15th International Conference on
HIV TREATMENT AND
PREVENTION ADHERENCE

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Feasibility and Acceptability of an eHealth Intervention for ART Adherence in People who use Substances

Late Breaker Oral Abstract Session

November 3, 2020

1:30-2:30 Eastern

The *POS4Health* eHealth intervention

Cores have multiple short video vignettes depicting peers living with HIV

Peers describe their history with that Core's targeted issue

Peers discuss active coping and how they overcame that issue

Baseline and follow-up online assessments

weekly diaries of ART adherence & substance use

automated emails to prompt logins

6 CORES addressing 6 common problems that undermine the efficacy of ART:

Social support
Nonadherence
Depression
Addictive behaviors (*Using* Core),
Stigma and disclosure
Wellness (*What's Next* Core)

Cores build self-management skills via:

interactions to engage users

tailored feedback on progress

motivate user to identify problems and practice skills

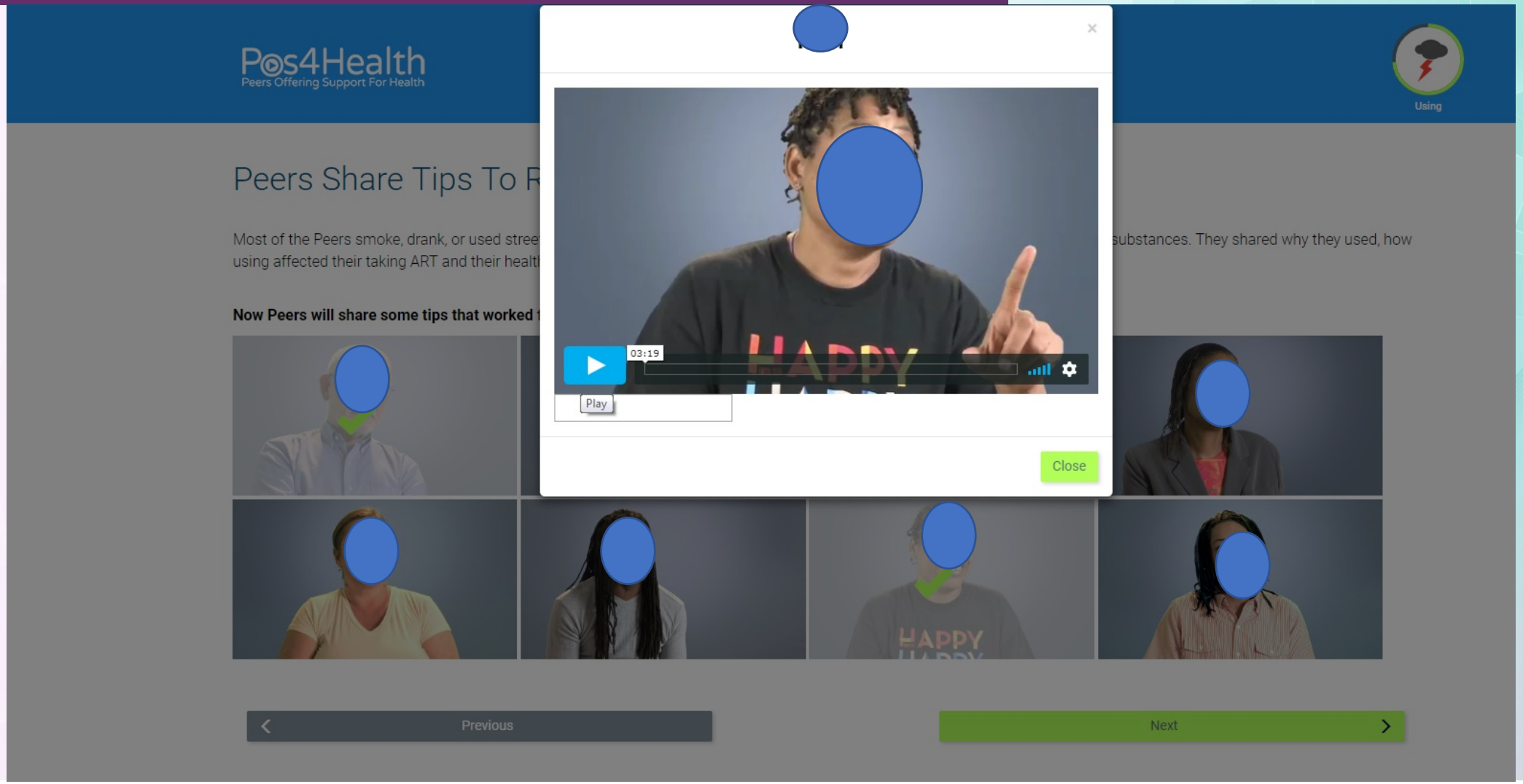
Cores target knowledge and encourage use of strategies to overcome each problem

