

15th International Conference on
**HIV TREATMENT AND
PREVENTION ADHERENCE**

Karen Ingersoll,¹ Christina Frederick,¹ Mahlatse Modipane,² Michelle Hilgart,¹

Rebecca Dillingham,¹ & Lee Ritterband¹

¹University of Virginia School of Medicine, USA

²University of Venda, South Africa



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



The interface is a rectangular panel with a light gray border. At the top, there is a horizontal row of eight drink icons: a cocktail with an orange slice, an iced tea with a lime wedge, a martini, a whiskey with a straw, a margarita, a cognac, a lemonade, and a beer mug. At the bottom, there is another horizontal row of eight drink icons: a red wine glass, a cocktail with a cherry, a glass of orange juice with a slice, a blue cocktail, a beer, a martini, a green beer bottle, and a red wine glass. In the center, a white box contains a photo of a man in a dark shirt and pants, with text explaining the task and a 'Close' button. To the right, a dark blue panel titled 'How Many Standard Drinks?' shows four star-shaped options: '1 About 1', '2-3 About 2-3', and '4+ 4 or More'. At the bottom left is a speaker icon, and at the bottom right are 'Back' and 'More' buttons.

How Many Standard Drinks?

Remember, Andrew could decide to drink *any* of these beverages. He needs your help sorting *all* of them by the correct number of standard drinks.

Click "Show me the drink chart" whenever you need a hint!

Close

1 About 1

2-3 About 2-3

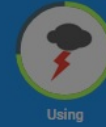
4+ 4 or More

< Back More >

Short Videos with Peer Tips



Pos4Health
Peers Offering Support For Health

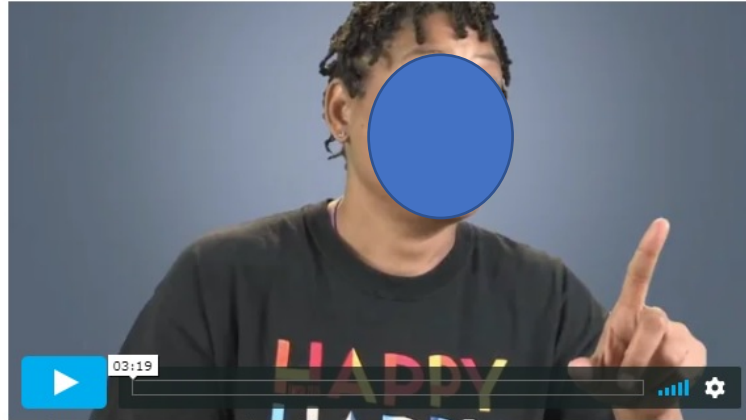


Peers Share Tips To R

Most of the Peers smoke, drank, or used street
using affected their taking ART and their health

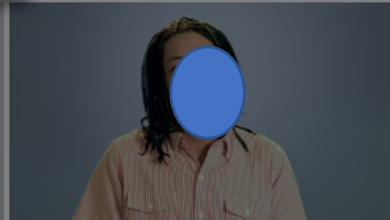
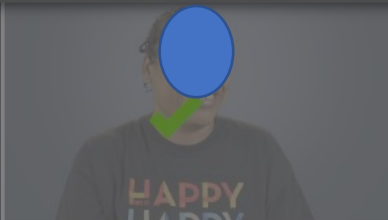
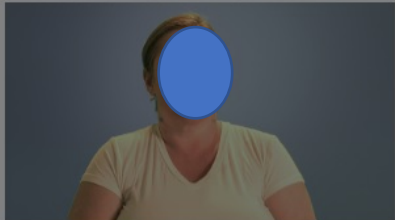
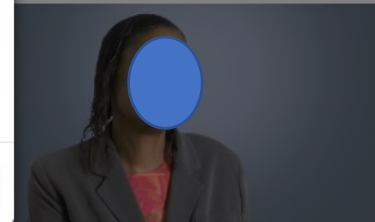
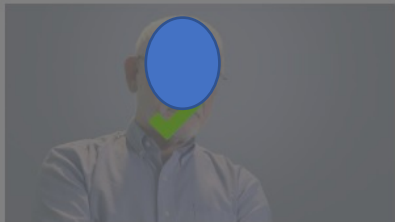
substances. They shared why they used, how

