
HIV AND SERIOUS MENTAL ILLNESS:

A CASE FOR EXPANDING ROUTINE TESTING

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*Interprofessional Primary Care Outreach for Persons
with Mental Illness*

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.

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

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' 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

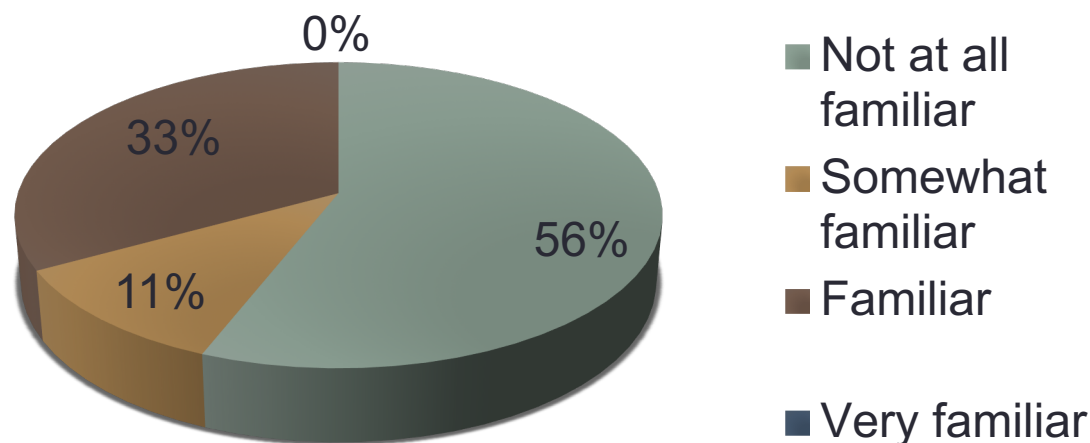
Survey Question	Pre-assessment (n=45)	Post-assessment (n=22)	Difference in mean or %	Data Interpretation
#2 (1) I think routine HIV testing is an important part of regular health care	4.23	4.32	+ 0.09	- Small shift toward “agree” on 5- point Likert scale - Majority of staff in believe in merit of routine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

