Pre-Exposure Prophylaxis (PrEP) Protocol for the Urgent Care and Incidence of Sexually Transmitted Infection (STI) Among PrEP Users

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Jack J. Mayeux, MSN, APRN
Pre-exposure Prophylaxis (PrEP) Protocol for the Urgent Care Setting

Jack J. Mayeux and Yeow Chye Ng

Objectives:

1. The learner will have a better understanding of why there is a need for an urgent care (UC) PrEP protocol.

2. The learner will be provided a PrEP protocol and be able to discuss the use and potential problems of initiating PrEP in the UC setting.
Background:

• Guidelines for clinicians who initiate PrEP are widely available, there is an unfortunate gap within these guidelines as they are currently only intended for primary care or specialty providers (CDC, 2017).

• UC offices have been reluctant to adopt this preventative method due to a lack of standard protocol specific to the urgent care environment (Ayers, 2017).
Methods:

• A search of the latest guidelines for the initiation of PrEP medication from the Centers for Disease Control and Prevention (CDC) was performed.

• The recommendations from the CDC were synthesized based on the appropriate clinical practice and feasibility for the UC setting.
Methods:

• Additionally, studies evaluating the use of PrEP in various settings were reviewed for cause of the lack of PrEP use.
Findings:

• While these guidelines are informative and give ample information to help guide practice, they comprise 77 pages of data. (CDC, 2017).

• Due to the size of this document and the UC provider seeing an average of 4.5 patients per hour, the busy UC clinician can feel overwhelmed.
• Additionally, there is a lack of comfort and numerous perceived barriers being held by UC clinicians toward the initiation of PrEP (Krakower, Ware, Mitty, Maloney, & Mayer, 2014).

• Due to the lack of guidance and comfort, a strong initiative to develop an urgent care specific protocol for the introduction of PrEP services was completed.
## Table 1. Suggested lab testing process for PrEP

<table>
<thead>
<tr>
<th>Procedure</th>
<th>First Visit</th>
<th>3-month (refill)</th>
<th>6-month (refill)</th>
<th>9-month (refill)</th>
<th>12-month (refill)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess for acute infection</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
</tr>
<tr>
<td>HIV test (HIV Ab)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HIV test (HIV Ag/Ab)</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Urinalysis Analysis</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hepatitis (HBV sAg)</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hepatitis (HBV sAb)</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hepatitis (HCV Ab)</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pregnancy testing</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Check for medication side effects</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Urine GC/CT (Males)</td>
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<td>✓</td>
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<td>✓</td>
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<tr>
<td>Rectal GC/CT</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Pharyngeal GC/CT</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Vaginal GC/CT/TV (Females)</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Renal function, CrCl &gt; 60 mL/min</td>
<td>c ✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Prescribe 90-day supply of PrEP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Assess the need to continue PrEP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

*a* Ig HBV sAb reactive, do not perform annual sAg.

*b* If reactive, refer to gastroenterologist

*c* May be conducted during a pre-visit
Discussion

• Use of the protocol can help with:
  – Identifying patients who may benefit from PrEP use
  – Identify required laboratory tests
  – Assist with the scheduling of follow up appointments
  – Address the needs for information related to future referrals
Conclusion

• With the guidance provided by the developed protocol, comfort and use of PrEP within the UC setting can increase to provide a valuable HIV prevention tool.

• With the large number of UC centers located within the U.S. and volume of patients seen for various conditions, increased PrEP utilization due to the developed protocol could provide a large impact on HIV prevention.
• The UC could initiate a new PrEP prescription or continue current PrEP services for 90 days.

• The patient can then need to be referred to their primary care or specialist clinic for continued management.
We have no relevant financial, professional, or personal relationships to disclose.

**Should Pre-Exposure Prophylaxis (PrEP) Services be Blamed for the Increased Rate of Sexual Transmitted Infections?**

Yeow Chye Ng and Jack Mayeux

**Objectives:**

1. The learner will understand the limitations of the literatures data pertaining to sexual transmitted infections among current pre-exposure prophylaxis (PrEP) users, and why PrEP providers should continue to provide PrEP services in conjunction with STIs prevention education.
The National HIV Surveillance System and pharmacy data show that pre-exposure prophylaxis (PrEP) use can be associated with serious declines in new HIV diagnoses (Sullivan, 2018).