Now Peers will share some tips that worked



Play

Close



Previous

Next



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)

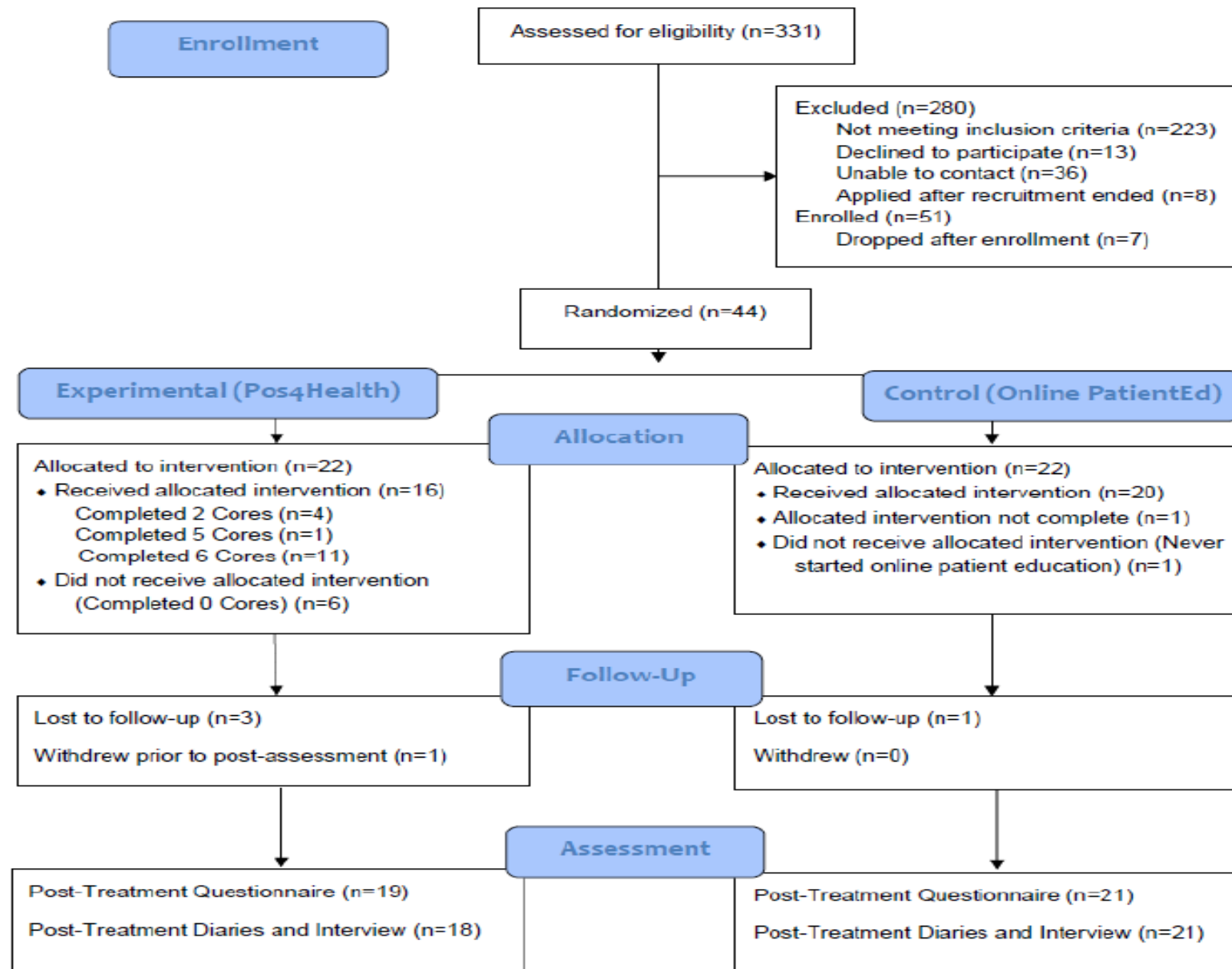
Hypotheses:

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

POS4HEALTH Pilot



Participant Characteristics



	Control n=25		Experimental n=26			Control n=25		Experimental n=26	
	n	%	n	%		n	%	n	%
Sex					Disclosure Difficulty Scale				
Men	18	(72%)	16	(64%)	Open about HIV Status	13	(59%)	13	(54%)
Women	7	(28%)	9	(36%)	Partly Open	7	(32%)	9	(38%)
					Secretive	2	(9%)	2	(8%)
Education					Depression on CES-D				
Less than High School	2	(9.1%)	2	(8.3%)	Not Depressed	12	(55%)	8	(33%)
High School, GED, Trade School	12	(54.6%)	14	(58.3%)	Mild to Moderate	4	(18%)	3	(13%)
Some College or More	8	(36.4%)	8	(33.3%)	Major Depression	6	(27%)	13	(54%)
Employment					Missed ART Medications				
Unemployed	6	(27.3%)	5	(20.8%)	Never	1	(5%)	0	(0%)
Disabled, Retired, Other	9	(40.9%)	11	(45.8%)	This Week	12	(55%)	16	(67%)
Employed Part Time	4	(18.2%)	2	(8.3%)	Last Week	4	(18%)	6	(25%)
Employed Full Time	3	(13.6%)	6	(25%)	2-4 Weeks Ago	4	(18%)	2	(8%)
					1-3 Months Ago	1	(5%)	0	(0%)
Partnership Status					Addiction Severity on DAST				
Single	15	(68.2%)	15	(62.5%)	None	4	(19%)	3	(13%)
Partnered	5	(22.7%)	7	(28.7%)	Low	6	(29%)	7	(29%)
Div, Separated, Widowed	2	(9.1%)	2	(8.3%)	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

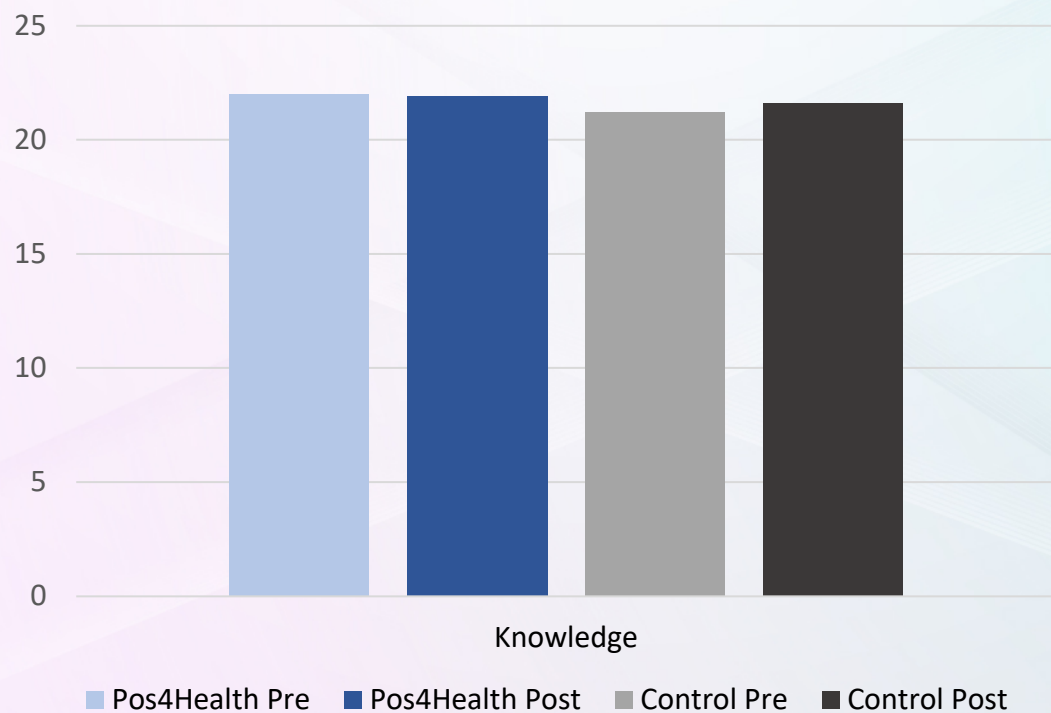
- **Program features:** (ease of use, convenient, interesting, likeable, attractive, private, satisfying, good fit, useful, easy to understand, trustworthy, etc.) **63-89% of Users rated every program feature as a 3 or 4** (A priori benchmark of 3 on majority of program features **EXCEEDED**)
- **Program 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

