Service Delivery: The Evolution & Impact of Innovative HIV Care Models

Implementation Science session, Nov. 3, 2020
Overview

- Differentiated service delivery
- Care for high-need, complex patients (*United States focus*)
- Low-barrier clinic models
- Implementation science research priorities
Evolution of HIV Service Delivery

One size fits all

Supporting individuals

Changing the way care is delivered

- Case management
- Transition support (jail & hospital)
- Clinic-wide messaging
- Text message support

- Navigation
- Appointment reminders
- Outreach & Patient Tracing
- Data to Care
Differentiated Service Delivery

**Differentiated Service Delivery (DSD)**

**MISSION:** To increase the scale up of differentiated service delivery to improve access to and quality of prevention, testing, treatment and care services for people living with and vulnerable to HIV.

- Client-centered
- Adapts services to the needs of patients
- Reduces burden on the healthcare system

- Fast-track ART refills
- Adherence Clubs
- Task Sharing

Focus on stable patients

Sources: picture from iasociety.org/Differentiated-Service-Delivery
Elements of Tiered Care

The levers of tiered care

- ART initiation/refills
- Clinical monitoring
- Adherence support
- Laboratory tests
- OI treatment
- Psychosocial support

- Service intensity
- Service frequency
- Service location

- Monthly
- Bi-monthly
- Every 3 months
- Every 6 months

- People

- Health worker cadre

- Physician
- Clinical Officer
- Nurse
- Pharmacist
- Community Health Worker
- Patient/peer/family

Community-Based ART Delivery

- DO ART Study
- South Africa & Uganda
- Participants not taking ART at time of entry
- Randomized to one of 3 care models

Viral suppression at 12 months

<table>
<thead>
<tr>
<th>Group</th>
<th>Viral Suppression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic Group (n=446)</td>
<td>63%</td>
</tr>
<tr>
<td>Community Group (n=427)</td>
<td>74%</td>
</tr>
<tr>
<td>Hybrid Group (n=442)</td>
<td>68%</td>
</tr>
</tbody>
</table>

RR 1.18 (1.07-1.29) Community vs. Clinic
RR 1.08 (0.98 – 1.19) Hybrid vs. Clinic

Source: Barnabas RV, Lancet Global Health, 2020
Streamlined Care

- SEARCH Study
- Universal Test & Treat trial in Uganda and Kenya
- Randomized communities (N=32)
- Intervention: streamlined care
  - Patient-centered care
  - Increased appointment spacing
  - Improved clinic access
  - Reminders
  - Tracking

Viral suppression at 3 years

- ART-experienced, baseline viral suppression (n=2,958)
  - Standard Care: 95%, Streamlined Care: 97%
  - RR 1.01 (1.00-1.03)

- ART-naïve with baseline CD4<350 (n=865)
  - Standard Care: 79%, Streamlined Care: 83%
  - RR 1.05 (0.95-1.16)

- ART-experienced, baseline viremia (n=568)
  - Standard Care: 47%, Streamlined Care: 67%
  - RR 1.41 (1.05 – 1.91)

Source: Hickey MD, JAIDS, 2020
High-Need, Complex Patients

- Tiered service strategy needed to match **spectrum of support need** among patients

Viral suppression among Ryan White Clients, 2010-18

87.1% of clients reported to receive HIV medical care reached viral suppression* in 2018
Not Unique to HIV

Sources: nationalcomplex.care, samhsa.gov, va.gov/HOMELESS, nhchc.org, nam.edu
Target Population

- Virally unsuppressed
- Not engaged in HIV medical care
- Complex medical & social needs
  - Homelessness & unstable housing
  - Substance use disorders
  - Mental health disorders

A central goal of care for high-need, complex patients is to *mitigate the impact of* social & structural inequities on HIV health outcomes.
What is Low-Barrier Care?

• Designed specifically to engage the “hardest-to-reach” people with HIV
• Changes the model of care available for patients who don’t engage in mainstream care
• Aims to reduce health systems barriers
• Informed by low-barrier models of substance use disorder treatment
The United States (and near neighbors) Context: Low-Barrier Care Programs*

*Undoubtedly incomplete map

Source: Ending the HIV Epidemic map from hiv.gov
Common Elements of Low-Barrier Care

• Walk-in access to primary care
• High-intensity case management
• Address immediate needs such as food, clothing, or hygiene
• Financial incentives
• Team-based (group cares for the patient)
• Outreach (patient encounters outside clinic)
• Cross-agency coordination
• Harm-reduction orientation
Maximum Assistance Clinic

University of Washington & Public Health – Seattle & King County

Positive-health Onsite Program for Unstably-housed Populations

UCSF

Cooperative for Innovation, Research and Clinical Engagement

University of Mississippi

Sources: Public Health – Seattle & King County website; hividgm.ucsf.edu/pop-up; courtesy of Leandro Mena
Impact Evaluation – Max Clinic

Retrospective case-control

HIV care outcomes among patients enrolled in the Max Clinic (n = 50) and standard-of-care controls (n = 100) in the 12 months pre- and postbaseline.