Pre-exposure prophylaxis (PrEP) is a once-a-day pill regimen that was first approved by the US Food and Drug Administration as a biomedical drug in HIV prevention in 2012.

• Rising cases of STIs among PrEP users has been reported by multiple clinics.
Methods:

• Pubmed, CINAHL, and Embase databases were searched for peered-reviewed studies concerning the incidence of STI rates among the PrEP population from January 2014 to November 2018 according to PRISMA.

• Of the 223 manuscripts reviewed, 30 met the inclusion criteria and were synthesized.
Findings:

• Three common limitations were noted in these reports:
  1) STI cases are based on cross sectional data
  2) Limited participants in the analysis for STIs among PrEP users
  3) There is a lack of longitudinal data to support that PrEP promotes risky behaviors such as unprotected sex among current PrEP users
• While approved in 2012, PrEP services did not receive much consumer attention until late 2014.

• A majority of the PrEP clinics are still in the beginning stages of providing PrEP services.

• Spiking STI cases among PrEP users should serve as a warning to providers that further preventative education may be needed for all patients.
• This study also emphasizes the importance of following screening and treatment guidelines in PrEP.

• PrEP providers should continue to monitor the trending of the STI cases and disseminate this information to other clinic providers.
Discussion

• The incidence of STIs among PrEP users has increased tremendously, but current reportable data that suggests PrEP is the sole instigator for the rise of STIs is still inconclusive.
Conclusion

• PrEP is a lifesaving HIV prevention medication and providers should continue to offer the service to patients who could benefit from the treatment.

• This must be paralleled with safe sex education as part of the protocol.

• Further longitudinal research is required to explore and identify risky behavior among PrEP users within the context of STIs.
Questions?

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Telemedicine Counseling Intervention for Rural HIV Patients with Comorbid Depression, Anxiety and Substance Use Issues

Safiya George, PhD, APRN-BC
Disclosure: The authors have no financial or other conflicts of interest to declare.
Objectives

- Background statistics on and screening for mental health and substance use issues in PLWH.
- Development and testing of a multi-level program for PLWH with mental health and/or substance use issues to support and improve medication adherence and retention in HIV care among PLWH, using:
  - (1) peer education and support and
  - (2) mental health and substance abuse group counseling via telemedicine videoconferencing
- How telemedicine can also be used in HIV prevention counseling, including counseling for pre-exposure prophylaxis (PrEP).
Background: HIV in the US

- At the end of 2015, an estimated 1.2 million persons aged ≥13 years were living with HIV infection in the US
  - including an estimated 161,200 (13%) persons whose infections had not been diagnosed.

- Southern states account for 44% of all people living with HIV in the US
  - despite the south only having 37% of the US population
In 2013, 12,025 (diagnosed) PLWH in Alabama

- HIV Diagnosis Rate Was 297 (Per 100,000)
- 72% Men And 28% Women
- 65% Black, 28% White, and 3% Latino
- Number of Deaths Was 288
- Rate Of Deaths Was 7 (Per 100,000)
Background: Depression & Substance Abuse in PLWH

- People living with HIV (PLWH) more likely than those in the general population to
  - experience depression and anxiety
  - have a history of substance abuse,

- People living with HIV (PLWH) less likely to
  - access treatment, especially in the rural South.
Background: Telemedicine in PLWH

- Few Studies Have Used Telemedicine Interventions In PLWH
- One Study Examined The Use Of Telemedicine In PLWH And Showed
  - 85% Satisfaction Rates,
  - Improved Care
  - Improved Health Outcomes: HIV Viral Cell Counts And ART Adherence Rates.
What is telemedicine?
Rationale for Study

• Substance abuse and mental illness are major risk factors for HIV transmission and may challenge PLWH’s engagement in the HIV care continuum
  – which is critically needed to decrease HIV viral load (VL) and transmission.