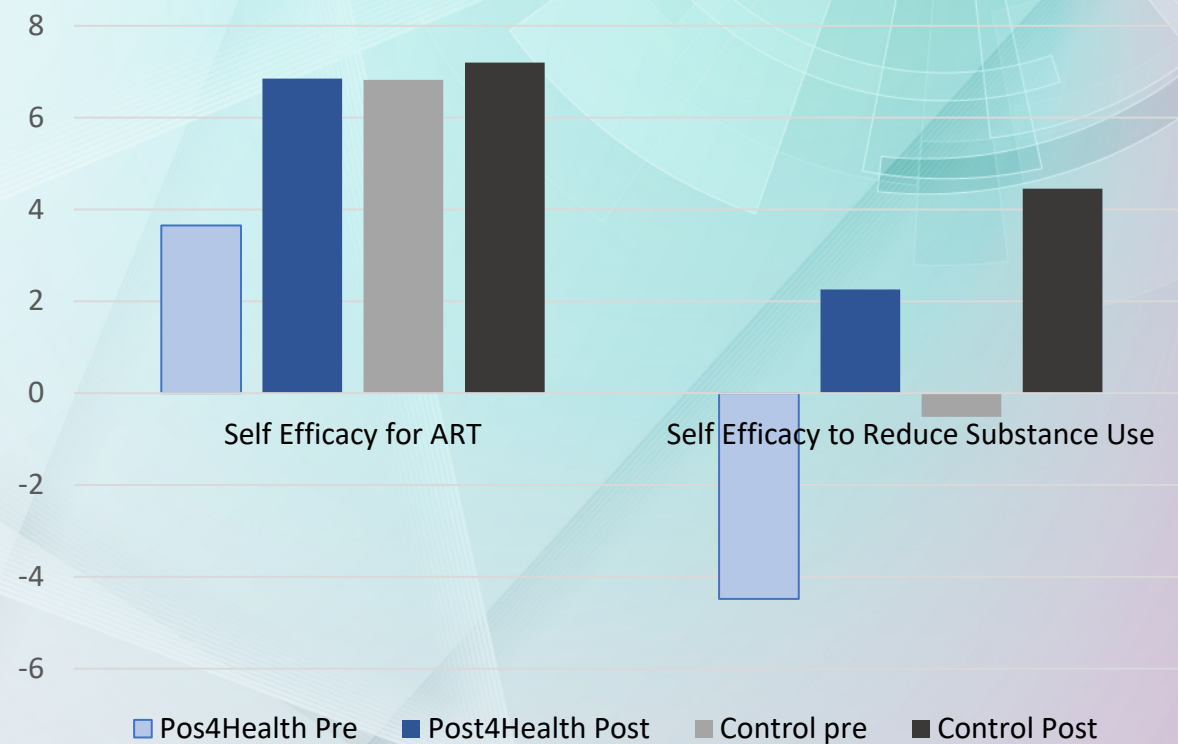


Aim 2: Impact on Potential Mechanisms

Knowledge across 