Reducing the HIV Burden: The PATH for Triples Intervention (PFT)

Tania Calle
SUMR Scholar 2018
Williams College

Mentors: Donna Coviello, PhD, and Michael Blank, PhD
Penn Center for AIDS Research
Significance
Serious Mental Illness (SMI) and Substance Abuse (SA) is a high risk profile for HIV/AIDS

<table>
<thead>
<tr>
<th>HIV Risk</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SMI Patients</td>
<td>5.2-22.9%</td>
</tr>
<tr>
<td>General Population</td>
<td>0.3-0.4%</td>
</tr>
</tbody>
</table>

High-risk behaviors reported as characteristic of people with SMI:
- injection drug use
- sexual activity with multiple partners/high-risk partners
- infrequent condom use
- high rates of sexually transmitted diseases (STDs)
- trading sex for material gain
- engaging in sex while using psychoactive substances

Serious Mental Illness (SMI) and Substance Abuse (SA) is a high risk profile for HIV/AIDS. Dually, those with SMI are more likely to use injection drugs. 54% of substance users (non-alcohol) are likely to have a SMI.

Bridget F. Grant, Comorbidity between DSM-IV drug use disorders and major depression: Results of a national survey of adults, Journal of Substance Abuse, Volume 7, Issue 4, 1995, Pages 481-497, ISSN 0899-3289
Screening for HIV in inpatient services is not standard practice

Only 9.4% of general hospital psychiatric departments conduct HIV testing.

Testing is related to:

- Lower educational attainment
- Higher HIV risk behavior
- Greater social support
- Homelessness
- Nonpsychotic disorder
- Borderline personality disorder
- Greater treatment utilization

Desai and Rosenheck Study

<table>
<thead>
<tr>
<th>SMI Patients Tested</th>
<th>38%</th>
</tr>
</thead>
</table>

88.8% returned to receive test results

Triple diagnosis reduces likelihood of medication adherence and viral load suppression

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>HAART Receipt Odds Ratio</th>
<th>p-value</th>
<th>Viral Load Suppression Odds Ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMI + SA</td>
<td>0.63</td>
<td>&lt;0.01</td>
<td>0.66</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>SA</td>
<td>0.75</td>
<td>&lt;0.01</td>
<td>0.77</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>SMI</td>
<td>0.93</td>
<td>0.35</td>
<td>0.93</td>
<td>0.24</td>
</tr>
<tr>
<td>Neither</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

PATH for Triples
Project Overview
Aims

1) *Treatment Adherence*

To test the effectiveness of the PFT Intervention to improve adherence to HIV and mental health treatment regimen and reduce viral loads and improve CD4 counts during the study period.

2) *Cost-effectiveness*

To examine the cost-effectiveness of the PFT intervention using the perspective of the payor

3) *Psychosocial Adjustment*

To demonstrate improvements in HIV knowledge, attitudes and risk behaviors, as well as mental health status and psychological outcomes.
12-month efficacy study that aims to evaluate the potential of nurse health navigators and individualized care to promote medication adherence and viral load adherence among patients triply diagnosed with HIV/AIDS, serious mental illness, and substance abuse.
Methods
Who?

Individuals diagnosed with HIV/AIDS, mental illness (MI), and substance abuse/addiction (SA) who have at some point participated in inpatient or intensive outpatient treatment for MI and/or SA.

Target N=130; currently enrolled=122

Exclusionary Criteria: HIV -; Persons unable to provide informed consent; inability to speak English; will not provide locator information
Where?

Originally* ‘Wright 4’ of Presbyterian Hospital in Philadelphia and ‘4 Spruce’ of Pennsylvania Hospital

*Recruitment sites were expanded to intensive outpatient units due to low enrollment
Treatment Overview

- In person baseline, 3-month, 6-month, and 9-month follow-ups for blood draw and psychosocial functions survey
- Nurse health navigator for psychoeducation and drug regimen support
- Intervention cascade for individual based care

Randomization

Experimental

Control

- In person baseline, 3-month, 6-month, and 9-month follow-ups for blood draw and psychosocial functions survey
Path for Triples Intervention Cascade

Is the patient 80% adherent?

Yes

Social Support

Is the patient 80% adherent?

Yes

Text to Cell Phone

Is the patient 80% adherent?

Yes

Call to Cell Phone

Is the patient 80% adherent?

Yes

Directly Observed Therapy

All experimental receive basic intervention

No

No

No

No
## Results

<table>
<thead>
<tr>
<th>Average Age</th>
<th>42.6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>56</td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
</tr>
<tr>
<td>Transgender (M to F)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Race (%)

<table>
<thead>
<tr>
<th>Race</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>76</td>
</tr>
<tr>
<td>Caucasian</td>
<td>18</td>
</tr>
<tr>
<td>Asian</td>
<td>3</td>
</tr>
<tr>
<td>Multiple races</td>
<td>3</td>
</tr>
</tbody>
</table>

### Psychiatric Disorder (%)

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>64</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>21</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>13</td>
</tr>
<tr>
<td>Anxiety</td>
<td>11</td>
</tr>
<tr>
<td>Psychotic disorder NOS</td>
<td>10</td>
</tr>
<tr>
<td>PTSD</td>
<td>10</td>
</tr>
</tbody>
</table>

## Results: Viral Load Suppression

### Univariate Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Suppression (%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opiate use in past 30 days</td>
<td>6</td>
<td>.038</td>
</tr>
<tr>
<td>Psychotic Disorder (NOS)</td>
<td>3</td>
<td>.099</td>
</tr>
</tbody>
</table>

### Logistic Regression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opiate use in past 30 days</td>
<td>6.0</td>
<td>.038</td>
</tr>
</tbody>
</table>

My Role

Pre-screening patients

Called referred patients and screened them for our study
Responded to patient queries

Data management

Entered and verified data of patient surveys and biomarkers

Follow-up Interviews

Partially conducted psychosocial function surveys
Lessons Learned

Value and importance of patient privacy

Flexibility of bedside manner

Complexity of co-morbidities and their impact on health
Acknowledgements

Dr. Donna Coviello

Dr. Michael Blank

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Maria Plano

Joanne Levy

LDI Center
Questions?