Data Analysis: HIV testing among specific populations

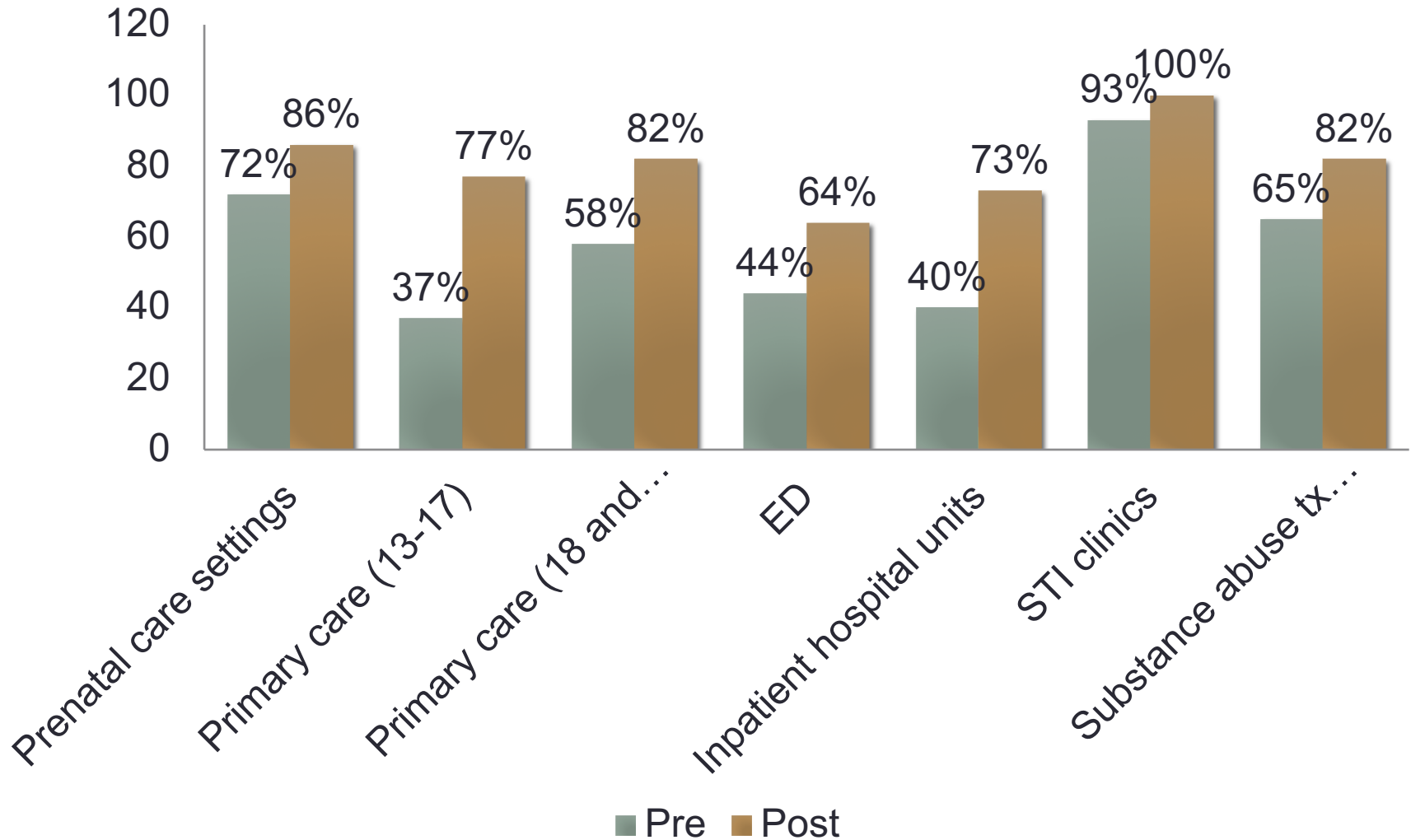
Survey Question	Pre-assessment (n=45)	Post-assessment (n=22)	Difference in %	Data Interpretation
#7 (1) All clients in the following population should be routinely tested: Teenagers (13-17)	47 %	82 %	+ 35 %	Increased number of staff who feel young adults should be routinely screened
# 7 (3) All clients in the following population should be routinely tested: Elderly Adults (65+)	28 %	59 %	+ 31 %	Greater misunderstanding of current testing guidelines among older adults (routine testing until age 65)
#8 What is the estimated prevalence of HIV among people with serious mental illness? <i>A: 5-10%</i>	40 %	64 %	+ 24 %	Increased staff awareness of higher HIV prevalence among clients with SMI compared to general pop.
#9 Should people with serious mental illness be routinely tested for HIV? <i>A: All of the time</i>	21 %	45 %	+ 24 %	Larger percentage of respondents who feel clients with SMI should be routinely screened

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?

