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## Introduction

- Consistent and nearly perfect adherence to ART regimens is critical for many PLWHA to fully control their HIV and prevent the development of drug resistance.
- The LifeWindows (LW) Intervention was developed, based on the IMB model of ART adherence (Fisher, Fisher, Amico, & Harman, 2006), as an intervention to assist PLWHA in clinical care in achieving and maintaining ART adherence and is currently under evaluation in a multi-site, randomized controlled trial.
- The current study explores the dynamics of LW software use and characterizes the most frequently selected intervention strategies and their utilization for this clinic sample of PLWHA.

## Methods

- The LW project is active in 5 different HIV care clinic sites in Connecticut, where patients complete a LW session (survey + intervention for Tx; survey data for Ctrl) in conjunction with their scheduled medical visits.
- Complete adherence data was collected for ~537 baseline sessions (Tx: 257; Ctrl: 280). 1845 total sessions have been collected to date (Tx: 863; Ctrl: 982).
- Surveys included the LW-IMB-AAO (IMB adherence measure) and self-reported ART adherence via 3-day pills taken and 3-4 week VAS. Baseline surveys were used to establish rates of adherence and IMB-based adherence deficits, and sessions were analyzed across participants to establish overall patterns of LW use.

## Results



**Participants:** LW project participants are predominantly heterosexual (73%) men (61%) and women (39%) of diverse backgrounds.

### Time in LW

The main components of the software (a guided survey assessment + intervention for Tx arm and guided survey only for control arm) took ~29 (Tx) and ~24 (Ctrl) min at baseline and ~29 and ~16 min., respectively, at follow-up (which has fewer demographic survey items).

### Adherence Assessment and Rates at Baseline

At baseline, 137 (25%) participants with adherence data reported <95% 3-day adherence; 138 (26%) reported missing at least one dose in the last 3-days and 291 (54%) reported less than 100% adherence on the VAS (adherence over past 3 to 4 weeks).

### IMB Based Adherence Barriers

At baseline, participants most frequently endorsed responses indicative of potential adherence related IMB model-based deficiencies on the following 5 items:

- ✓ It upsets me that the HIV meds I have been prescribed can cause side effects. (72%)
- ✓ I am worried that other people might realize that I am HIV+ if they see me taking my HIV meds. (63%)
- ✓ It frustrates me to think that I will have to take these HIV meds every day for the rest of my life. (58%)
- ✓ I understand how each of my HIV meds works in my body to fight HIV. (58%)
- ✓ I know what the possible side effects of each of my HIV meds are. (58%)

Total number of deficits differed by whether or not a dose was missed (15 vs. 12 deficits, respectively), and significantly more non-adherent patients reported a deficit on 18 of the 33 LW-IMB-AAO items.

### IMB Based Adherence Support Strategies

Treatment arm participants go on through the LW program to review a set of adherence support strategies tailored to their specific deficits, and select one that would help the most with adherence. Strategies presented and selected across ALL treatment arm sessions were reviewed (863). The top 4 selected strategies include:

- ✓ Learn more about how your HIV medications work in your body. (offered in 55% of sessions, selected in 26%)
- ✓ Learn about the side effects of your HIV medications and ways to deal with them. (offered in 87% of sessions, selected in 16%)
- ✓ Learn how skipping you HIV medications from time to time can keep them from working for you and hurt your health. (offered in 53% of sessions, selected in 16%)
- ✓ Learn how taking your HIV medications as prescribed can help you to live longer. (offered in 11% of sessions, selected in 16%)

## Intervention Selection and Activities

20 activities are available in LW. The average amount of time in an activity (⌚), a brief description of the activity, and the percent of surveys of 863 in which the activity was selected is presented for the eight most frequently selected activities.



### Doc Talk (⌚ 8 min)

Offered to those with information, motivation, or behavioral skills deficits. This video-based, interview-style activity allows patients to ask HIV doctors about a broad range of HIV-related issues, including HIV treatment, side effects, and resistance. **The most frequently selected activity (16%).**



### Journey through the Bloodstream (⌚ 12 min)

Offered to those with deficits in information about ART, this animated documentary style movie explains T-Cells, CD-4 count, HIV, viral load, resistance, types of HIV meds, and how they fight HIV in the body. **2<sup>nd</sup> most frequently selected activity (13%).**



### Positive Voices (⌚ 3 min)

Offered to those with information, motivation, or behavioral skills deficits. This video-based activity covers a broad range of topics through unscripted interventions with PLWHA. A variety of strategies for overcoming barriers to adherence are discussed. **3<sup>rd</sup> most frequently selected activity (12%).**



### My Meds (⌚ 4 min)

Offered to those with informational deficits and who might benefit from increased skills in managing side-effects. This activity provides comprehensive information regarding one's specific HIV meds: side effects, drug interactions, and dietary restrictions for each med. **9% of sessions included this activity.**



### Celebrate Success (⌚ 11 min)

Offered to those with perfect adherence, this activity promotes maintenance of perfect adherence by focusing on the importance of recognizing and rewarding this accomplishment. Also covers issues germane to relapse prevention. **9% of sessions included this activity.**



### Felicia the Pharmacist (⌚ 9 min)

Offered to those with information, motivation, or behavioral skills deficits. This interview-based interactive video activity allows patients to ask Felicia questions about their HIV prescriptions. **7% of sessions included this activity.**



### Side Effects Solutions (⌚ 9 min)

Offered to those with deficits in information, motivation, or behavioral skills concerning medication side effects. This activity presents detailed information regarding side effects and tips and strategies for managing them. **5% of sessions included this activity.**



### Stress Management (⌚ 11 min)

Offered to those with negative attitudes towards ART or adherence, or lacking in stress management skills. This activity provides information about stress, as well as opportunities to practice stress-reducing techniques. **4% of sessions included this activity.**

## Goal Setting

At the conclusion of the Tx arm session, the participant selects an adherence-related, activity specific goal that they will try to accomplish before their next LW session. On follow-up sessions (468), 31% reported partially accomplishing their goal, while 61% reported accomplishing it completely.

## Conclusions

- HIV-positive clinical care patients in the LW project reported relatively high rates of adherence.
- The LW software program is being used as intended, with full treatment sessions averaging about 30 minutes.
- The most frequently IMB-based adherence **barrier identified** and **strategy offered** involved questions and concerns regarding medication side effects.
- The most frequently **selected adherence-promoting strategy** was "Learning more about how medications work in the body".
- The most frequently **selected intervention activity** was Doc Talk.
- Recognizing the diversity in PLWHA's adherence-related needs and using a choice-driven ideographic intervention approach may prove to be a key step toward improving and maintaining optimal ART adherence.

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