HIV AND SERIOUS MENTAL ILLNESS:
A CASE FOR EXPANDING ROUTINE TESTING

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Project Goals

• Familiarize Progress Foundation (PF) staff with current, routine HIV testing recommendations and types of rapid antibody tests

• Encourage PF health system to routinely refer all ADU clients for testing at off-site locations

• Disseminate information about nearby, off-site HIV screening resources

• Assess openness to exploring point of care testing at PF ADU’s or other long-term program sites

• Influence overall screening strategy in populations with serious mental illness
The Problem: Large Gap in HIV Serostatus Awareness

Of the 1.1 million people infected...

- 16 percent unaware of their infection (180,000 people)

- Approximately 1/2 of estimated 50,000 new HIV infections each year transmitted by people who don’t know their serostatus

- Transmission rate from HIV-infected individuals unaware of their infection 3.5x higher than from individuals who are aware of their infection.

(CDC, 2013; Hall, 2012)
HIV and SMI

• Individuals with SMI at increased risk for HIV infection

• 1-23% prevalence, depending on mental health setting, study design, and study samples

• 6-8x higher HIV prevalence than general US population (0.6%)

• Blank et al. (2014): 4.8 % mean HIV prevalence in 3 mental health settings (n=1061) in Baltimore and Philadelphia

• High prevalence of HIV+ patients with MDD (22%) and dysthymia (5%) (Burnam & Beckman, 2002)

• **Triple Diagnosis** - 16-23 % in hospital-based psych units, NYC; 10-28% in substance abuse treatment centers (Dausey & Desai, 2003; McKinnon et al., 2000)
HIV and SMI: Barriers to testing

• Patients with SMI are screened at lower rates:
  - screening rates for at-risk SMI patients as low as 17-48% (Senn and Carey, 2009)
  - 16% of outpatient CMHC’s offered testing services in NY study (Satriano, 2007)
  - higher testing rates among Pts with MDD, BPD, and schizoaffective disorder

• Mental health providers aren’t proactively screening their patients:
  - reluctance to ask about risk behaviors
  - limited time/resources
  - lack of knowledge about blood-borne infections
  - discomfort in handling test results
  - belief SMI patients should get testing done at medical sites
  - 41% of Houston physicians (n=137) unaware of HIV testing recommendations in primary care settings

Amspoker et al., 2014; Walkup, 1998; Satriano, 2007; Senn & Carey, 2008
The Recommendations: CDC

All individuals between the ages of 13 and 64 in all healthcare settings should be screened for HIV at least once in their lifetime in areas with HIV prevalence > 0.1%

And....

- Notify patient that testing will be performed unless he or she declines (opt-out screening)
- No separate written consent; consent for general medical care sufficient
- Pre-test prevention counseling not required.
- Screen high-risk individuals at least annually
The Recommendations: USPSTF

- The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years (Grade A)

- Younger adolescents and older adults who are at increased risk should also be screened (Grade A)

- All pregnant women should be tested for HIV, including those who present in labor who are untested and whose HIV status is unknown (Grade A)
Current HIV screening practice at PF

- Providers (adult and psychiatric mental health NP’s) refer ADU residents to off-site HIV testing clinics

- Screening referrals are generally risk-based rather than routine

- HIV testing referral occurrences are tracked in an electronic survey

- No on-site screening

- Known HIV + patients have care coordinated between PF ADU’s and HIV specialty clinics at Tom Waddell and Ward 86
Current HIV screening practice at PF

• Limited discussion and documentation of residents’ sexual history and behaviors, or past HIV testing history by providers or counselors

• Other high risk behaviors (illicit drug/ETOH use) documented during intake

• No written information for clients about nearby, off-site HIV testing locations
Methods: Pre/Post-Test Assessment

1. Needs assessment of key informants at 3 of 4 PF ADU’s

2. Online Qualtrics Survey
   - **Purpose**: Assess PF’s staff’s baseline knowledge of HIV epidemiology, current testing recommendations, and comfort level in referring clients for routine testing
   - Generated from validated surveys used by CDC and cross-sectional studies
   - Adapted to mental health setting
   - Pre-assessment survey: 17 questions (*45/65 completed*)
   - Post-assessment survey: 21 questions (*5 additional qualitative questions*) (*22/65 completed*)
   - Surveys opened 1 week before workshop, and closed 7-10 days afterwards
Methods: Educational Intervention

**Intervention:** Educational workshop at Progress Foundation headquarters in San Francisco, CA

- Two, 1.5 hr presentations using Power Point slide deck (*Nov. 4 and 18*)
- Single presenter, with audience fielding questions during workshop
- 65 eligible to attend (*56 ADU staff + 9 providers*)
- 48 attended (*n=22 on Nov. 4; n= 26 on Nov. 18*)
- 93 % of attendees were ADU counselors and program directors, 2 NP’s and 1 psychiatrist attended; 2 SFSU RN students observed
- Distributed 2-pg testing resource list identifying closest HIV screening sites
Data Analysis:

• Means from questions containing 5-pt Likert scale items (1=strongly disagree, 2= disagree, 3=neither agree or disagree, 4=agree, 5=strongly agree) calculated by Qualtrics

• Other questions with categorical (multiple choice) answers examined percentage differences between pre and post-assessment surveys

• Differences in both means and percentages likely not significant because of low response rate on post-assessment survey
**Data Analysis: Familiarity with CDC’s HIV testing recommendations**

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Pre-assessment (n=45)</th>
<th>Post-assessment (n=22)</th>
<th>Difference in mean or %</th>
<th>Data Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2 (1) I think routine HIV testing is an important part of regular health care</td>
<td>4.23</td>
<td>4.32</td>
<td>+ 0.09</td>
<td>- Small shift toward “agree” on 5-point Likert scale</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Majority of staff in believe in merit of routine HIV testing</td>
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<tr>
<td>#2 (7) Clients may be concerned about the confidentiality of routine HIV testing</td>
<td>3.86</td>
<td>3.73</td>
<td>- 0.13</td>
<td>- Small shift toward “disagree” on 5-point Likert scale</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Slightly less staff wariness around issue of testing and confidentiality in intimate ADU setting</td>
</tr>
<tr>
<td>#2 (10) We have the resources needed to counsel clients regarding the importance of routine HIV testing</td>
<td>2.64</td>
<td>2.68</td>
<td>+ 0.04</td>
<td>- Almost no change from “disagree” answer on 5-point Likert scale</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Progress Foundation may not have the resources to support routine HIV testing</td>
</tr>
<tr>
<td>#4 What is the definition of routine testing? A: Testing all clients ages 13-64 regardless of risk</td>
<td>28 %</td>
<td>55%</td>
<td>+ 27 %</td>
<td>Increased number of staff who understand definition of routine testing</td>
</tr>
</tbody>
</table>
**Data Analysis: HIV testing among specific populations**

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<tr>
<td>#7 (1) All clients in the following population should be routinely tested: <strong>Teenagers (13-17)</strong></td>
<td>47 %</td>
<td>82 %</td>
<td>+ 35 %</td>
<td>Increased number of staff who feel young adults should be routinely screened</td>
</tr>
<tr>
<td>#7 (3) All clients in the following population should be routinely tested: <strong>Elderly Adults (65+)</strong></td>
<td>28 %</td>
<td>59 %</td>
<td>+ 31 %</td>
<td>Greater misunderstanding of current testing guidelines among older adults (routine testing until age 65)</td>
</tr>
<tr>
<td>#8 What is the estimated prevalence of HIV among people with serious mental illness? A: 5-10%</td>
<td>40 %</td>
<td>64 %</td>
<td>+ 24 %</td>
<td>Increased staff awareness of higher HIV prevalence among clients with SMI compared to general pop.</td>
</tr>
<tr>
<td>#9 Should people with serious mental illness be routinely tested for HIV? A: <em>All of the time</em></td>
<td>21 %</td>
<td>45 %</td>
<td>+ 24 %</td>
<td>Larger percentage of respondents who feel clients with SMI should be routinely screened</td>
</tr>
</tbody>
</table>
Data analysis: If you are a nurse practitioner, registered nurse, or psychiatrist, please answer the following: Before completing this survey, I was aware/unaware that the CDC issued updated recommendations for routine HIV testing in 2006?

Progress Foundation’s provider awareness of CDC’s 2006 HIV testing recommendations

- 56% Very familiar
- 33% Familiar
- 11% Somewhat familiar
- 0% Not at all familiar
Data Analysis: All clients in the following settings should be routinely tested for HIV

- Prenatal care settings: 72%
- Primary care (13-17): 37%
- Primary care (18 and...): 58%
- ED: 44%
- Inpatient hospital units: 40%
- STI clinics: 93%
- Substance abuse tx: 65%
- Overall: 82%
Data Analysis: Routine HIV testing at ADU’s may not be a good idea
**Data Analysis: Benefits of HIV screening at PF ADU’s**