Cores encourage practice of positive-psychology-evidence based healthy habits

Cores are metered out weekly to allow time to practice skills

Sample Interactive Feature

Short Videos with Peer Tips



Pilot RCT Design

Inclusion Criteria:

- HIV positive, prescribed ART
- 18 years or older
- Speaks and reads English
- Has regular access to a phone, email, and computer connected to the Internet
- Missed ≥2 days of ART in the past 30 days
- Illicit drug use **OR** binge drinking in past 30 days

Design:

2 X 2 RCT with assessments at baseline and 3M(post-intervention).

Groups:

- Pos4Health vs. Patient Education (static website)

Hypotheses:

1: *Pos4Health* is **feasible and acceptable** by a priori benchmarks.

2: *Pos4Health* participants would show more improvements in **knowledge, self efficacy, and motivation to change** than those assigned to the PE (control) condition

3: *Pos4Health* participants would show more change on: days using substances, days taking ART, symptoms (stigma, depression, etc.), and viral suppression, **(exploratory clinical outcomes)** compared to those assigned to the PE condition

Participant Characteristics

	Control n=25 n	%	Experimental n=26 n	%
Sex				
Men	18	(72%)	16	(64%)
Women	7	(28%)	9	(36%)
Education				
Less than High School	2	(9.1%)	2	(8.3%)
High School, GED, Trade	12	(54.6%)	14	(58.3%)
School	8	(36.4%)	8	(33.3%)
Some College or More				
Employment				
Unemployed	6	(27.3%)	5	(20.8%)
Disabled, Retired, Other	9	(40.9%)	11	(45.8%)
Employed Part Time	4	(18.2%)	2	(8.3%)
Employed Full Time	3	(13.6%)	6	(25%)
Partnership Status				
Single	15	(68.2%)	15	(62.5%)
Partnered	5	(22.7%)	7	(28.7%)
Div, Separated, Widowed	2	(9.1%)	2	(8.3%)

	Control n=25 n	%	Experimental n=26 n	%
Disclosure Difficulty Scale				
Open about HIV Status	13	(59%)	13	(54%)
Partly Open	7	(32%)	9	(38%)
Secretive	2	(9%)	2	(8%)
Depression on CES-D				
Not Depressed	12	(55%)	8	(33%)
Mild to Moderate	4	(18%)	3	(13%)
Major Depression	6	(27%)	13	(54%)
Missed ART Medications				
Never	1	(5%)	0	(0%)
This Week	12	(55%)	16	(67%)
Last Week	4	(18%)	6	(25%)
2-4 Weeks Ago	4	(18%)	2	(8%)
1-3 Months Ago	1	(5%)	0	(0%)
Addiction Severity on DAST				
None	4	(19%)	3	(13%)
Low	6	(29%)	7	(29%)
Moderate	5	(24%)	8	(33%)
Severe or Substantial	6	(29%)	6	(25%)

Aim 1: Pilot Data on Study Feasibility

Feasibility benchmarks:

- STUDY ACCEPTANCE DATA: 331 applicants, 223 not eligible, 36 not contactable, 8 applied late, leaving 64 eligible, 13 declined, and 51 consents.
- 44 of 64 eligible patients completed baseline interviews**= 68.8%**. (benchmark was 56% based on literature)
- STUDY COMPLETION RATE: completed follow-up interviews =**39** divided by baseline interviews **44 = 88.6%** (benchmark was 80% based on literature)

Conclusion: The pilot data exceeded the a priori Study Acceptance and Study Completion criteria for Feasibility.