6 Core Areas



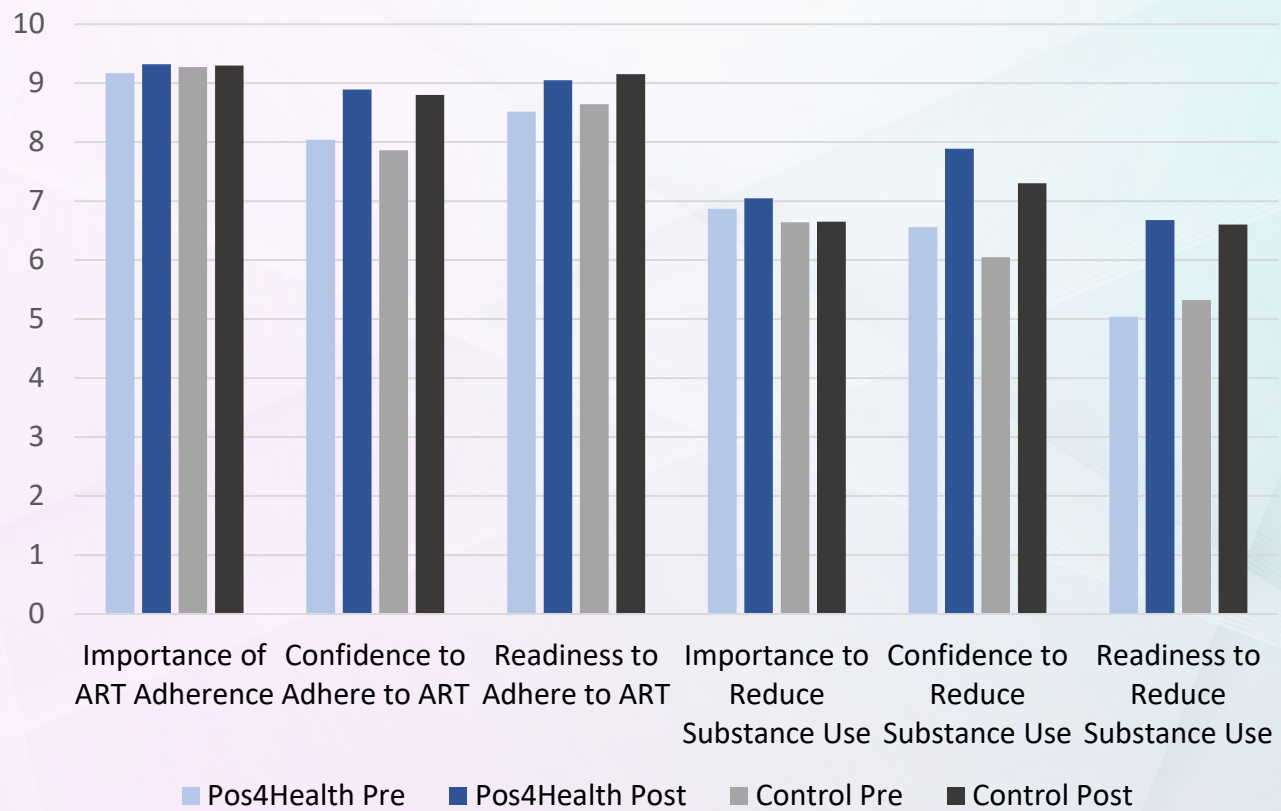
Self Efficacy (Confidence-Temptation)



