Abstract

Assessing Feasibility and Acceptability of mHealth among Underserved HIV+ Cocaine Users and Their Healthcare Providers

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Abstract

Background: HIV-infected individuals with comorbidities like drug addiction have difficulty staying in medical care and adhering to antiretroviral medication which, if taken regularly, results in viral suppression and greatly reduces risk of transmission to others. Since cocaine is not amenable to pharmacological interventions, there is an urgent need for behavioral interventions. Innovative and cost-effective strategies to improve medication adherence and optimize HIV treatment outcomes may be provided by mHealth. Very little, however, is known about the acceptability and feasibility of mHealth among HIV-infected drug users.

Objective: To assess feasibility, acceptability, and barriers and facilitators of implementing an mHealth intervention among HIV-infected cocaine users.

Methods: Focus groups were conducted with 5 groups (N=20) of HIV-infected individuals who self-reported cocaine use in the past 30 days, and 3 groups (N=8) of HIV and substance use providers. Participants were recruited from clinical and community venues including HIV and drug treatment clinics, a mobile medical unit, and support groups. We asked about: previous experience with smartphones and computers; barriers and facilitators of mobile technology for health purposes; attitudes toward receiving different types of feedback about adherence behaviors. Data was analyzed using content analysis to identify salient themes from responses, facilitated by the qualitative data analysis software NVivo.

Results: Results highlighted the pattern and preference of cell phone/mobile device usage among HIV-infected cocaine users. Usage reasons included staying connected with their social network, receiving text reminders for appointments, information seeking, scheduling and recreational use. Text reminders were preferred over phone calls due to reasons of privacy, accessibility and economizing "minutes". Patient privacy and confidence in the electronic medical system, however, were important themes among patients. Although cell phones were considered useful, some patients reported very limited computer use because of distrusting technology and worries that their medical information, particularly their HIV status, could be hacked through the phone. From providers' perspectives, the personal interaction with patients, including via cell phones, was important to them and was often hampered by interruptions in patients' phone use (number changes, disconnections, running out of pre-paid minutes). Communication via text message or phone calls would be most appropriate for professionals directly in charge and in continuous contact with patients, such as social workers and case managers, as opposed to physicians.

Conclusions: Participants' beliefs and suggestions were helpful in informing the design of a subsequent mHealth pilot randomized control trial. We incorporated findings in the following ways: (1) personalized feedback from a clinician along with automated reminders and feedback; (2) an extra layer of security was added on the smartphone app; and (3) facilitated mobility and convenience by providing backpacks for all devices, considering HIV-infected participants' concerns about their transient and unstable living

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conditions. Understanding potential users' and stakeholders' perspectives is an important step in developing effective mHealth strategies to help people manage their health behaviors.

KEYWORDS