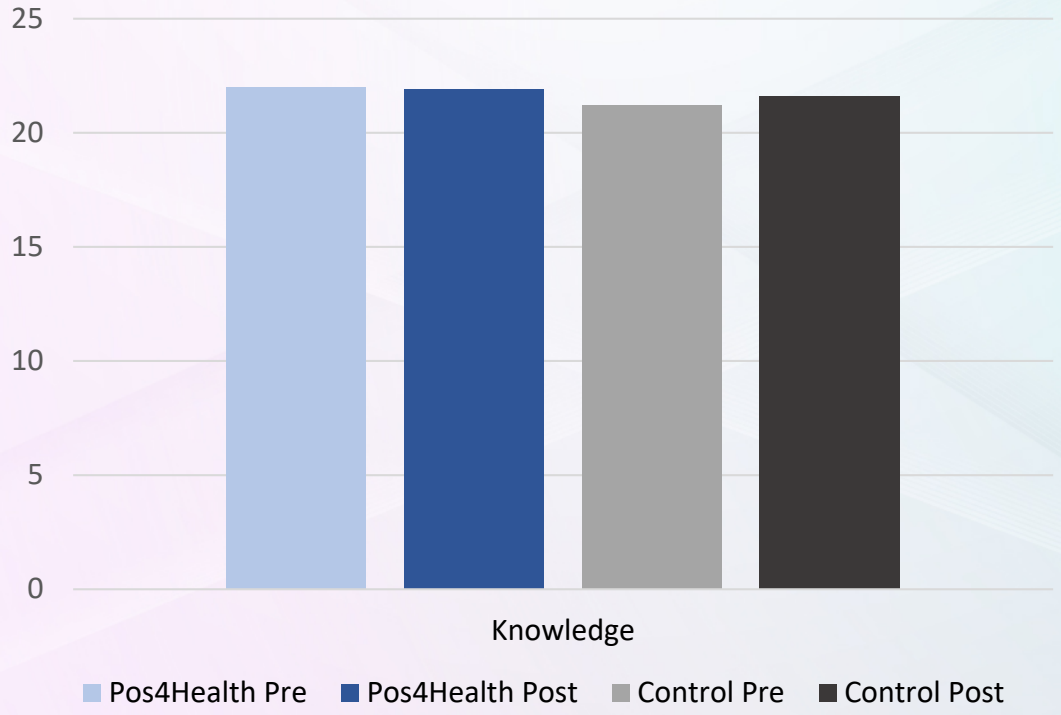
Aim 1: Pilot Data on Program Acceptability

- **Program features:** (ease of use, convenient, interesting, likeable, attractive, private, satisfying, good fit, useful, easy to understand, trustworthy, etc.) **63-89% of Users rated every program feature as a 3 or 4** (A priori benchmark of 3 on majority of program features EXCEEDED)
- **Program Utility:** (improving their problems, increasing knowledge about substance use and ART, improving quality of life, ability to follow program recommendations, reaching goals, etc.) **Users rated 64% of 22 program utility items as Mostly to Very Helpful.** (A priori benchmark of "helpful" on majority of program utility EXCEEDED)
    - **8** Items were rated as not at all or slightly helpful: improve mood, physical activities, confidence to reduce substance use, reducing risky drinking, improving social life, improving family relationships, and improving other relationships
- **Usage:** 6 of 22 (27.2%) completed 0 Cores, **4 of 22 (18.2%) completed 2 Cores, and 12 of 22 (54.5%) completed 5 or 6 Cores.** (A priori benchmark completing 75% of Cores NOT met)

