Implementing Behavioral Activation and Life-Steps for Depression and HIV Medication Adherence in a Community Health Center

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Antiretroviral therapy to treat HIV/AIDS has substantially improved clinical outcomes among patients living with HIV/AIDS, but only in the presence of very consistent adherence. One of the most prevalent and impactful individual-level predictors of poor adherence is depressive symptoms, even at subthreshold levels. Evidence-based cognitive behavioral interventions exist to address improvements in depressive symptoms and adherence in this population, yet these techniques have largely been designed and tested as individual treatments for delivery in mental health settings. This presents a significant challenge when transporting these techniques to medical settings where other formats for delivery may be more appropriate (i.e., groups, less frequent visits), and few hands-on resources exist to guide this process. As such, primary aims of this study were to adapt and implement evidence-based cognitive behavioral techniques for depression (behavioral activation; BA) and HIV medication adherence (Life-Steps) that have potential for dissemination in an outpatient community health center. The intervention incorporated feedback from health center staff and utilized a modular, group format that did not rely on sequential session attendance. Feasibility was examined over 8 weeks (n = 13). Preliminary effects on depression, health-related quality of life, and medication adherence were examined, and exit interviews were conducted with a subset of participants (n = 4) to inform future modifications. Treatment descriptions and recommendations for effective clinical implementation based on patient and clinician feedback are provided along with case material of two individual patients and an example group session. Current efforts are an important next step for disseminating evidence-based techniques for depression and HIV medication adherence to community health center or AIDS service organization settings.

A NTIRETROVIRAL therapy to treat HIV/AIDS has substantially improved clinical outcomes among patients living with HIV/AIDS, but only in the presence of very consistent adherence (e.g., Crum et al., 2006). There are numerous barriers to achieving optimal levels of adherence; one of the most prevalent, impactful, and consistent individual-level predictors of poor adherence is depression (Gonzalez, Batchelder, Psaros, & Safren, 2011). Rates of depression among individuals living with HIV/AIDS are estimated to be approximately 42% (Horberg et al., 2008), and the presence of even subthreshold symptoms of depression has been shown to disrupt medication adherence; depressive symptoms have been associated with approximately a twofold increase in likelihood of poor

adherence over time (Kacanek et al., 2010). Among HIV-infected substance-using individuals, even a 1-point increase in clinician-rated depressive symptoms on the Clinical Global Impression (CGI) severity scale (Guy, 1976) has been associated with a 75% increase in the odds of HIV medication nonadherence (Gonzalez, Psaros, et al., 2011); additionally, for each standard deviation increase on the Montgomery Asberg Depression Rating Scale (MADRS; Montgomery & Asberg, 1979), a 2.6-fold increased odds of nonadherence has been demonstrated. This has important implications for treatment outcomes, as medication nonadherence is associated with increased likelihood of producing medication-resistant HIV strains, greater health complications, failure to achieve full viral suppression (Bangsberg et al., 2001), and increased risk of death (de Olalla et al., 2002).

Evidence-based cognitive behavioral interventions have been developed to address improvements in both depression and HIV medication adherence among individuals living with HIV/AIDS with either clinical levels of depression or elevated depressive symptoms. Yet, it has been estimated that only 7% of HIV-infected

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individuals who require treatment for depression are receiving adequate treatment (Pence, O'Donnell, & Gaynes, 2012). These evidence-based techniques are rarely implemented in medical settings where many HIV-infected individuals with the greatest treatment needs—such as low-income, minority individuals with psychiatric comorbidity—receive treatment (Altice, Kamarulzaman, Soriano, Schechter, & Friedland, 2010; Pence et al., 2012; Soller et al., 2011; Weaver et al., 2008).

Specific to medication adherence, a brief, even single-session intervention, Life-Steps, is an evidence-based intervention that integrates informational, problem-solving, and cognitive behavioral components to improve HIV medication adherence (Safren, Otto, & Worth, 1999; Safren et al., 2001). Life-Steps has empirical support as a brief individual treatment across a range of settings, including outpatient behavioral health (Safren et al., 1999, 2001, 2009), methadone maintenance (Safren et al., 2012), and international contexts (e.g., Cohen et al., 2011; Shiu et al., 2012; Simoni et al., 2011). Although first developed as a single-session intervention, recent adaptations (e.g., in international contexts) have delivered Life-Steps across multiple sessions (Shiu et al.; Simoni et al.). When integrated with other treatments, the Life-Steps module is conducted initially in a single session and then reviewed in subsequent sessions to continue to identify barriers and strategies to improve adherence (Safren et al., 2009, 2012).