• Thus, interventions which better address co-existing HIV/AIDS and substance abuse and/or mental illness are needed,
  – particularly in rural settings, such as in the Deep South.
STUDY PURPOSE

• To develop and evaluate a multilevel approach, using
  – professional group counseling
  – via telemedicine and
  – peer support
Project Goals

• This project will help address the National HIV/AIDS Strategy (NHAS), Goal 2C
  – to “increase access to care and improving health outcomes for PLWH by supporting comprehensive, coordinated, patient-centered care for PLWH, including addressing HIV-occurring conditions and challenges meeting basic needs.”

• To improve mental health, substance abuse and HIV outcomes, including HIV treatment adherence, in PLWH in four West Alabama counties: Tuscaloosa, Walker, Sumter, Pickens and Hale.
Figure 1. Study Schema

Phase I (0-6 months)
Develop Multilevel HIV program
(based on preliminary studies)

Feedback from experts/clinicians
(Evaluation form)
Focus Group & evaluation form (n=10)

Evaluation of Phase I Outcomes
Qualitative analysis of Key themes and ideas
Recruitment, eligibility, satisfaction rates & feedback/responses

Revise Multilevel HIV Program & Manual

Screening for mental health/substance abuse issues

Phase II (6-20 months)
Enroll n=50 PLWH & Pilot Test Multilevel HIV Program & Manual

Multilevel HIV Program Telemedicine Group n=50
12 bi-weekly sessions: HIV treatment adherence,
mental health, coping, substance use

Examples of Outcome Measures
Depression & Anxiety (self-report PHQ), substance use (AUDIT, DAST)
Antiretroviral Therapy Adherence (self-report)
HIV care ‘Retention’, HIV-RNA PCR, CD4 count (record review)
Feasibility/Acceptance/Satisfaction (End of study evaluation form)
Moderators: session attendance
Mediators: Self-efficacy for ART Adherence
Self-efficacy for depressive or anxious symptom self-management
Study Design/Procedures

• **Phase 1**, included *development of (1) a peer leadership development program*; and (2) *substance abuse and mental health support groups*, via *telemedicine*, based on:
  – previous studies
  – guidelines from the Substance Abuse and Mental Health Services Administration (SAMHSA),
  – the National Institute for Drug Abuse
  – American Association of Telemedicine (ATA)

• Each group session co-led by an in-person peer leader (PL) and a licensed professional counselor (LPC) via telemedicine.

• A Peer Leader and study team member present at each site’s group session and will connect the LPC to the session via videoconference.
Study Design/Procedures

- **Phase 1**, Also Included 3 **Focus Group Sessions**
- To Assess Initial Reactions To The Proposed Program, We Sought Input From PLWH Via Focus Groups (FG), After Receiving Input From Experts Via Informal Review And Feedback.
  - Subjects Screened In-person Or Via Telephone Using A Screening Form (Described Below) And Asked To Provide Written Informed Consent.
  - They Were Compensated $25 For Their Time.
  - We Enrolled 15 PLWH (With Depression/Anxiety and/or Substance Abuse) On ART And Asked Them To Attend A 2-hour Focus Group, With Mock Sessions.
  - The FG Audio Taped And Transcribed.
  - They Were Asked To Rate The Program And Provide Suggestions For Improvement.
  - The Program Updated As Necessary
Peer Leader Training

- HIV Peer Leader and Advocacy Manual developed by Dr. Foster, with help from student research assistants

- 4 HIV+ peer leaders selected and trained

- The PIs, Co-Investigators, 3 student research assistants and the LPC attended the training
Study Procedures: Phase 2

• Screen about 150 PLWH to identify mental health and substance use issues and invite 50 who meet criteria to participate in phase 2 of the program.
Setting & Sample Recruitment

• PLWH recruited from an aids service organization and an hiv clinic

• PLWH recruited using:
  – 1) a study flyer posted/disseminated at each site;
  – 2) direct recruitment/referral of clients by ASO and HIV Clinic staff through their clinical and outreach programs
Eligibility: Inclusion

• **Phase 1 Eligibility** criteria are:
  – HIV+;
  – 18-85 Years;
  – English Speaking;
  – Report Depressive Or Anxiety Symptoms and/Or Substance Abuse
  – Willing To Participate In Study Procedures

• **Phase 2 Eligibility** Criteria Are:
  – 1) Meets Criteria For Risk Of Depression, Anxiety And/Or Substance Abuse Or Dependence On Phq, Audit And Dast-10;
  – 2) Currently On ART And Self-report Less Than 100% Adherence.
  – Eligible PLWH Asked To Provide Written Informed Consent.
Eligibility: Exclusion

• **Exclusion** criteria are:
  • significant cognitive impairment (mini-mental status exam score [MMSE] < 16);
  • current mental health/addiction counseling or within past two months.
  • current suicidal ideations and psychotic behavior, since these may negatively affect their ability to safely participate in group therapy.