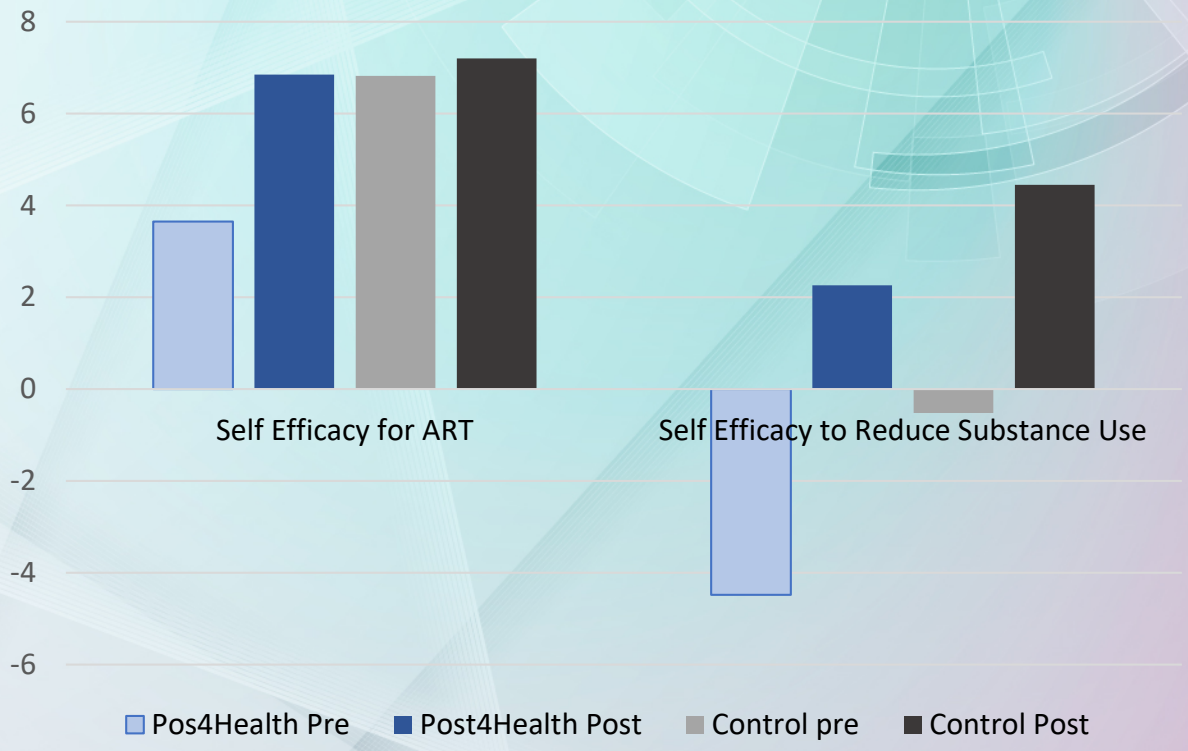
Conclusion: The program met 2 of 3 a priori Acceptability benchmarks