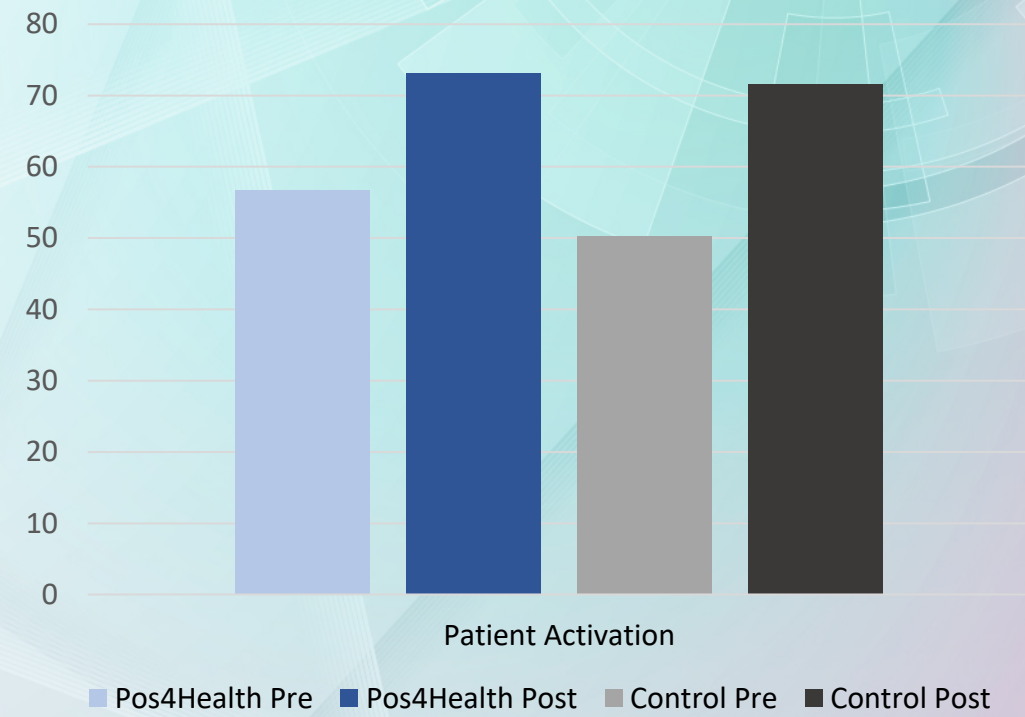


Aim 2: Impact on Potential Mechanisms (Motivation)

