

# SMARTPHONE-DELIVERED MOBILE HIV RISK REDUCTION EDUCATION IN OPIOID DEPENDENT INDIVIDUALS

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## ABSTRACT

**BACKGROUND** Computer-based HIV education has been shown effective and is preferred over counselor-delivered education. Previous studies have shown significant increases in risk-reduction behaviors after participation in a computerized HIV risk reduction (HIVRR) intervention. Whether delivery of mobile HIVRR (mHIVRR) education via smartphone is also effective at increasing knowledge and decreasing risk behavior has yet to be determined.

**PURPOSE** To develop and deploy an interactive mHIVRR software program to deliver HIV/STD education on smartphones and determine whether it reduces HIV/STD-related risk via increased HIV/STD knowledge.

**METHODS** We developed mHIVRR modules using video components of pre-existing evidence-based programs. Each module consists of a 5-10-minute video component followed by an 11-item usability/acceptability questionnaire and a 3-item knowledge questionnaire. New modules were downloaded onto smartphones weekly. Participants completed questionnaires after each viewing of  $\geq 75\%$  of the video component. Prior week modules were moved to the "Library" and available for repeated viewing. Acceptability of mHIVRR modules was defined as a median score of  $\leq 2.5$  (1-very easy/effective to 5-very hard/not at all effective) for each usability/acceptability question. Effectiveness was defined as  $\geq 80\%$  of participants scoring  $> 65\%$  on the knowledge questions.

**RESULTS** 78% of video modules attempted were completed. Average usability/acceptability questionnaire responses were all  $\leq 2.5$  (range 1.3 to 2.1). Video module length was "just right" according to 72% of participants. Only 16% thought the mHIVRR module information would have been better suited for printed material and 28% for computer-based delivery. 25% of participants would have preferred a text-based smartphone module compared to the video-based smartphone module. 100% of participants scored  $> 65\%$  on the knowledge questions, with an average overall knowledge score of 82%.

**CONCLUSIONS** Video-based mHIVRR education delivered via smartphone appears to be acceptable, and may increase HIV/STD risk reduction knowledge. Future studies, with pre-intervention assessments of knowledge, are needed to confirm these findings.