Aim 2: Impact on Potential Mechanisms

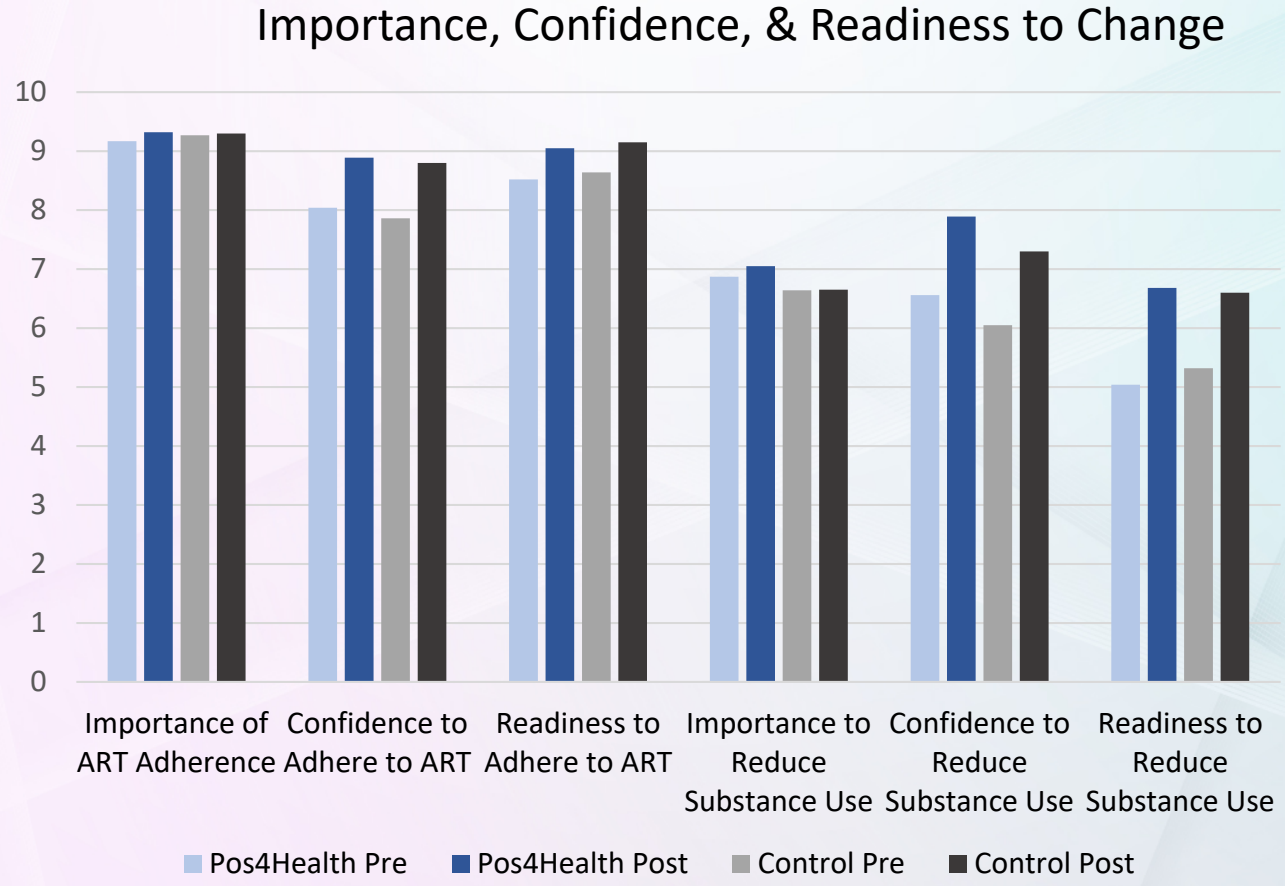
Knowledge across 6 Core Areas

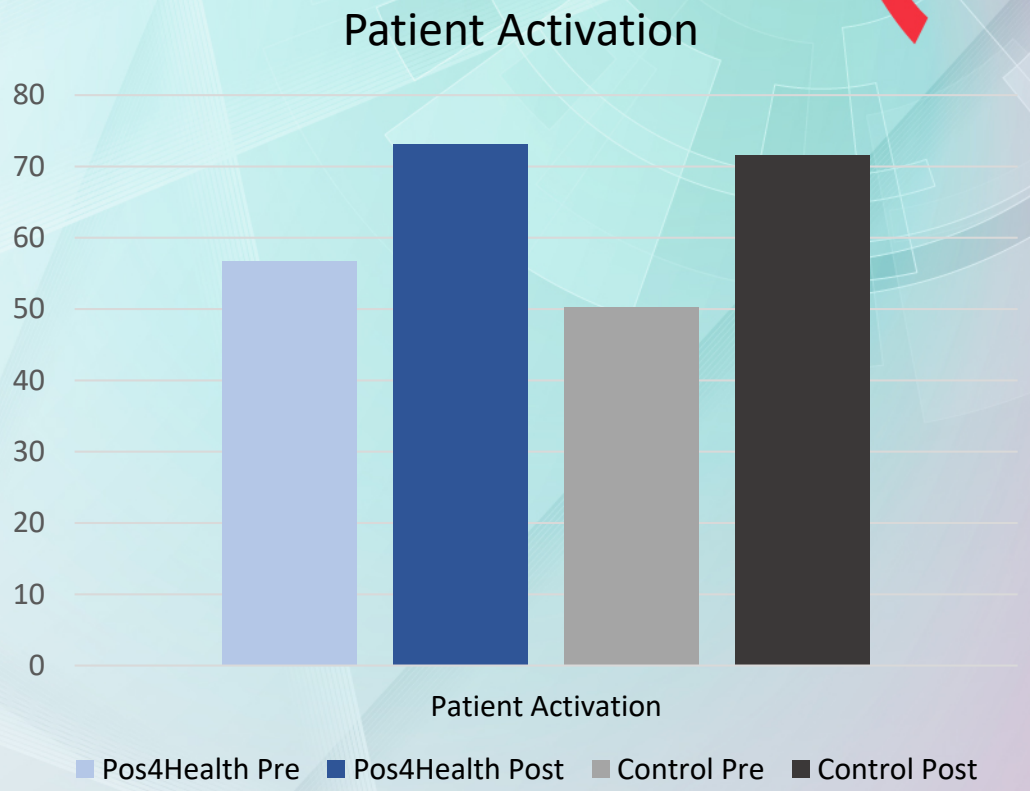


Self Efficacy (Confidence-Temptation)