• Patients with serious problems will be referred immediately to a mental health clinician on site.
Data Collection & Analysis

- **Phase I**
  - Computerized surveys analyzed using SPSS statistical software version 23
  - NVivo 11 software (QSR international) used to analyze qualitative data

- **Phase 2:**
  - Data is collected at four time periods, during screening, pre-intervention, post-intervention, and 3 months post-intervention
  - Data include computerized surveys on demographics, mental health, substance use, coping, HIV medication adherence, and self-efficacy
  - Lab reports of data on CD4 count and HIV viral load are obtained and clinic appointment attendance from medical records
  - Study outcomes will be examined using repeated measures analysis of covariance (ANOVA) in SPSS version 24 and mixed ANOVA models will examine the effect of the intervention
<table>
<thead>
<tr>
<th>Primary Outcomes</th>
<th># of items</th>
<th>Measure</th>
<th>Notes</th>
<th>Data Collection</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression &amp; Anxiety</td>
<td>9</td>
<td>PHQ78, 79 and PHQ-980-83</td>
<td>Diagnostic instrument</td>
<td>T0, T1, T2</td>
<td>PLWH</td>
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<tr>
<td>Alcohol Use/Abuse</td>
<td>10</td>
<td>AUDIT84</td>
<td>Risk/actual; $\alpha=0.85$</td>
<td>T0, T1, T2</td>
<td>PLWH</td>
</tr>
<tr>
<td>Drug use/Abuse</td>
<td>10</td>
<td>DAST-1085</td>
<td>Drug abuse; $\alpha=.94$</td>
<td>T0, T1, T2</td>
<td>PLWH</td>
</tr>
<tr>
<td>Acceptability, satisfaction, feasibility of procedures/program</td>
<td>TBD</td>
<td>End of study evaluation survey</td>
<td>Eval of procedures and each session</td>
<td>FG, T2</td>
<td>PLWH, PL</td>
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</table>

<table>
<thead>
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<th>Secondary Outcomes</th>
<th># of items</th>
<th>Measure</th>
<th>Notes</th>
<th>Data Collection</th>
<th>Sample</th>
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</thead>
<tbody>
<tr>
<td>ART- Adherence (reasons missed)</td>
<td>30</td>
<td>ACTG99</td>
<td>$\alpha=0.80 - 0.91$; past 30 days</td>
<td>T1, T2</td>
<td>PLWH</td>
</tr>
<tr>
<td>ART- Adherence (ease of taking)</td>
<td>5</td>
<td>AGAS86</td>
<td>ART in past 4 weeks ($\alpha=.86$)</td>
<td>T1, T2</td>
<td>PLWH</td>
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<tr>
<td>CD4 T-cell counts</td>
<td>N/A</td>
<td>Record review</td>
<td>Good $&gt;200$</td>
<td>T1, T2</td>
<td>PLWH</td>
</tr>
<tr>
<td>HIV Viral load</td>
<td>N/A</td>
<td>Record review</td>
<td>Suppression: $&lt;200$ copies/mL</td>
<td>T1, T2</td>
<td>PLWH</td>
</tr>
<tr>
<td>‘Retained’ in HIV care</td>
<td>N/A</td>
<td>Record review</td>
<td>NHAS definition</td>
<td>12 months</td>
<td>PLWH</td>
</tr>
</tbody>
</table>

