A Novel Combination Contingency Management and Peer Health Navigation Intervention for Advancing Transgender Women of Color Living with HIV along the HIV Care Continuum

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Disclosure

• No conflict of interests
The Alexis Project was named after Alexis Rivera who died at the age of 34 from complications related to HIV. Alexis was a Latina trans woman, a community activist, a peer advocate, and a gatekeeper. Yet, even as a knowledgeable role model to so many, Alexis’ own health suffered as a result of ART non-adherence and the use of gender-enhancing substances that compromised her immune system.
Background

- Trans women, particularly trans women of color, experience multiple psychosocial and structural disparities including:
  - Increased rates of homelessness, substance use disorders, sex work, victimization and violence, mental health disorders, reduced access to health care, incarceration, unsafe or medically unmonitored gender-confirming procedures, and increased stigma, discrimination and transphobia.

- The synergistic and intersectionality nature of these health disparities place trans women at increased risk for HIV, and, for trans women living with HIV, greatly impact advancement along the HIV Care Continuum.
Community Participatory Study Design

During the development of the grant application, two focus groups (N=19) were held with trans women community members. Focus group participants were asked to identify which components of a hypothetical intervention were necessary to make it responsive to the needs of trans women of color living with HIV.

Responses included:
“give us transportation,” “make sure we make it to our appointments,” “give us incentives ‘cause we need stuff,” “stimulate people to take care of themselves,” “support us,” “I want money and a ride.”

Content analysis of focus groups:
**Peer Health Navigation** to respond to transportation, make appointments, increase self-efficacy to take care of self, provide support
**Contingency Management** to respond to “give us incentives ‘cause we need stuff”
Peer Health Navigation

The PHN sessions include (1) identify the barriers to HIV care, (2) identify and link participants into other auxiliary needed services, and (3) increase participants’ self-efficacy in working with HIV care providers. Peer Health Navigators do not provide counseling or psychotherapy; rather, they work with participants to successfully navigate complicated health care and social service systems.

Contingency Management

Behavioral economics is the application of contingencies to motivate individuals toward health-promoting behavior change. The escalating reinforcement schedule (a primary tenet of CM) serves to motivate behavior change. The CM intervention provides vouchers redeemable for goods or services (or purchasing the goods or services online for the participant) that promote a healthy/health-promoting lifestyle.
Methods

- Enrollment from February 2014 through August 2016
- Recruitment:
  - Community-wide social network recruitment and engagement methodology (i.e., Respondent Driven Sampling)
  - Venue- and street-based outreach
  - Dissemination of project flyers
  - In-reach at other programs conducted at the project site
  - In-services conducted at local agencies
  - Collaborating HIV medical care clinics
- Assessment time points and incentives:
  - Eligibility screening = $10
  - Baseline = $25
  - 6- and 12-month follow-up = $50
  - 18-, 24-, 30-, and 36-month follow-up = $100
- Computer Assisted Self Interview (CASI) assessments administered via REDCap
Eligibility

- Identified as a trans woman
- Assigned the male sex on her original birth certificate
- Between the ages of 18 and 65 years
- Reported her racial/ethnic identity as other than Caucasian/White
- HIV positive and currently not in HIV care or had not seen a HIV medical provider in the previous six months or not prescribed ART medication or prescribed ART medication but not always adherent.
Combined Peer Health Navigation + Contingency Management Intervention

Peer Health Navigation

Voucher Points

$100

$80

$60

$40

$20

$0

Timeframe  
0-2 mos  3-5 mos  6-7 mos  8-9 mos  11-13 mos  17-19 mos

Visit  
1  2  3  4  5  6

Evaluations  
Baseline  6-month follow-up  12-month follow-up  18-month follow-up

- VL & CD4  $20
- Pick Up Meds  $20
- HIV Care Visit  $20
- VL  1 log ↓  $30
- HIV Care Visit  $30
- VL  2 log ↓  $40
- HIV Care Visit  $40
- Undet. VL or ≤200  $50
- Undet. VL or ≤200  $50
- Undet. VL or ≤200  $50
Study Progress and Retention

- Inquiries: 382
- Screened: 165
- Consented: 140
- Enrolled: 139

6-Month Follow-up: n = 102/135; 75.6%
12-Month Follow-up: n = 107/133; 80.5%
18-Month Follow-up: n = 102/113; 90.3%
24-Month Follow-up: n = 80/91; 87.9%
30-Month Follow-up: n = 53/62; 85.5%
36-Month Follow-up: n = 34/40; 85.0%

Eligible = 146
Ineligible = 19

Reason for Exclusion (not mutually exclusive)
- Not transgender = 1
- Not transgender woman of color = 1
- HIV negative = 7
- Actively in care/Medically adherent = 6
- Enrolled at other site = 4

Percentage inquiries/enrollment: 36.4%
Withdrawn
- No longer transgender = 2
### Baseline Demographics (N = 139)