Source: Dombrowski JC, Open Forum Infect Dis, 2019
Impact Evaluation – Max Clinic

Retrospective case-control

HIV care outcomes among patients enrolled in the Max Clinic (n = 50) and standard-of-care controls (n = 100) in the 12 months pre- and postbaseline.

*Relative Risk Ratio (RRR) Adjusted for substance use, psychiatric dx, housing status (aRRR)

Source: Dombrowski JC, Open Forum Infect Dis, 2019
Impact Evaluation – Max Clinic

HIV care outcomes among patients enrolled in the Max Clinic (n = 50) and standard-of-care controls (n = 100) in the 12 months pre- and postbaseline.

- **Viral Suppression (≥1 VL<200)**
  - Max Patients: 82%
  - Control Patients: 65%
  - aRR*: (95% CI): 3.2 (1.8-5.9)

- **Engagement in Care (≥2 visits ≥ 60 days apart)**
  - Control Patients: 64%
  - Max Patients: 90%
  - aRR*: (95% CI): 1.3 (0.9 – 1.9)

*Relative Risk Ratio (RRR) Adjusted for substance use, psychiatric dx, housing status (aRRR)

Provider visits are not the most useful measure of engagement for this model since most visits are with case managers.

Source: Dombrowski JC, Open Forum Infect Dis, 2019
Thematic Findings

Themes

- Key component is how patients feel they are treated and how social circumstances are addressed
- Walk-in access to care is essential
  - alleviates shame from missed appointments
- Incentives often served as a bridge to engagement: unimportant to some, crucial to others

Qualitative Findings

“...I was there at that road where I felt like giving up every day, and I used to tell the doctors that too.....I was like, ‘You don't understand how hard it is to take [antiretroviral medications]. You don't understand that my mom's dead and sometimes I don't care to even live’.....When I came here, it just changed my life. So, I am forever grateful to be here.

“They help me help myself. And even if I don't want to help myself, they're still in it. They're here for me regardless.

“It's a great incentive for you to take your meds and get in the habit of taking your meds, so you know, even when....you're at the point where you leave this [the Max Clinic] and you stop getting cash for taking them, you're already in the habit of [taking them] and are already in a routine of taking them, so it's not that big of a deal for you to continue to take them, you know?”

Source: Beima-Sofie K, AIDS Patient Care STDs, 2020
Impact Evaluation – POP-Up Clinic

Prospective Cohort Study

- **Eligibility**
  - Homeless or unstably housed
  - Viremic
  - ≥1 missed primary care appointment & ≥2 drop-in visits

- **Outcomes**
  - Uptake among eligible patients
  - Cumulative incidence of ART initiation
  - Return to care
  - Virologic suppression 6 months post-enrollment

- **Results forthcoming**

Source: Personal Communication, Elizabeth Imbert, manuscript under review
Discrete Choice Experiment

- Homeless or unstably housed patients (n=65) with viremia and ≥1 missed visit in past year
- Choose between hypothetical clinics

- Care team gets to know me as a person
- Drop-in (vs. scheduled) visits
- $10, $15, or $20 gift cards for clinic visits
- Direct phone communication to care team (vs. front-desk staff)
- 2 (vs. 20) blocks from where I’m staying

Source: Conte M, JAIDS 2020
Discrete Choice Experiment

- Homeless or unstably housed patients (n=65) with viremia and ≥1 missed visit in past year
- Choose between hypothetical clinics

- Care team gets to know me as a person
  - Willingness to trade $32.79 in gift cards per visit

- Drop-in (vs. scheduled) visits
  - $10, $15, or $20 gift cards for clinic visits

- Direct phone communication to care team (vs. front-desk staff)
  - 2 (vs. 20) blocks from where I’m staying

- Willingness to trade $11.45 in gift cards per visit

Source: Conte M, JAIDS 2020
Implementation Research Priorities

• Impact evaluation
  • Ideally controlled
    • Consider quasi-experimental approaches when randomization not feasible or appropriate
  • HIV care continuum outcomes
  • Other chronic conditions
  • Health service utilization

• Who needs and benefits most
  • Transitions in and out (?) of low-barrier care

• Economic analyses
• Matthew Golden
• Meena Ramchandani
• Elizabeth Imbert
• Leandro Mena
• Elvin Geng & Saiqa Mullick

Thank you!
jdombrow@uw.edu