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<thead>
<tr>
<th>Survey Question</th>
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<tr>
<td>#15 (1) It is important for everyone to know their HIV status.</td>
<td>4.53</td>
<td>4.55</td>
<td>+ 0.02</td>
<td>- Minimal change in mean&lt;br&gt;- Staff agreed ADU clients should know their serostatus</td>
</tr>
<tr>
<td>#15 (2) ADU clients will benefit from knowledge of their HIV status</td>
<td>4.30</td>
<td>4.36</td>
<td>+ 0.06</td>
<td>- Minimal change in mean&lt;br&gt;- Majority of PF attendees “agreed” that ADU residents will benefit from knowing their HIV status</td>
</tr>
<tr>
<td>#15 (3) ADU clients will accept referrals for HIV testing</td>
<td>3.28</td>
<td>3.59</td>
<td>+ 0.31</td>
<td>-- Small shift toward “agree” on 5-point Likert scale; weighted more toward “neither agree/disagree”&lt;br&gt;- Staff ambivalence on whether or not ADU clients will be open to referrals for HIV screening</td>
</tr>
<tr>
<td>#15 (5) ADU referrals for routine HIV testing and counseling may help clients to modify their risk behaviors</td>
<td>3.70</td>
<td>4.05</td>
<td>+ 0.35</td>
<td>- Small shift toward “agree” on 5-point Likert scale&lt;br&gt;- More staff felt referrals for HIV screening will help ADU residents modify risk behaviors after post-assessment</td>
</tr>
<tr>
<td>#15 (6) ADU referral for HIV testing and counseling may lower the HIV transmission rate in the local community</td>
<td>3.67</td>
<td>4.18</td>
<td>+ 0.51</td>
<td>- Moderate shift toward “agree” on 5-point Likert scale&lt;br&gt;- Noticeably more staff thought HIV screening referrals will help lower HIV infection rates</td>
</tr>
</tbody>
</table>
Data Analysis: How willing are you to refer, or support a referral for, an ADU resident for HIV testing?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of the time</td>
<td>47%</td>
<td>36%</td>
</tr>
<tr>
<td>Most of the time</td>
<td>28%</td>
<td>45%</td>
</tr>
<tr>
<td>Occasionally</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>Rarely</td>
<td>4.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Nevr</td>
<td>0%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Data Analysis: Additional post-assessment questions

- 59% (n=13) of respondents agreed, and 27% (n=6) strongly agreed, that their level of understanding about the natural history and epidemiology of HIV increased after the workshop; 9% (n=2) disagreed

- 41% (n=9) of respondents agreed, 27% (n=6) neither agreed or disagreed, and 23% (n=5) disagreed that the workshop changed their viewpoint on HIV screening among people with SMI
Summary of Major Findings

• Progress Foundation staff believe there is value in clients with SMI knowing their HIV serostatus

• Majority of PF staff (59%) agreed that their level of understanding of HIV screening recommendations and HIV natural history and epidemiology increased after attending workshop

• Less than ½ of survey respondents (41%) stated the intervention changed their viewpoint of HIV screening among the mentally ill

• Most survey respondents felt the Progress Foundation doesn’t have the resources or trained staff to initiate on-site testing in the near future

• Majority of staff concluded HIV testing, or referrals for testing, for their acute population at ADU’s may not be appropriate; Long-term programs (6-9 month stays) at other sites might be more suitable
Summary of Major Findings

• Most significant change from intervention was belief that HIV screening could lead to behavioral change and reduced HIV transmission by ADU residents

• Majority of staff concluded HIV testing, or referrals for testing, for their acute population at ADU’s may not be appropriate; Long-term programs (6-9) mos at other sites might be more suitable
Limitations

• Low provider attendance at workshop

• Disparate response rate in completion of post-assessment survey

• 14% \((n=3)\) of post-assessment respondents didn’t complete the pre-assessment survey

• Email reminders to complete survey had to be channeled through ADU program directors

• Intervention spent less time than anticipated on clinical testing information
  and adapting point of care screening to mental health setting

• Intervention limited to one type of PF mental health setting (ADU)
Future Clinical and Policy Considerations

- Continue to encourage provider referral and staff support of HIV testing for all residents at PF's ADUs, regardless of risk profile

- Explore the feasibility of point of care testing in either the ADUs or the PF transitional houses (with adequate resources) in the future

- Create or utilize existing linkage-to-care resources for clients with (+) rapid test results, paying special attention to mental health needs

- Consider PREP as prevention strategy for higher-risk groups within SMI population
Evidence-Based Practice: The STIRR model for HIV testing

- **STIRR**: Screening and testing for HIV and Hepatitis C virus, immunization for Hepatitis A and B virus, Risk-reduction counseling and medical treatment referral to infectious disease medical follow-up

- **RCT** to compare STIRR (n=118) with usual care (n=118)

- **Study participants**: Dx of schizophrenia or schizoaffective disorder (69.9%), Bipolar Disorder (17%), and Major Depressive Disorder (13.1%); Homeless (6%); Alcohol or drug use disorder (29%), IDU (24.2%, 92.3% had shared needles)

- **Results**: 6.1% HIV prevalence, 25% Hepatitis C prevalence; STIRR intervention participants were more likely to be tested for HIV and HCV, had increased HCV knowledge, and reduced substance abuse.
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- Angela Dombrowski, PF administrative assistant
References


