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New Ci3 study finds mobile video game helps to engage and inform youth about HIV testing

Chicago – In a recent study published in the American Journal of Sexuality Education by researchers at the University of Chicago’s Center for Interdisciplinary Inquiry and Innovation (Ci3) in Sexual and Reproductive Health, researchers found that, a game using a concept called embedded design was found to be acceptable, engaging, and informative. Embedded design is a relatively new concept that mixes message content with content that is not the main focus of the game. The study describes the design, development, and evaluation of *The Test*, a mobile video game developed to promote HIV testing among young men who have sex with men (YMSM), particularly African American young men who have sex with men (AAYMSM).

Research suggests that digital games have been effective for health-related behavior change. However, little is known about general gaming rates and mobile game play among YMSM, or about using digital games for HIV prevention. For *The Test*, embedded game design was chosen as a design strategy to approach information on HIV testing in a holistic way that considers individual information, emotions, and social relationships. The game also draws concepts from a social ecological approach to health.

Though youth comprise only 17% of the U.S. population, adolescents ages 13–24 account for approximately 22% of new HIV infections, and YMSM account for approximately 80% of all new infections among adolescents. In major urban areas such as Chicago, rates of HIV are three times the national average, and AAYMSM merit attention, as in 2010 they accounted for more new infections than any other race/ethnicity, age and sex.

Published in a special issue of the American Journal of Sexuality Education, the article, [“Embedded Game Design as a Method for Addressing Social Determinants of Health,”](#) describes the research, design, development and evaluation of *The Test*. This initial game component, focuses on four structural or social deterrents that research shows AAYMSM face when seeking HIV testing: a lack of urgency about HIV testing; a lack of knowledge about insurance coverage HIV test; a fear of homophobia in the clinical setting; and lack of social support for testing.

The Test opens as an aerial street map in which the player follows the path that their character must take to arrive at a clinic for testing. Players can play as one of three characters, each of whom has a distinct set of behaviors, preferences, and life circumstances. The aforementioned barriers to testing appear as “roadblocks” or short experiences in the form of a text message conversation and a replayable 30 second mini game that helps the player examine the issue. For example, anxiety or fear that a young person faces when experiencing homophobia in a clinic setting is depicted as having to defend a cookie against relentlessly pursuing ants. The game is intended to simulate feelings of annoyance, self-protection, and futility. The dialogue acknowledges the emotion and then provides helpful suggestions and concrete ways to identify LGBT-friendly clinics.

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The game was then tested with a sample of 40 AAYMSM predominantly from Chicago's South Side using a pre-post evaluation design to determine whether the resulting game was engaging, acceptable, increased knowledge, and increased interest in getting HIV tested. After playing, participants were contacted two weeks later to take part in a focus group that was held with five participants.

Overall, participants rated the quality of the game highly (mean 8.2 out of 10). A slight majority of participants found the game easy to use (52.6%), while the majority found that the game was easy to navigate (76.3%); well organized conceptually (71.1%); easy to understand (76.3%); provided useful information for the future (76.3%); and taught something new about HIV testing (63.2%). Most participants (70.0%) reported that they would play the game even outside of the research setting and 84% would recommend the game to a friend. At two weeks, the level of HIV knowledge remained persistently high, and one participant obtained HIV testing during that time frame. Participants also acknowledged that *The Test* was fun to play, and evoked the intended emotions and experiences.

This study examines the development and testing of an early version of a game designed to help young men identify, encounter, and overcome social determinants of health that prevent HIV testing. *The Test* helped young players explore the issue of HIV testing and barriers to getting tested.

To review the full publication, click [here](#). This research was conducted as part of the evaluation phase of an NIH-funded grant awarded to the Ci3 Game Changer Chicago Design Lab and Resilient Games Studio.

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About Ci3 at the University of Chicago

Established in 2012, [Ci3](#) is a research center the University of Chicago addressing the social and structural determinants of adolescent sexual and reproductive health. At Ci3, we envision a world in which all youth emerge into adulthood with agency over their bodies and futures. Ci3 houses three labs: [The Game Changer Chicago Design Lab](#); [The Transmedia Story Lab](#); and [The Design Thinking Lab](#). Within these labs, we create games and digital narratives, and design interventions with and for youth. Ci3 is committed to empowering young people, conducting innovative research, and uncovering opportunities for policy and systemic change.

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