

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

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OBJECTIVES

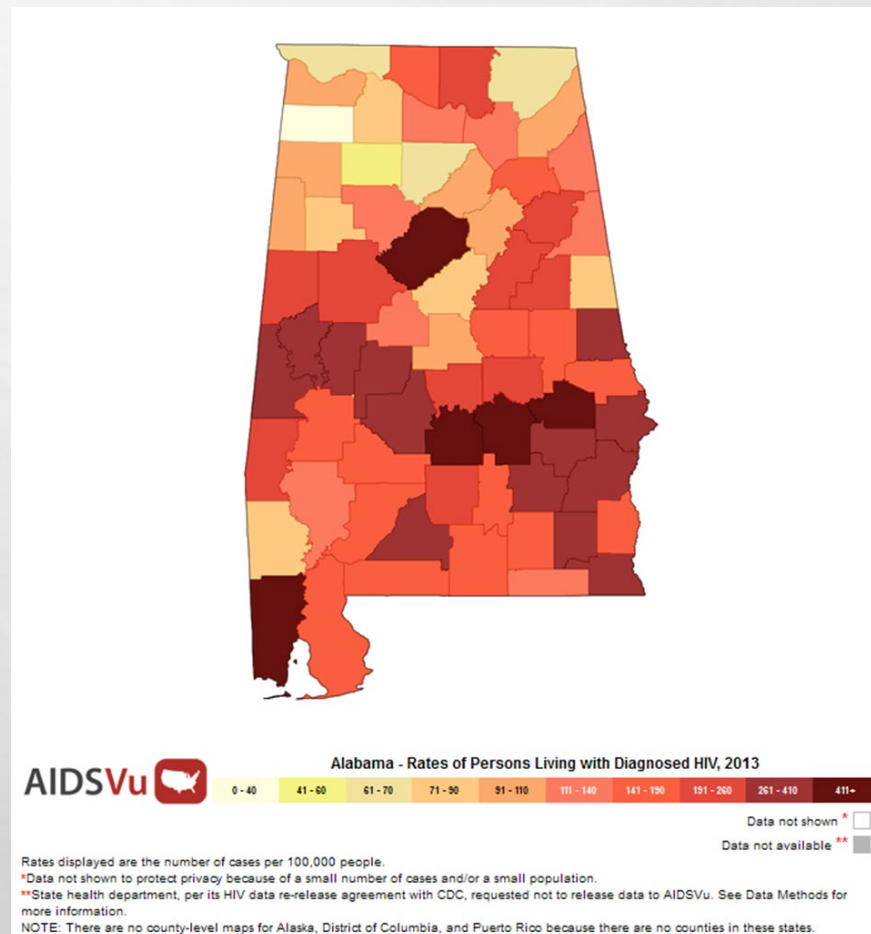
- BACKGROUND STATISTICS ON AND SCREENING FOR MENTAL HEALTH AND SUBSTANCE USE ISSUES IN PLWH.
- DEVELOPMENT AND TESTING OF A MULTI-LEVEL PROGRAM FOR PLWH WITH MENTAL HEALTH AND/OR SUBSTANCE USE ISSUES TO SUPPORT AND IMPROVE MEDICATION ADHERENCE AND RETENTION IN HIV CARE AMONG PLWH, USING:
 - (1) PEER 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

BACKGROUND: HIV IN ALABAMA

- 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 Load, CD4 Cell Counts And ART Adherence Rates.



WHAT IS TELEMEDICINE?