Importance, Confidence, & Readiness to Change



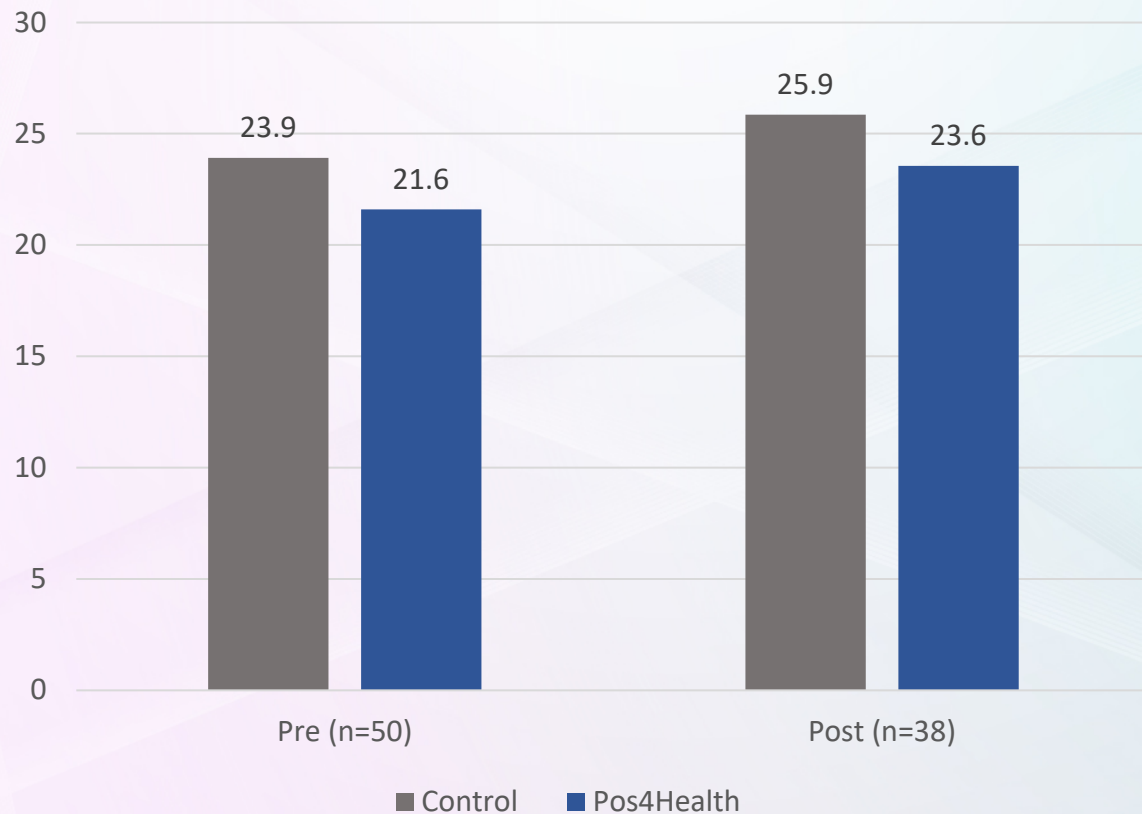
Patient Activation



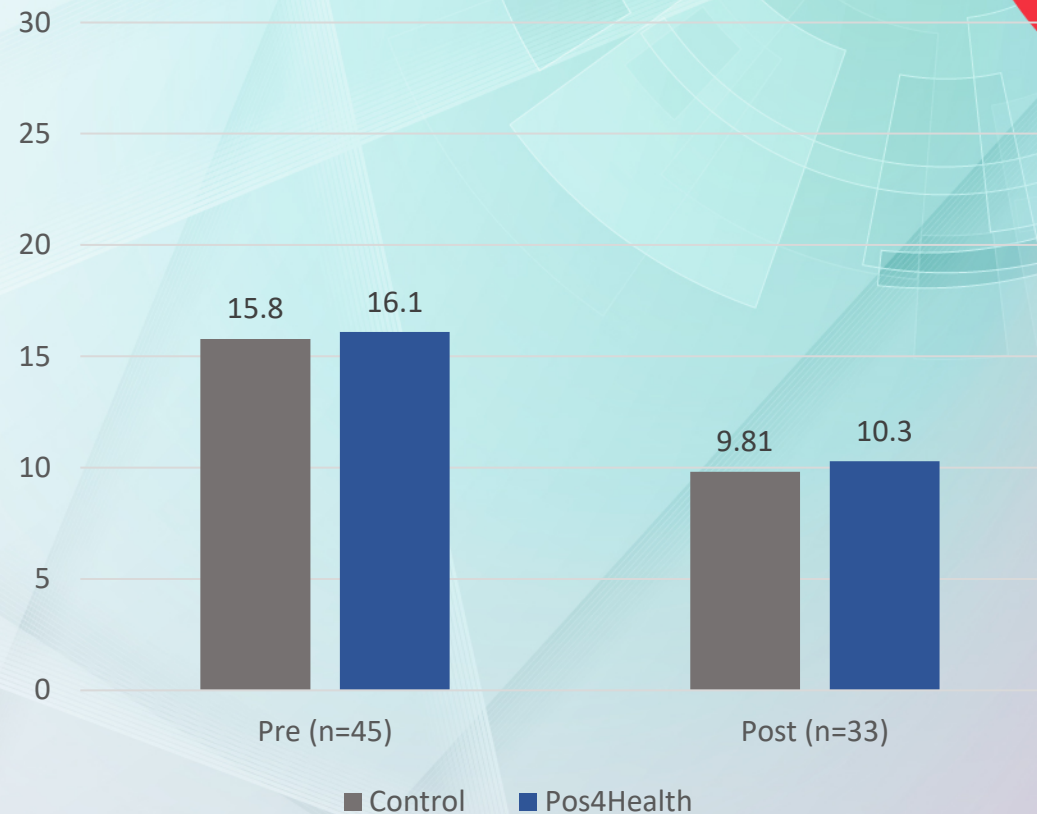
Aim 3: Impact on Exploratory Outcomes



Days in 30 took ART (TLFB)