<table>
<thead>
<tr>
<th>Variable</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latina</td>
<td>53 (38.1%)</td>
</tr>
<tr>
<td>African American/Black</td>
<td>54 (38.9%)</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>10 (7.2%)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>3 (2.2%)</td>
</tr>
<tr>
<td>Multi/Other</td>
<td>19 (13.7%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>19 – 59 years</td>
</tr>
<tr>
<td>Mean</td>
<td>36.2 yrs (9.7)</td>
</tr>
</tbody>
</table>
## Sociodemographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sexual Identity</strong></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>65 (46.8%)</td>
</tr>
<tr>
<td>Gay/bisexual</td>
<td>40 (28.8%)</td>
</tr>
<tr>
<td>Lesbian</td>
<td>4 (2.9%)</td>
</tr>
<tr>
<td>Other/refused</td>
<td>30 (21.6%)</td>
</tr>
<tr>
<td><strong>Educational Attainment</strong></td>
<td></td>
</tr>
<tr>
<td>≤ High School/GED</td>
<td>53 (38.1%)</td>
</tr>
<tr>
<td>High School Diploma/GED</td>
<td>45 (32.4%)</td>
</tr>
<tr>
<td>Some College</td>
<td>36 (25.9%)</td>
</tr>
<tr>
<td>Bachelor’s Degree or Higher</td>
<td>3 (2.1%)</td>
</tr>
<tr>
<td><strong>Housing Status</strong></td>
<td></td>
</tr>
<tr>
<td>Homeless/Transitional Housing</td>
<td>59 (42.5%)</td>
</tr>
<tr>
<td>Housed</td>
<td>55 (39.5%)</td>
</tr>
<tr>
<td>Other/DK/Refused</td>
<td>25 (18.0%)</td>
</tr>
</tbody>
</table>
Stage of HIV Care Continuum

- 11 were unaware of their HIV positive status; 7.9% new positivity rate
- Most need ART / medication non-adherent
- 32 (23.0%) had never been in care

<table>
<thead>
<tr>
<th>Engagement in Care Continuum at Enrollment (not mutually exclusive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaware of HIV Status</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>11</td>
</tr>
</tbody>
</table>

- 118/139 (84.9%) linked to care
- Range of time from baseline assessment to linkage to care:
  - Range 0 – 467 days
  - Median = 20 days
  - Mean = 67 (SD = 103) days
Peer Health Navigation Outcomes

- Range of Peer Health Navigation sessions: 1-31 sessions; Mean 6.6 (SD = 6.5); 919 total PHN sessions
- 88.4% of the participants attended 2 or more PHN sessions
- Only 16 (11.6%) participants did not have a PHN session past their baseline session
## Contingency Management Outcomes

### Contingency Management Behavioral Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>1st HIV Care Visit</th>
<th>Received ART Medication</th>
<th>Returned for VL/CD4</th>
<th>2nd HIV Care Visit</th>
<th>3rd HIV Care Visit</th>
<th>4th HIV Care Visit</th>
<th>5th HIV Care Visit</th>
<th>6th HIV Care Visit*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieved</td>
<td>118 (84.9%)</td>
<td>98 (70.5%)</td>
<td>96 (56.8%)</td>
<td>79 (42.5%)</td>
<td>59 (28.8%)</td>
<td>40 (28.8%)</td>
<td>29 (20.9%)</td>
<td>16 (11.5%)</td>
</tr>
<tr>
<td>Reward</td>
<td>$20 pts</td>
<td>$20 pts</td>
<td>$20 pts</td>
<td>$30 pts</td>
<td>$40 pts</td>
<td>$50 pts</td>
<td>$50 pts</td>
<td>$50 pts</td>
</tr>
<tr>
<td>Total</td>
<td>$2,360 pts</td>
<td>$1,960 pts</td>
<td>$1,920 pts</td>
<td>$2,370 pts</td>
<td>$2,360 pts</td>
<td>$2,000 pts</td>
<td>$1,450 pts</td>
<td>$800 pts</td>
</tr>
</tbody>
</table>

525 Achieved

### Contingency Management Biomedical Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>Reduce VL ( \leq 1 ) Log</th>
<th>Reduce VL ( \leq 2 ) Logs</th>
<th>Undetectable VL (1)</th>
<th>Undetectable VL (2)</th>
<th>Undetectable VL (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieved</td>
<td>52 (37.4%)</td>
<td>37 (26.6%)</td>
<td>19 (13.7%)</td>
<td>12 (8.6%)</td>
<td>3 (2.2%)</td>
</tr>
<tr>
<td>Reward</td>
<td>$30 pts</td>
<td>$40 pts</td>
<td>$50 pts</td>
<td>$50 pts</td>
<td>$50 pts</td>
</tr>
<tr>
<td>Total</td>
<td>$1,560 pts</td>
<td>$1,480 pts</td>
<td>$950 pts</td>
<td>$600 pts</td>
<td>$150 pts</td>
</tr>
</tbody>
</table>

123 Achieved

### Contingency Management Totals:

- 648 Targets Achieved
- Mean = 4.7 targets (SD = 3.7)
- Total = $19,960 Pts Earned

*12 participants were not eligible to reach their 6th HIV care visit, due to the late date of their enrollment
Viral Load Outcome

• 83% who enrolled detectable and achieved the minimum 1 log viral load reduction advanced to full viral suppression

• 60/135 (44.4%) have achieved/maintained viral load suppression
Conclusions

• 7.9% new positivity rate
• 85% were linked to HIV care
• Almost all (88.4%) attended at least 2 PHN sessions
• Almost all (88.9%) earned a CM reward
• Increased attendance to PHN sessions was associated with significant achievement of both behavioral (coef. range 0.12-0.38) and biomedical (coef. = 0.10) HIV milestones (all p ≤ 0.01)
Future Directions: Next Steps

- A randomized controlled trial is needed to unpack the mechanism of behavioral change of Peer Health Navigation versus Contingency Management
Thank you!

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This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number H97HA24968 in the last annual award amount of $285,757 awarded to Friends Research Institute. No percentage of this project was financed with non-governmental sources. This information or content and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.