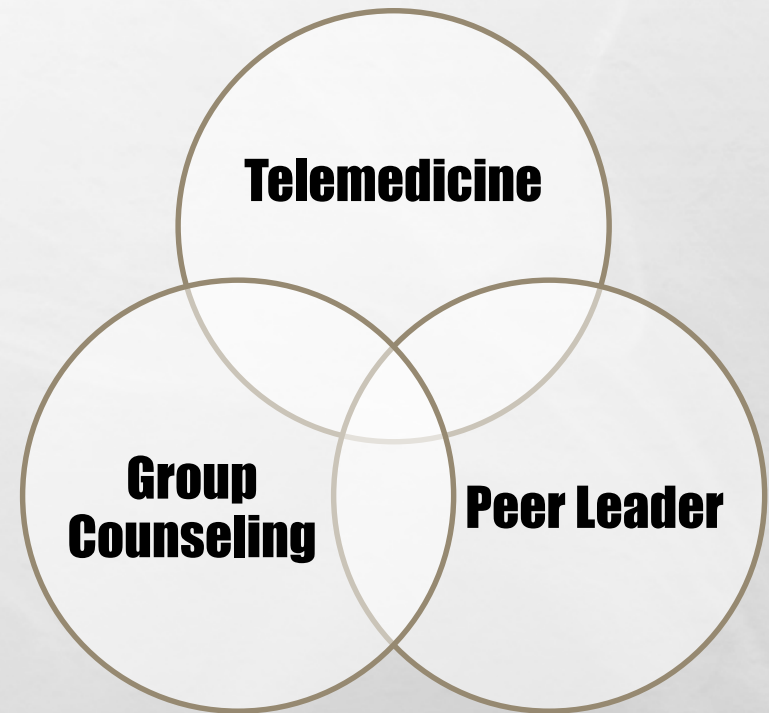


RATIONALE FOR STUDY

- 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

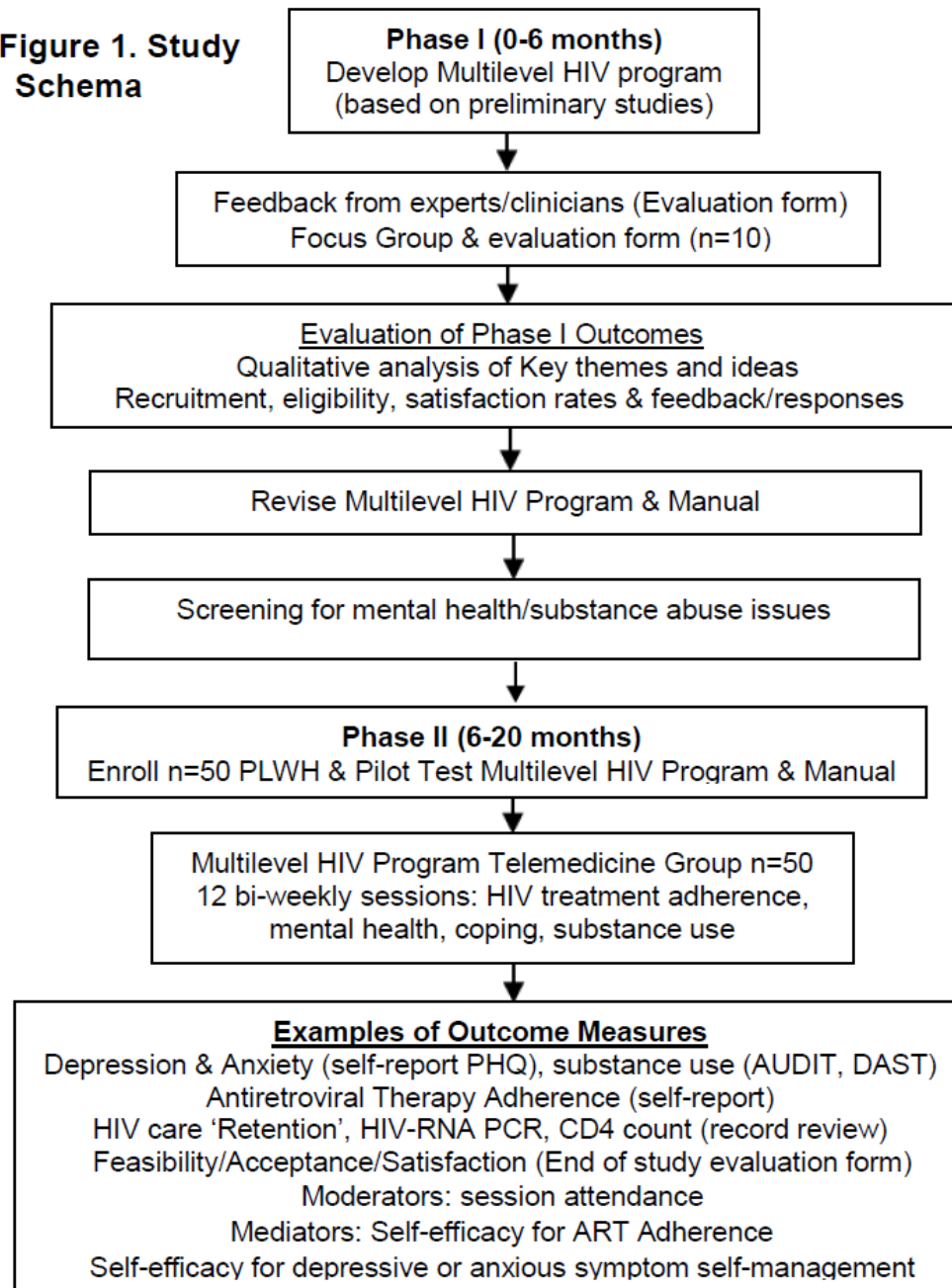
- **TO DEVELOP AND EVALUATE A MULTILEVEL APPROACH, USING**
 - **PROFESSIONAL GROUP COUNSELING**
 - **VIA TELEMEDICINE AND**
 - **PEER SUPPORT**