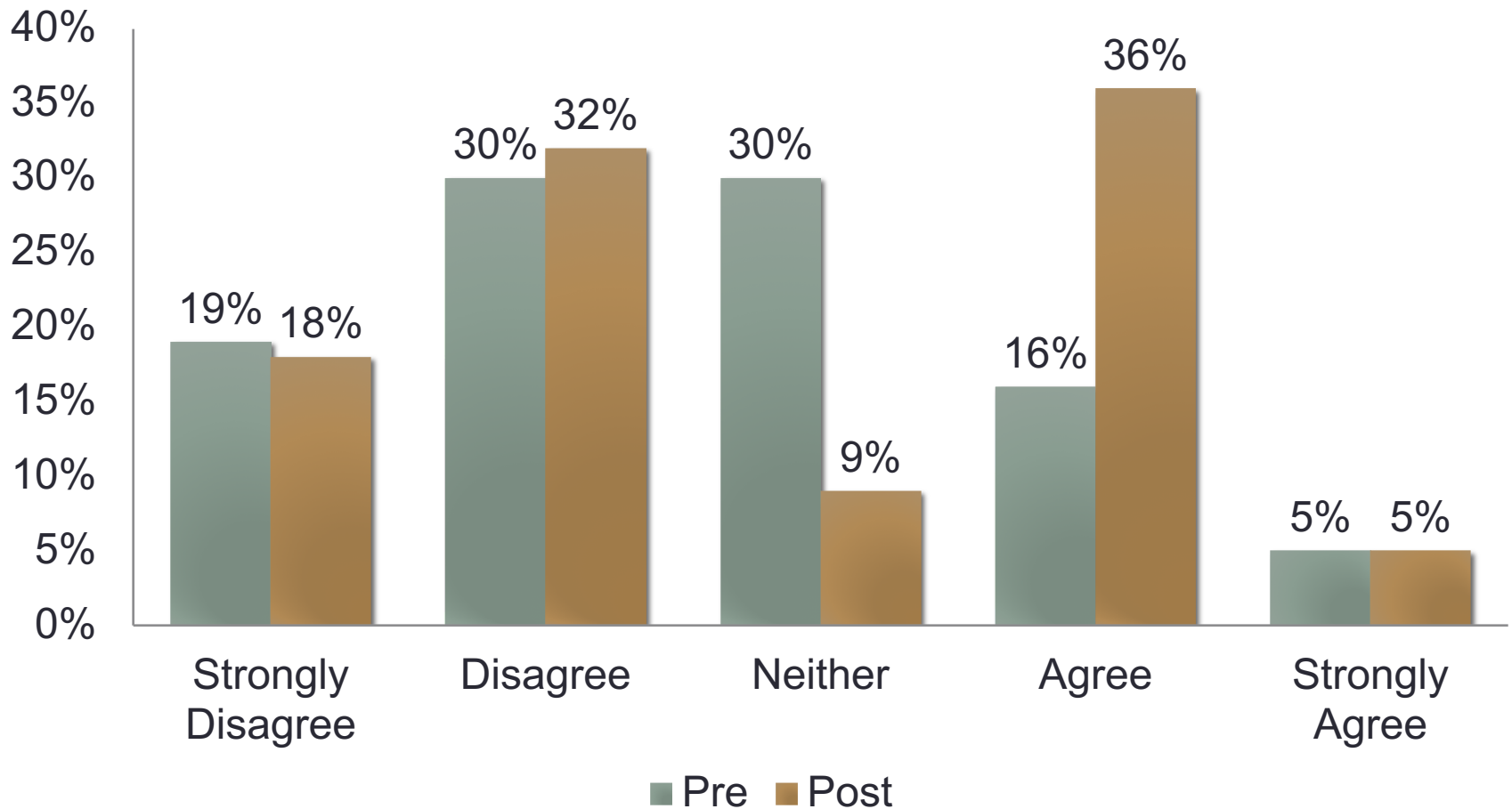
Progress Foundation's provider awareness of CDC's 2006 HIV testing recommendations



Data Analysis: All clients in the following settings should be routinely tested for HIV



