

Final Report, Kauth 2001

MIRECC Clinical Education Grants Program

Final Report

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Title: HIV Medication Adherence Tool Kit: An Educational Intervention

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I. Summary of education program:

The health outlook for many people with HIV has improved dramatically in recent years, although new treatment regimens appear to be unforgiving and demand near perfect adherence. Patients must maintain 95% compliance or better with HIV medications to receive maximum benefit. Many regimens require that patients take multiple doses of multiple medications under specific conditions, such as with or without food or in temporal sequence. What is more, additional medications may be required to manage the side effects of HIV medications. Unfortunately, patients may receive little support or practical materials to help them fit their medications into their daily lives. At the New Orleans VA Medical Center, veterans with HIV receive instructions about when to take medications from a pharmacist, but they are not helped to design adherence strategies or anticipate barriers to adherence.

We proposed to evaluate the effectiveness of a brief educational intervention to provide instruction to patients and tools to improve adherence to HIV medications. All veterans with HIV who presented at the clinic and met inclusion criteria were invited to participate. Sixty veterans with HIV (59 male; 1 female) were interviewed by a doctoral level mental health professional about how they take their HIV medications. Depression and substance use were also assessed.

II. Describe the intervention:

Veterans were given an Adherence Tool Kit which contained a large weekly pillbox with two large daily compartments, a small pillbox for a single dose, sticky notes with printed reminder message, ten tips for taking medications effectively, various visual reminders including stickers and rubber bands, a narrative illustrating how a typical HIV patient could incorporate these strategies, and a movie ticket for stress management. The movie ticket also served as an inducement for participation. The interviewer discussed with the patient how each item in the tool kit could help them take their medications as prescribed.

Participating veterans were middle-aged ($M=48.9$, $SD=10.0$; range=32-78). Most were African American (55%; 43% Caucasian) and had at least some college or trade school training (58%). Almost half (49%) identified as heterosexual, and 39% identified as gay. More than one-third (38%) had an AIDS diagnosis ($CD4 < 200$), and 62% had detectable viral loads ($M=81,320$; $SD=128,185$). Thirty percent of veterans had no strategy to remember to take their

medications. Only 29% had never missed a dose in the past 3 months. However, delayed doses can present as much of a problem for treatment efficacy as missed doses. In this sample, only 34% had not delayed more than one dose by two hours or more. For the purposes of this study, adherence was defined as not delaying more than one dose by two hours or more in the past week.

III. What was effective about your intervention:

One month after the interview, 51 (85%) veterans were contacted and asked about their use of the tool kit and how they take their medications. Veterans received another movie ticket for their participation. Nearly all veterans (49) used the tool kit, and most (87%) reported that it was "very" and "extremely useful." By far, the large and small pillboxes were identified as most useful to people (59%) in taking their medications as prescribed. Thirty-seven (73%) veterans reported compliance with HIV medications in the past week, a significant increase over baseline rates ($X^2 = 3.98, p = .05$).

In the NO VAMC Infectious Disease Clinic, a 3-month follow-up appointment is routine. At that time, providers assessed medication adherence during a regular clinic visit using the definition above. Data were obtained from the medical record. Providers rated 25/40 veterans (63%) as adherent with medications in the past week. Seventeen veterans who failed to keep their regular clinic visit were contacted by telephone. Only 2 (12%) were adherent with their medications. Overall, 27/57 (47%) veterans were adherent at 3-month follow-up, a non-significant difference from baseline and 1-month assessment.

Adherence at 3-month assessment was NOT predicted by demographic variables, baseline compliance, health status or beliefs, outcome expectancies, depression scores, substance use, use of the tool kit, or changes in medications in the past 3 months. However, adherence significantly differed for veterans who kept their 3-month clinic appointment compared to those who did not (63% vs. 12%). Demographic, attitude, and behavioral variables did not distinguish veterans who failed to keep their clinic appointment.

Conclusion: The brief intervention (tool kit plus instructions) appeared to increase adherence in the short-term, although only veterans who kept their regular 3-month follow-up appointment maintained these gains. No other predictors of non-adherence were identified.

The Tool Kit alone is unlikely to account for increased medication adherence, suggesting that providing patients with adherence strategies may be necessary but not sufficient to maintain adherence. Alternatively, staff attention may have boosted adherence in the short-term, although contact at 1-month did not predict compliance at 3 months. However, failure to keep a routine follow-up strongly suggests treatment noncompliance. A 3-month follow-up may be too long for patients who have difficulty with their treatment regime.

It should be noted that this sample may be too small to detect meaningful differences between adherers and non-adherers. In addition, provider evaluation of adherence at 3-months was variable: providers failed to mention adherence in their progress note for 18 patients. In addition, patients' self-report may have overestimated adherence, although this did not appear to be the case at 3-month follow-up for patients who missed their clinic appointment.

IV. Future application of this intervention:

Future studies will include multiple sites to increase sample size and will evaluate the effect of education and staff support compared to usual care.

IV. Signatures:

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Cc: Jeffrey West, Ph.D., and Albert Breland, M.D.