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



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

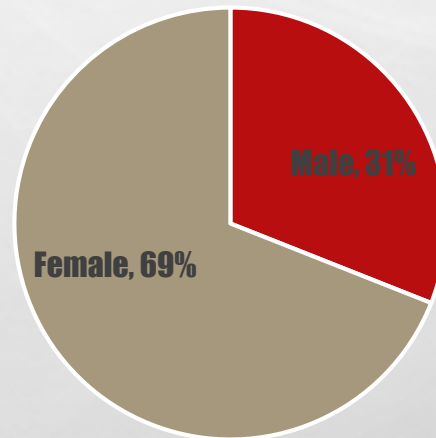
❖ PHASE 2:

- ❖ 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

Primary Outcomes	# of items	Measure	Notes	Data Collection	Sample
Depression & Anxiety	9	PHQ78, 79 and PHQ-980-83	Diagnostic instrument	T0, T1, T2	PLWH
Alcohol Use/Abuse	10	AUDIT84	Risk/actual; $\alpha=0.85$	T0, T1, T2	PLWH
Drug use/Abuse	10	DAST-1085	Drug abuse; $\alpha=.94$	T0, T1, T2	PLWH
Acceptability, satisfaction, feasibility of procedures/program	TBD	End of study evaluation survey	Eval of procedures and each session	FG, T2	PLWH, PL
Secondary Outcomes					
ART- Adherence (reasons missed)	30	ACTG99	$\alpha = 0.80 - 0.91$; past 30 days	T1, T2	PLWH
ART- Adherence (ease of taking)	5	AGAS86	ART in past 4 weeks ($\alpha = .86$)	T1, T2	PLWH
CD4 T-cell counts	N/A	Record review	Good= >200	T1, T2	PLWH
HIV Viral load	N/A	Record review	Suppression: <200 copies/mL	T1, T2	PLWH
'Retained' in HIV care	N/A	Record review	NHAS definition	12 months	PLWH
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		Peer Leader
Medications	N/A	Medication form	N/A	T1	PLWH

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.



■ Male ■ Female

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

PHASE 2: SAMPLE DEMOGRAPHICS (N=22)

VARIABLE	Frequency (n)	Percent (%)
Gender		
Female	7	31.8
Male	15	68.2
Race/Ethnicity		
Black/African American	21	95.5
Marital Status		
Married	1	4.5
Separated/Divorced/Widowed	7	31.8
Never Been Married	12	54.5
Committed Relationship	2	9.1
Sexual Orientation		
Heterosexual/straight	10	45.5
Gay/Lesbian	10	45.5
Bisexual	1	4.5
Highest Education Level		
Junior High or Middle School	2	9.1
High School or G E D	11	50.0
College degree	7	31.8
Some college (no degree)	2	9.1
Religious Affiliation		
Evangelical Christian	1	4.5
Baptist	6	27.3
Other	1	4.5
Missing/Didn't Respond	14	63.6
Current Employment Status		
Employed part-time	1	4.5
Unemployed	15	68.2
Other	6	27.3
Main Source of Income		
Family/Other	6	27.2
Public Support (SSI, SSDI, TANF etc)	16	72.7

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

HIV Knowledge, Drug Abuse, Alcohol Use and Depressive Symptoms

	Mean (SD)	Range (Min-Max)	N	%
HIV- Knowledge	15.1 (2.3)	10 (8-18)	22	-
Drug use (DAST)	0.50 (0.91)	3 (0-3)		
None (Score 0)			15	68.2
Low (Scores 1 to 2)			5	22.7
Moderate to High (Scores 3 to 6)			2	9.1
Alcohol Use (AUDIT)	3.9 (5.9)	21 (0-21)	22	
Low Risk (Scores 0 to 7)			16	72.7
Risky (Scores 8 to 21)			6	27.3
Depressive Symptoms (PHQ-With Missing)	8.5 (6.5)	22 (1-23)	16	
Minimal (Scores 1 to 4)			5	31.1
Mild (Score 5 to 9)			6	37.8
Moderate to High (Scores 10 to 23)			5	31.1

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

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THANK YOU!

ANY QUESTIONS?

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