| Covariates | | | | | |
| Sociodemographics & HIV history | TBD | Demographic form | i.e. race, years+ | FG, T0, T1 | PLWH |
| HIV Knowledge | 18 | HIV-KQ-1887 | $\alpha = .75$ to $.89$ | T1, T2 | PLWH, PL |
| Chronic disease self-management | 13 | PAM88 | $\alpha=.81; 0–100$ scale | T1, T2 | PLWH |
| Coping | 28 | Brief COPE 89 | 1 (didn't) to 4 (did) | T1,T2 | PLWH |
| Self-efficacy for ART adherence | 19 | ASES90 | $\alpha=.83$ | T1, T2 | PLWH |
| Self-efficacy for HIV Care | 1 | HCES | 0-100 scale | T1, T2 | PLWH |
| Self-efficacy for managing depression or anxiety | 1 | SSES | 0 (none) to 100 (extremely) | T1, T2 | PLWH |
| Self-efficacy for substance abuse | 1 | SAMS | 0 to 100 | T1, T2 | PLWH |
| Self-efficacy for HIV advocacy | 1 | HASE | 0-100 scale | T1, T2 | PLWH |
| Medications | N/A | Medication form | N/A | T1 | PLWH |

Peer Leader
Phase 1 Results: Sample (N=16)

- 16 PLWH participated in 1 of 2 focus groups
  - 1 in Tuscaloosa and 1 in Sumter
- All participants were HIV+ and Black
- Mean age was 51±9.5, range from 25 - 62.
Phase 1 Results:
Sample Characteristics

- 93.8% (n=15) of PLWH were on disability or unemployed
- 75% (n=12) reported public support as their main source of income
- 75% (n=12) reported income <$20,000/year;
- 75% (n=12) reported health insurance through medicare/medicaid.
Phase 1 Findings

- Common Themes Included:
  - Barriers To Medication Adherence;
  - Benefits Of Peer Leadership, Benefits Of Telemedicine, Benefits Of Group Therapy
  - Protective and Resilience Factors (Social Support, Health Behaviors, Religion/Spirituality)
  - Poly-stigma Of Being Black, Gay, HIV+, & Living In The Rural South
  - (37.5% Of Participants (N=6) Were Gay/Lesbian Or Bisexual)
Phase 1 Findings

- Most common *mental health* themes:
  - depression
  - anxiety

- **Substance use** themes:
  - The most common substances used include
    - Alcohol
    - Marijuana
    - Nicotine
  - Most participants discussed substance abuse and mental issues as barriers to HIV treatment adherence
    - some adhered to medicines despite substance use.
Phase 1 Findings

- **Telemedicine themes:**
  - The majority of PLWH were not familiar with telemedicine.
  - Seeing a live demonstration improved PLWH’s understanding of telemedicine.
  - Participants believed that telemedicine could be a major benefit in rural settings.
  - FG participants discussed the importance of privacy and data security during telemedicine.

- Many FG participants identified transportation as a barrier to HIV care.
Phase 1 Findings

- Group type & group therapy preferences:
  - Participants felt that Co-ed group would be the most beneficial
  - Smaller group
  - All participants were receptive to peer leaders as co-facilitators of group therapy
<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>31.8</td>
</tr>
<tr>
<td>Male</td>
<td>15</td>
<td>68.2</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
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</tr>
<tr>
<td>Black/African American</td>
<td>21</td>
<td>95.5</td>
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<td><strong>Marital Status</strong></td>
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<tr>
<td>Married</td>
<td>1</td>
<td>4.5</td>
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<tr>
<td>Separated/Divorced/Widowed</td>
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<td>31.8</td>
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<tr>
<td>Never Been Married</td>
<td>12</td>
<td>54.5</td>
</tr>
<tr>
<td>Committed Relationship</td>
<td>2</td>
<td>9.1</td>
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<tr>
<td><strong>Sexual Orientation</strong></td>
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<tr>
<td>Heterosexual/straight</td>
<td>10</td>
<td>45.5</td>
</tr>
<tr>
<td>Gay/Lesbian</td>
<td>10</td>
<td>45.5</td>
</tr>
<tr>
<td>Bisexual</td>
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<td>4.5</td>
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<tr>
<td><strong>Highest Education Level</strong></td>
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<td>Junior High or Middle School</td>
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<td>High School or G E D</td>
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<td>50.0</td>
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<td>31.8</td>
</tr>
<tr>
<td>Some college (no degree)</td>
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<td>9.1</td>
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<td><strong>Religious Affiliation</strong></td>
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<tr>
<td>Baptist</td>
<td>6</td>
<td>27.3</td>
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<tr>
<td>Other</td>
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<td>4.5</td>
</tr>
<tr>
<td>Missing/Didn’t Respond</td>
<td>14</td>
<td>63.6</td>
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<tr>
<td><strong>Current Employment Status</strong></td>
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<td>4.5</td>
</tr>
<tr>
<td>Unemployed</td>
<td>15</td>
<td>68.2</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>27.3</td>
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<tr>
<td><strong>Main Source of Income</strong></td>
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<td></td>
</tr>
<tr>
<td>Family/Other</td>
<td>6</td>
<td>27.2</td>
</tr>
<tr>
<td>Public Support (SSI, SSDI, TANF etc)</td>
<td>16</td>
<td>72.7</td>
</tr>
</tbody>
</table>
Phase 2 Findings: Substance Use