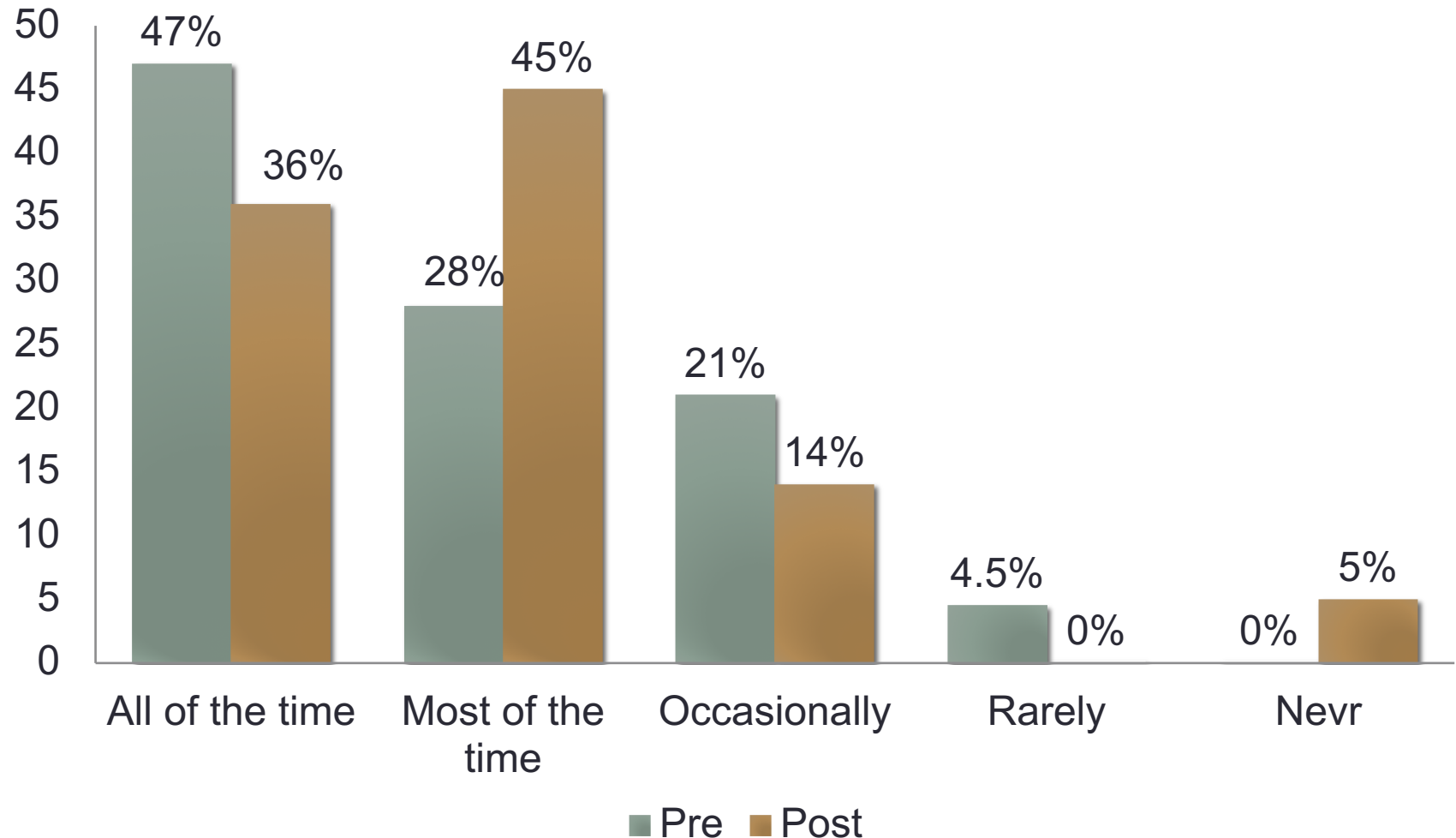
Data Analysis: Routine HIV testing at ADU's may not be a good idea



Data Analysis: Benefits of HIV screening at PF ADU's

1 Survey Question	Pre-assessment (n=45)	Post-assessment (n=22)	Difference in mean /	Data Interpretation
#15 (1) It is important for everyone to know their HIV status.	4.53	4.55	+ 0.02	- Minimal change in mean - Staff agreed ADU clients should know their serostatus
#15 (2) ADU clients will benefit from knowledge of their HIV status	4.30	4.36	+ 0.06	- Minimal change in mean - Majority of PF attendees "agreed" that ADU residents will benefit from knowing their HIV status
#15 (3) ADU clients will accept referrals for HIV testing	3.28	3.59	+ 0.31	-- Small shift toward "agree" on 5- point Likert scale; weighted more toward "neither agree/disagree" - Staff ambivalence on whether or not ADU clients will be open to referrals for HIV screening
#15 (5) ADU referrals for routine HIV testing and counseling may help clients to modify their risk behaviors	3.70	4.05	+ 0.35	- Small shift toward "agree" on 5- point Likert scale - More staff felt referrals for HIV screening will help ADU residents modify risk behaviors after post-assessment
#15 (6) ADU referral for HIV testing and counseling may lower the HIV transmission rate in the local community	3.67	4.18	+ 0.51	- Moderate shift toward "agree" on 5- point Likert scale - Noticeably more staff thought HIV screening referrals will help lower HIV infection rates

Data Analysis: How willing are you to refer, or support a referral for, an ADU resident for HIV testing?



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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