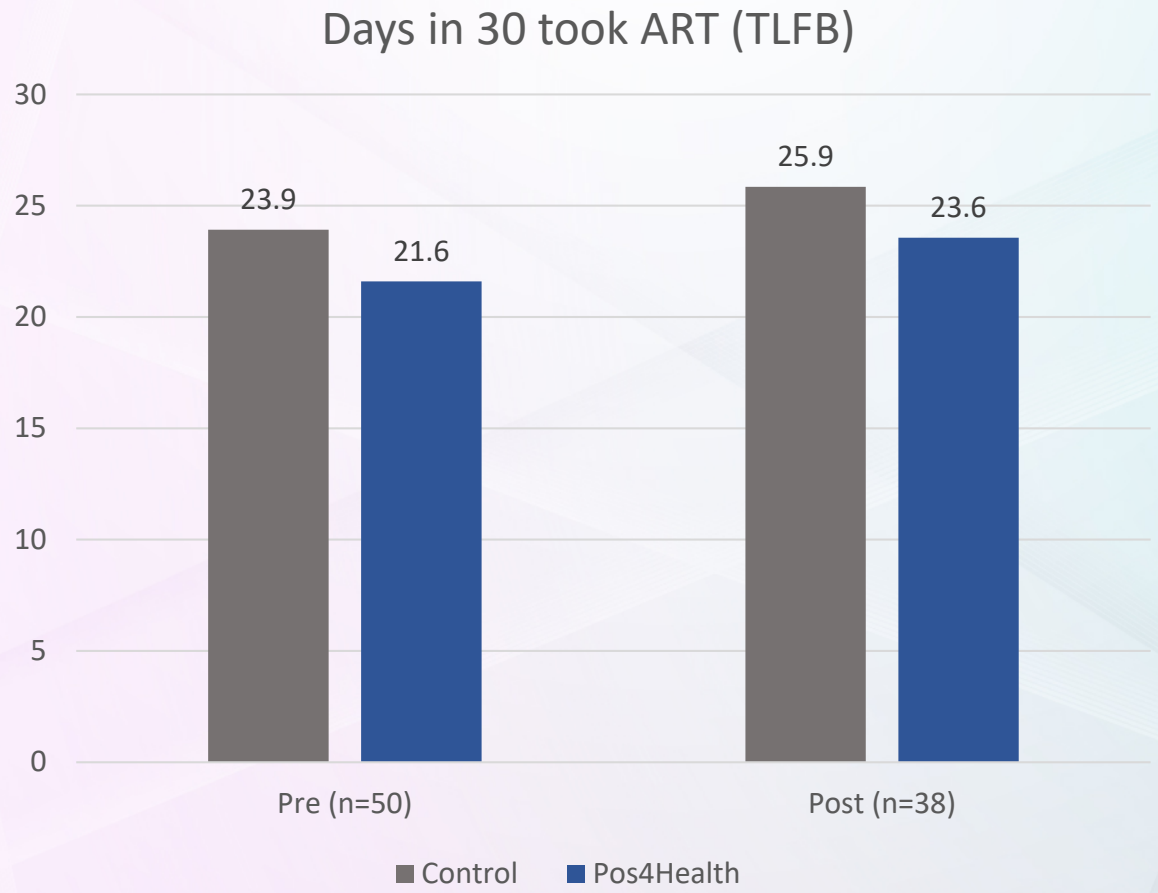


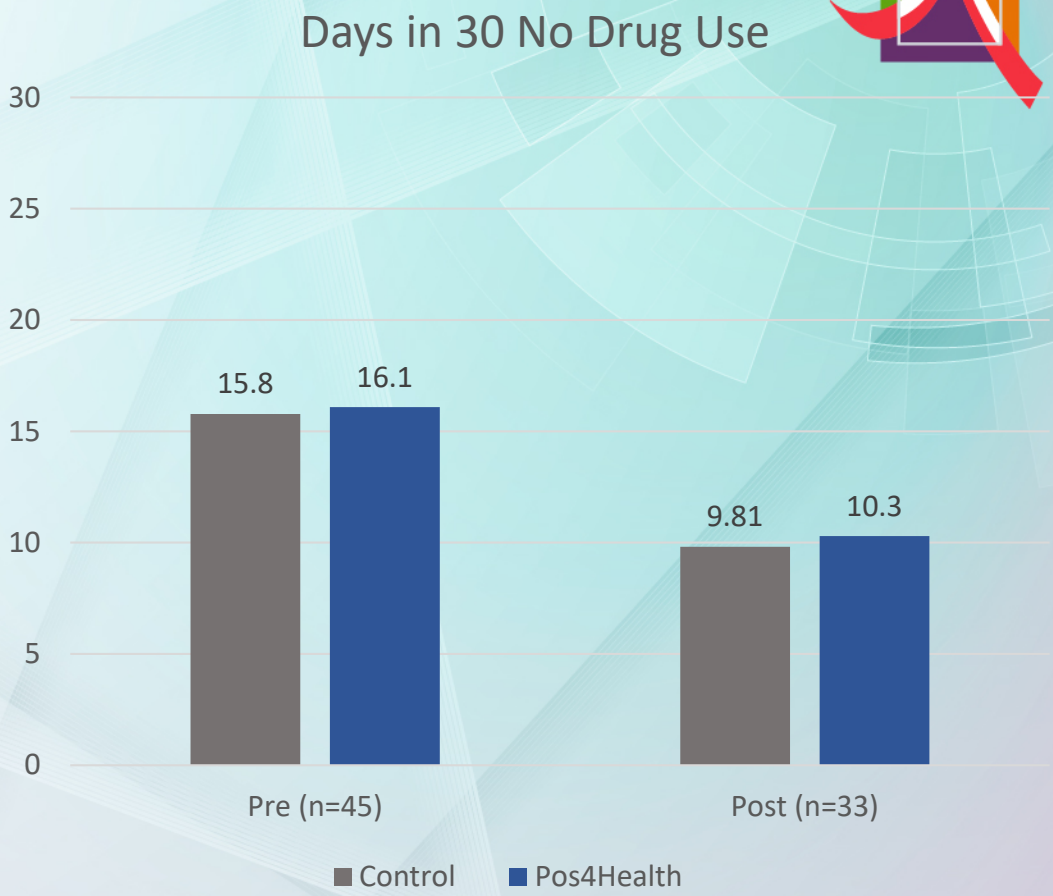
Aim 2: Impact on Potential Mechanisms (Motivation)