Substance use

- alcohol (68.2%, n=15)
- marijuana (54.5%, n=12)
- “cocaine or crack” (13.6%, n=3)
- cigarettes (45.5%, n=10)

Despite reports of substance use, most participants scored low risk for alcoholism as assessed by the AUDIT (N=16, 72.7%)
Phase 2: Mean Scores

- Most indicated minimal or mild levels of depression (N=11, 68.9%) on the PHQ

- Overall, relatively high degree of HIV knowledge, per the 18-item HIV knowledge questionnaire (M=15.1, SD=2.3)
  - most participants answering at least 75% of questions correctly (N=18, 81.8%)
  - many answering around 95% or higher correctly (N=9, 41%).
## Phase 2: Mean Scores

<table>
<thead>
<tr>
<th>HIV Knowledge, Drug Abuse, Alcohol Use and Depressive Symptoms</th>
<th>Mean (SD)</th>
<th>Range (Min-Max)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV- Knowledge</td>
<td>15.1 (2.3)</td>
<td>10 (8-18)</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td>Drug use (DAST)</td>
<td>0.50 (0.91)</td>
<td>3 (0-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None (Score 0)</td>
<td></td>
<td></td>
<td>15</td>
<td>68.2</td>
</tr>
<tr>
<td>Low (Scores1 to 2)</td>
<td></td>
<td></td>
<td>5</td>
<td>22.7</td>
</tr>
<tr>
<td>Moderate to High (Scores 3 to 6)</td>
<td></td>
<td></td>
<td>2</td>
<td>9.1</td>
</tr>
<tr>
<td>Alcohol Use (AUDIT)</td>
<td>3.9 (5.9)</td>
<td>21 (0-21)</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Low Risk (Scores 0 to 7)</td>
<td></td>
<td></td>
<td>16</td>
<td>72.7</td>
</tr>
<tr>
<td>Risky (Scores 8 to 21)</td>
<td></td>
<td></td>
<td>6</td>
<td>27.3</td>
</tr>
<tr>
<td>Depressive Symptoms (PHQ-With Missing)</td>
<td>8.5 (6.5)</td>
<td>22 (1-23)</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Minimal (Scores 1 to 4)</td>
<td></td>
<td></td>
<td>5</td>
<td>31.1</td>
</tr>
<tr>
<td>Mild (Score 5 to 9)</td>
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<td></td>
<td>6</td>
<td>37.8</td>
</tr>
<tr>
<td>Moderate to High (Scores 10 to 23)</td>
<td></td>
<td></td>
<td>5</td>
<td>31.1</td>
</tr>
</tbody>
</table>
Implications & Potential Impact

- Need to Increase awareness about mental health & substance use issues and resources

- Important to strengthen partnerships for community engagement, CBPR and improvements in HIV Care and case management for PLWH

- Need interventions for PLWH with mental health/substance use issues

- Telemedicine can also be used in HIV prevention counseling, including counseling for pre-exposure prophylaxis (PrEP).
Implications & Potential Impact

- Contribute to gaps in the literature
- Facilitate future research
References

References


• Grabowski, D. C., & O’Malley, A. J. (2014). Use of telemedicine can reduce hospitalizations of nursing home residents and generate savings for medicare. *Health Affairs, 33*(2), 244-250.


References

Thank You!

Any Questions?

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