LifeWindows

Center for Health, Intervention and Prevention (CHIP)
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Principal Investigators: Jeffrey D. Fisher, Ph.D; K. Rivet Amico, Ph.D; Deborah H. Cornman, Ph.D; and William A. Fisher, Ph.D of the Center for Health, Intervention and Prevention at Uconn. The LifeWindows intervention was developed with the needs of people living with HIV/AIDS (PLWHA) in mind. The LifeWindows program development team developed a computer-based program designed to help individuals with ARV adherence.

A snapshot: LifeWindows is a personalized, interactive, and engaging software program designed to help PLWHA achieve and maintain adequate ARV adherence. For a brief video synopsis of the program: [http://www.chip.uconn.edu/lw/](http://www.chip.uconn.edu/lw/)

Target population: 594 PLWHA on ARVs receiving HIV care at five Connecticut clinics were randomized to intervention or control arms for study duration of approximately 18 months. PLWHA interacted with LifeWindows at each clinical care visit.

The Intervention: Based on participants’ self-reported information, motivation, and behavioral skills barriers to ARV adherence, users are provided with a tailored list of adherence-promoting strategies and asked to select a strategy to work on during their LifeWindows session. Users are then presented with a list of adherence-promoting interventions and are asked to select the one that would help them most with taking their ARV medication. In total, LifeWindows contains 20 different interventions, based on the IMB model of ARV adherence, that address a variety of unique adherence-related barriers.

User Environment: ‘Marcus,’ the on-screen video host of LifeWindows, welcomes users to the program, guides them through it, and provides personalized feedback along the way (see screenshot below). LifeWindows uses media-rich and interactive activities to provide a diverse array of experiences for users to select from, all targeting the adherence-related information, motivation, and behavioral skills deficits the participant reports.

Assessment Module: Prior to engaging in strategy or intervention activity selection, the program assesses current adherence and associated adherence barriers and facilitators. Users are asked to complete

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series of questions that assess (see screenshot to right):

- Demographics
- Self-reported physical and mental health
- Information, Motivation, Behavioral skills
- Barriers to ARV adherence
- Self reported ARV regimen
- Self-reported ARV adherence

Adherence Assessment: ARV adherence is assessed over a 3-day and a 3-4 week period.

3-day adherence is assessed using a modified version of Chesney et al.’s (2000) AACTG measure. The modified measure differs from the original in that users are asked to report the amount of each dose taken, rather than the number of doses missed (see screenshot above).

Adherence over the past 3-4 weeks is assessed using a computer-based version of Walsh et al.’s (2002) visual analog scale (VAS). On a series of scales with values ranging from 0%-100%, users are asked to indicate how much of each HIV medication they have taken over the last 3-4 weeks.

LW-IMB- AAQ: The LW-IMB-AAQ [http://www.chip.uconn.edu/int_res_meas_ins.htm](http://www.chip.uconn.edu/int_res_meas_ins.htm) was developed as a measure of barriers to antiretroviral (ARV) adherence among HIV+ patients in clinical care, following the constructs identified in the Information--Motivation--Behavioral Skills (IMB) model of adherence (Fisher, Fisher, Amico, & Harman, 2006). The 33 item measure provides the LifeWindows program with critical information about users’ ARV adherence-related strengths and weaknesses. Each LW-IMB-AAQ item serves a dual purpose: quantifying information, motivation, and/or behavioral skills strengths and weaknesses, and signaling which specific IMB adherence-related deficits should be addressed in order for adherence to improve or most effectively be maintained.

Strategy Selection: The program uses the information gathered from the LW-IMB-AAQ to determine which specific intervention activities would be most relevant to a user given his or her specific constellation of adherence-related barriers. The user is then offered this targeted set of intervention activities and asked to select
an activity that would be most helpful in improving or maintaining his or her ART adherence. The average number of strategies chosen out of a maximum of 22 was 10.

**Intervention Activities:** Each strategy leads to a set of strategy-appropriate intervention activities that are explained by the on-screen video host. Users select one activity to engage in that is of greatest interest and perceived utility to them. Each of the 20 different intervention activities are multifaceted and offer experiences and opportunities to work on the resolution of barriers in real time. Each activity ends in the selection of a specific goal, which is then assessed for progress at the following LifeWindows session.

**Results of the LifeWindows Intervention:** The efficacy of using LifeWindows to increase ARV adherence was assessed through a randomized controlled trial at the five participating HIV care sites.

Intervention impact was significant in the “On Protocol” sample (participants who completed 6 or more LifeWindows visits and were on ARVs throughout the project). In comparison to those in the control arm (who also completed at least 6 control condition visits and were on ARVs throughout their participation), intervention arm participants achieved significantly higher levels of perfect- and 90% or greater adherence over time.

Other findings indicate that:

- LifeWindows was highly acceptable to HIV+ clinical care attendees.
- It’s interactive and individually targeted intervention modules were highly engaging.
- The intervention has promise as an impactful and practical approach for widespread application in support of ARV adherence in the clinical care setting.

**Related CHIP Publications:**


Presentations:


References:


If you are interested in reading the original research study, please write to the Center for Health, Intervention and Prevention, c/o Jeffrey Fisher Ph.D, Unit 1028, University of Connecticut, Storrs, Connecticut 06269-1028 or email jeffrey.fisher@uconn.edu