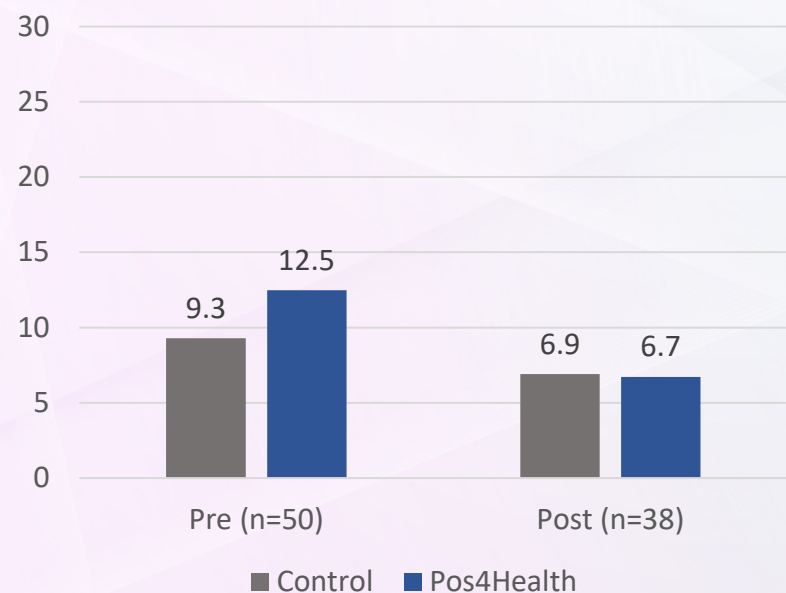
Days in 30 No Drug Use



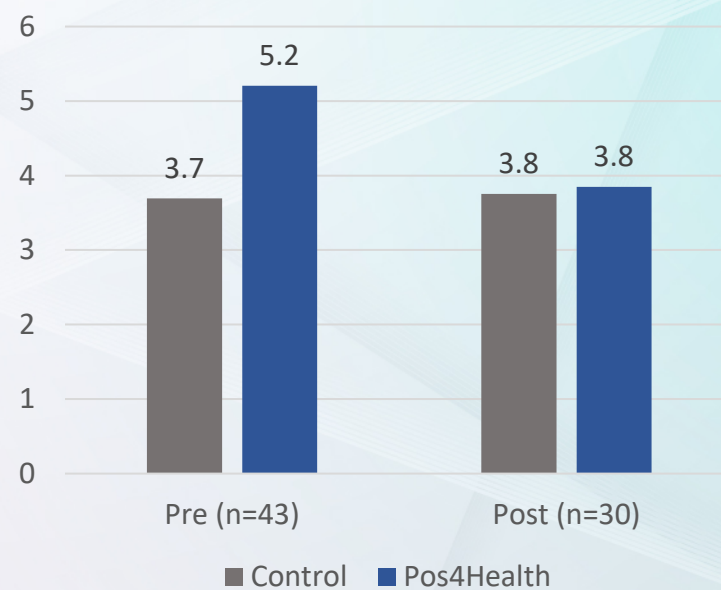


Aim 3: Impact on Exploratory 3M Outcomes

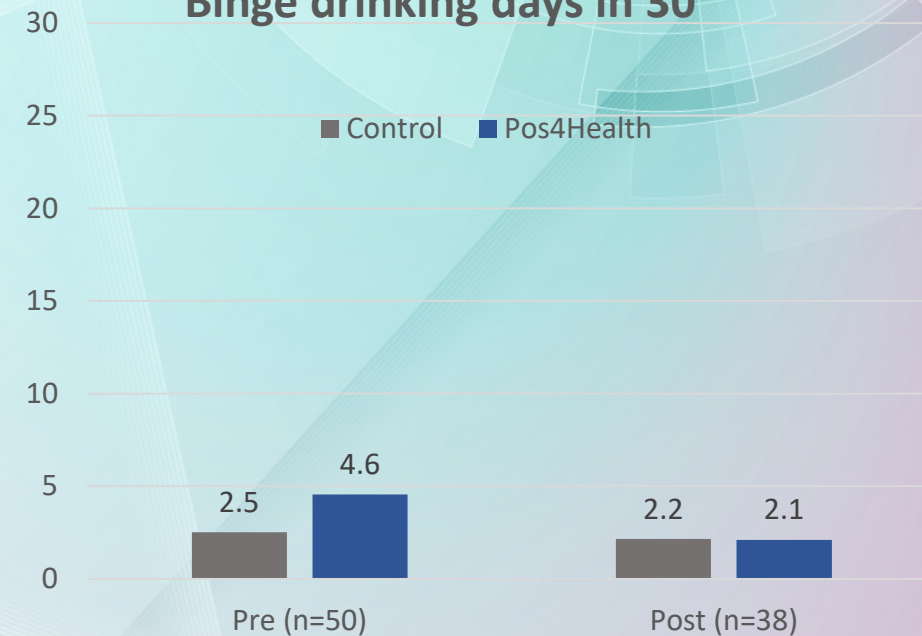
Drinking days in 30



Drinks per drinking day



Binge drinking days in 30



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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 - Contact me: kareningersoll@virginia.edu