

# PHONE-DELIVERED SUPPORT COUNSELING FOR HIV TREATMENT ADHERENCE

## Good Evidence – Medication Adherence

### INTERVENTION DESCRIPTION

#### Target Population

- HIV clinic patients who are antiretroviral treatment-experienced

#### Goals of Intervention

- Improve adherence to antiretroviral therapy
- Improve HIV viral suppression

#### Brief Description

*Phone-Delivered Support Counseling for HIV Treatment Adherence* is an individual-level intervention delivered to HIV-clinic patients who are treatment experienced and self-reported less than 95% adherence. The intervention was designed to improve medication adherence through independent and interactive effects of brief biweekly adherence self-regulation counseling with and without daily text message medication reminders. The counseling intervention incorporated techniques commonly used in motivational interviewing and included corrective feedback and problem-solving strategies. The counseling intervention was delivered through 5 biweekly sessions (one 45-minute face-to-face meeting and four phone sessions) delivered over 2 months.

#### Theoretical Basis

- Self-regulation Theory

#### Intervention Duration

- One 45-minute face-to-face counseling session, followed by 4 subsequent biweekly counseling sessions over the phone, delivered over 2 months. Text message reminders were delivered daily for up to 2 daily medication times for over 10 months.

#### Intervention Setting

- Infectious disease clinics
- Locations where participants had access to their personal and/or study phone

#### Deliverer

- Trained adherence counselor

#### Delivery Methods

- Counseling
- Corrective feedback
- Discussion
- Personalized adherence plan
- Problem-solving
- Reinforcement
- Text message reminders

## INTERVENTION PACKAGE INFORMATION

**An intervention package is not available at this time.** Please contact **Seth Kalichman**, Department of Psychology, 406 Babbidge Road, University of Connecticut, Storrs, CT 06269.

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## EVALUATION STUDY AND RESULTS

The original evaluation was conducted in Atlanta, GA between 2011 and 2015

### Key Intervention Effects

- Increased medication adherence
- Increased viral suppression

### Study Sample

The baseline study sample of 600 men and women is characterized by the following:

- 94.5% black or African American
- 71.3% male, 28.7% female, 6.8% transgender
- 100% treatment-experienced
- 81.6% of participants with > 90% medication adherence measured by monthly unannounced phone-based pill counts
- 76.3% of participants with undetectable viral load (< 100 copies/mL)
- Mean age of 47.1 years (SD = 9.5)

### Recruitment Settings

Infectious disease clinics

### Eligibility Criteria

Men and women were eligible if they were ages 18 or older, receiving ART, and adherence less than 95% in a prospective past month as determined by unannounced phone-based pill counts.

### Assignment Method

Participants (N = 600) were randomly assigned to 1 of 4 groups: adherence counseling only (n = 149), adherence counseling with text message reminders (n = 150), contact-matched control (n = 151), or contact-matched with text message reminders (n = 150). The intervention group consisted of participants who received the adherence counseling, with or without text message reminders (n = 299). The comparison group consisted of participants from the contact-matched control, with or without text message reminders (n = 301).

### Comparison Group

The comparison group was a contact-matched, non-contaminating health improvement intervention. Participants in the contact-matched control arms (i.e., contact-matched control only and contact-matched with text message reminders arms) received counseling that focused on improving general health and well-

being in relation to living with HIV/AIDS. The control counseling sessions mirrored adherence counseling in frequency and structure.

**Relevant Outcomes Measured and Follow-up Time**

- Medication adherence behavior was measured using unannounced phone-based pill counts and were assessed monthly for 12 consecutive months.
- Viral load was measured at 12-months post-initiation of intervention and was assessed as undetectable (<100 copies/mL).

**Participant Retention**

Assessment time point (Post-initiation of intervention)	Adherence Counseling Only	Adherence Counseling with Text Message Reminders	Contact-Matched Control	Contact-Matched Control with Text Message Reminders
3 months	96%	98%	95%	96%
4 months	95%	94%	92%	93%
5 months	94%	87%	92%	94%
6 months	92%	85%	90%	88%
7 months	92%	80%	88%	88%
8 months	92%	83%	88%	86%
9 months	92%	84%	86%	85%
10 months	90%	81%	85%	85%
11 months	89%	79%	84%	84%
12 months	88%	81%	86%	86%

**Significant Findings**

- From baseline to 12 months post-initiation of the intervention, there was a significant improvement in medication adherence among participants in the adherence counseling condition compared to participants in the contact-matched control condition, controlling for baseline (Wald  $\chi^2 = 26.83$ ,  $p < 0.01$ ).
- From baseline to 12 months post-initiation of the intervention, a significantly greater proportion of participants receiving the adherence counseling condition achieved 90% adherence compared to participants in the contact-matched control condition, controlling for baseline (Wald  $\chi^2 = 17.78$ ,  $p < 0.05$ ). This significant effect was also found between participants who achieved 95% adherence in the adherence counseling condition and the contact-matched control condition, controlling for baseline (Wald  $\chi^2 = 26.41$ ,  $p < 0.01$ ).
- At 12 months post-initiation of the intervention, participants in the adherence counseling condition were more likely to achieve viral suppression (< 100 copies/mL) compared to participants in the contact-matched control condition, controlling for baseline (OR = 1.23, 95% C.I. = 1.01—1.51,  $p < 0.05$ ).

**Considerations**

- This study did not meet best-evidence criteria because imputation to account for missing data due to attrition was not conducted.
- The text-messaging component of the intervention is not supported because there were no significant effects in adherence or viral suppression in the text message reminder condition.

- Participants in the adherence counseling condition demonstrated significantly greater adherence self-efficacy over time (Wilks'  $\lambda = 0.98$ ,  $F_{(4, 471)} = 2.41$ ,  $p < 0.05$ ) and reported more use of adherence strategies (Wilks'  $\lambda = 0.97$ ,  $F_{(4, 471)} = 2.89$ ,  $p < 0.05$ ).
- From baseline to 12 months post-initiation of the intervention, participants in the text messaging condition demonstrated lower self-efficacy for medication adherence (Wilks'  $\lambda = 0.97$ ,  $F_{(4, 471)} = 2.51$ ,  $p < 0.05$ ). Although this is a statistically significant negative intervention effect, the text messaging component of the intervention is not supported, and the study meets good-evidence criteria based on the results for the counseling intervention. The authors suggest that the study participants may have habituated to the daily text message reminders, which may have demotivated adherence by cuing participants to their non-adherence.

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## REFERENCES AND CONTACT INFORMATION

Kalichman, S. C., Kalichman, M. O., Cherry, C., Eaton, L. A., Cruess, D., & Schinazi, R. F. (2016). [Randomized factorial trial of phone-delivered support counseling and daily text message reminders for HIV treatment adherence](#). *Journal of Acquired Immune Deficiency Syndrome*, 73, 47-54.

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