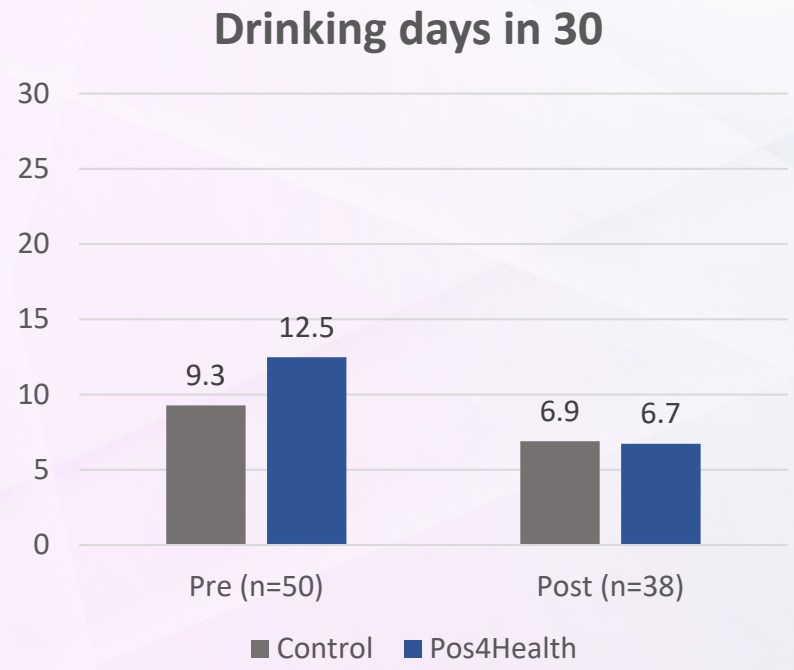


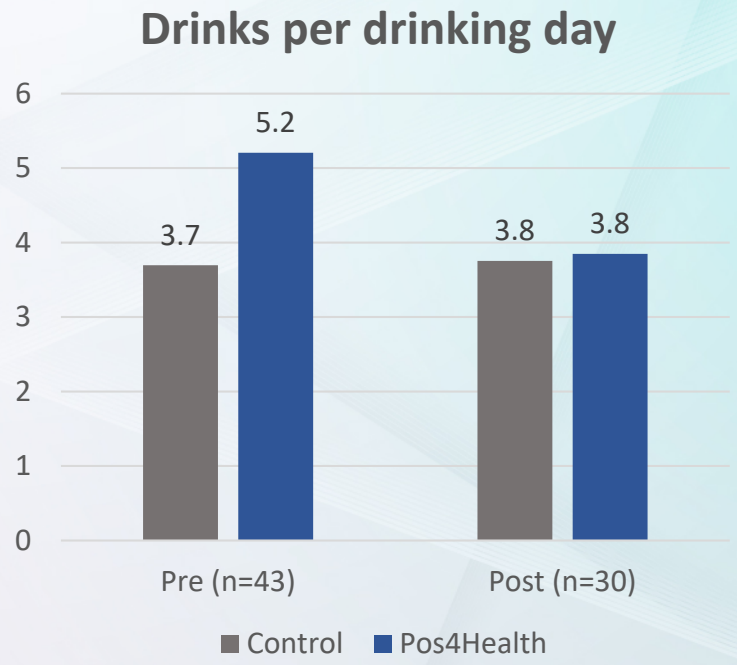
Aim 3: Impact on Exploratory Outcomes

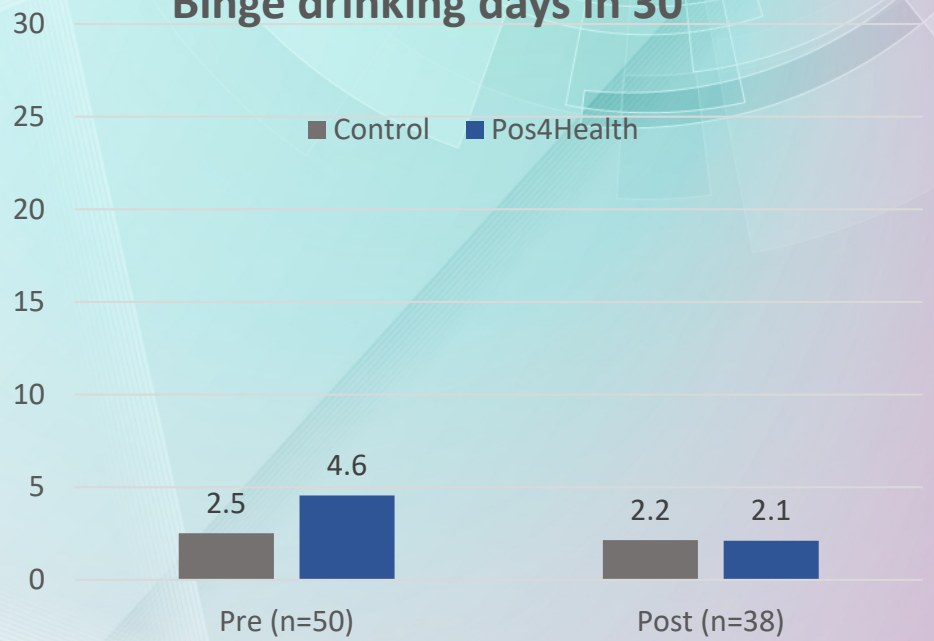




Aim 3: Impact on Exploratory 3M Outcomes







Discussion: General Study Feasibility

- Recruiting Peer Role models and developing compelling video content was easier than anticipated
- Recruited study participants with high rates of the 6 common problems that undermine treatment adherence
- Expanded recruitment for pilot RCT participants beyond local clinics due to high ART adherence & few active substance users
  - national recruitment: medical & pharmacy records collection time-consuming
  - Final data received a year late. Labs data are incomplete. Inadequate viral load data to determine impact.

Discussion: Findings

- Aim 1 **Study was Feasible** by study acceptance and retention and was **Acceptable by participant evaluations but not usage**
- Aim 2 **Potential mechanisms of change not promising** (Knowledge, Self-efficacy, Motivation show few diffs, little change)
- Aim 3 **Exploratory outcomes:**
  - **30 day ART adherence**: slight parallel increase in both groups
  - **Drug use days in 30**: slight parallel decrease in both groups
  - **Drinking days in 30 and Drinks per drinking day**: decrease in both groups but decline was twice as steep in Pos4Health participants
  - **Viral load** data not available for most participants; change cannot be assessed.

Pos4Health Future Directions

- Consider focusing on PLWH with harmful drinking
- INTERVENTION
  - Drop or improve features with low utility
  - Update program with responsive design to enable mobile
  - Use automated mobile assessments

STUDY FEASIBILITY/ACCEPTABILITY

DBS testing for VL?

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