To address depression alongside improvements in adherence, evidence-based treatments for depression have been integrated with Life-Steps, including cognitive behavioral therapy (CBT) for depression (Safren et al., 2009, 2012) and behavioral activation (BA; Daughters, Magidson, Schuster, & Safren, 2010). BA holds particular promise when considering potential relevance for dissemination and flexible delivery of evidence-based techniques in HIV community health centers. BA is an evidence-based behavioral intervention based upon reinforcement theories of depression that targets increases in value-driven rewarding behaviors (Cuijpers, Van Straten, & Warmerdam, 2007; Lejuez, Hopko, Acierno, Daughters, & Pagoto, 2011; Lejuez, Hopko, LePage, Hopko, & McNeil, 2001; Mazzucchelli, Kane, & Rees, 2009; Sturmey, 2009). It is similar to the activity scheduling module of CBT (Jacobson et al., 1996), with a few key distinctions: BA includes an in-depth psychoeducation component on the relationship between depression and engaging in enjoyable and important behaviors. BA also includes behavioral monitoring with associated ratings of enjoyment and importance and a values-based assessment to guide activity selection.

Given its practical, straightforward nature, BA has been suggested to be particularly suitable for dissemination. Evidence suggests BA can be delivered as an individual or group approach and condensed into a briefer formats as practical barriers necessitate (e.g., Daughters et al., 2008; MacPherson et al., 2010; Magidson et al., 2011). It is also appropriate for training nonspecialized primary care providers (Ekers, Richards, McMillan, Bland, & Gilbody, 2011). These are characteristics that support its broad application across a range of clinical settings. Further, there is some evidence that more elaborate cognitive techniques may not be feasible or appropriate for individuals with low psychological insight, low education levels, chronic substance use histories, or cognitive impairment (Aharonovich et al., 2006; Aharonovich, Nunes, & Hasin, 2003). In addition to clinical depression, BA has been used to improve subthreshold depressive symptoms and distress regardless of depression diagnosis (Daughters et al., 2008; Magidson et al., 2011; Manos et al., 2009). BA also has been suggested to be easily tailored for medical and psychiatric comorbidities (Mazzucchelli et al., 2009; Sturmey, 2009) and has demonstrated positive effects on comorbid outcomes often independent of changes in depression (i.e., smoking, substance use; MacPherson et al., 2010; Magidson et al., 2011).

More specifically, BA has been adapted for low-income substance using and HIV-positive individuals; adaptations include emphasizing the link between activity, mood, and substance use, generating ideas for substance-free activities, incorporating relapse prevention into treatment (Daughters et al., 2008; Magidson et al., 2011), and identifying links between activities and poor HIV medication adherence (Daughters et al., 2010). These modified BA techniques have been previously integrated with Life-Steps in a 16-session, manualized individual treatment format (Daughters et al., 2010).

Despite the potential for dissemination of BA to improve depression across a range of settings and empirical support for delivery of BA in groups (e.g., Daughters et al., 2008; Magidson et al., 2011; Porter, Spates, & Smitham, 2004) and in primary care specifically (Ekers et al., 2011), BA and Life-Steps have largely been delivered as individual treatments in mental health settings. This presents a significant challenge when transporting these techniques to medical settings, where many individuals with the greatest need for treatment—such as low-income, minority HIV-infected individuals with psychiatric comorbidity—seek care (Soller et al., 2011). Few resources exist to guide how to adapt these interventions and techniques for a medical setting and, in particular, into a group format, which may be the most feasible and cost-effective option for low-resource community health settings. Further, other features of a mental health setting, such as trained mental health providers, sequential, weekly treatment attendance, and a unified presenting problem may not be realistic in medical settings. Implementing interventions in a medical setting that were tested and designed for individual treatment in a mental health setting is a struggle across types of disorders and interventions, particularly for