appointments
  • RCT in 11 U.S. Cities
    - Up to 5 sessions in 90 day period
    - Mean of 2 contacts until linkage achieved
    - 78% linkage in 6 months vs. 60% in controls
  • Now being implemented throughout U.S.
  • Limitation: relatively resource intense

Peer Navigation

- Model of care coordination adapted from oncology setting
- Trained peers help navigate healthcare systems
- Limited evidence for effect
  - No controlled studies for linkage to care
  - In related interventions for HIV+ persons
    - Knowledge but no effect on biomarkers
- HRSA SPNS initiative suggested effectiveness

Images of peer navigators from Berry J. “Guiding Lights”, Positively Aware, 2012
HIV Care Orientation

• Orientation to timeline of HIV care & the clinic
  - Impact of orientation (or lack thereof) was a prominent theme in qualitative interviews with patients in and out of care
  - Increases patient comfort and satisfaction with care
  - Discourse of HIV as a chronic disease
  - Familiarize patients with
    • Expected frequency of visits and changes over time
    • Expected timeline for return to physical & emotional health
    • Administrative aspects of care – routine and urgent care appointments, procedure for blood draws

Sources: Christopoulos KA, et al. AIDS Pat Care and STDs; 27: 223-9
HIV Clinical Resource Guidelines for Transitioning HIV-Infected Adolescents into Care
Orientation Example: Project CONNECT

Within 5 days of calling to schedule first appointment
- Questionnaire
- Baseline lab testing
- Social worker
- Prophylactic meds
- Mental health and substance abuse referrals

Clinic no show rate 31% -> 16%
Cost of $200 per patient, $1628 per additional patient linked to care

Intensive Outreach for Non-Linked Persons

- Interventions not well-defined
- Observational studies, typically focused on specific vulnerable populations
- Many U.S. health departments are implementing outreach programs
  - Based on surveillance data
    - CD4 and viral load results reported to health departments
  - Investigation of cases with no results after diagnosis
  - Outreach to assist with linkage
Goals of partner services include:
- Assisting with linkage to care
- Ensuring linkage to care
- Assisting with partner notification and testing

Varies by jurisdiction:
- AK, OR & WA: all new cases contacted & assisted with linkage to care
- ID: all new cases investigated & referred to RW case management
- MT: linkage separate from PS
  - Funded testing sites are required to follow through linkage to care
Summary & Conclusions

- Linkage to care is a shared responsibility of diagnosing site, HIV clinic and public health
- Linkage success = first visit within 3 months
- ~1 in 5 do not successfully link to care
- Partner with testing sites and public health to implement/improve linkage programs
- Case management, active linkage assistance, and follow-up to ensure linkage are crucial
- Provider and clinic role:
  - Intervention for no-show new patient appointments
  - Orient new patients to timeline of HIV care and clinic
Thank you

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