

'Stealth Health' Promotes Physical Activity

Engaging sedentary youth through computer technology

By Jeff Harrison

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Associate professor Barron Orr (left) and members of the Douglas and Skrappy's (Tucson) Spirit of the Sun youth groups map safe and unsafe places as part of a youth-driven community asset mapping project.

A group of researchers at The University of Arizona is devising a plan to target childhood obesity through the very technology that is partly to blame for the increasingly large number of growing young waists.

The study, "Stealth Health: Youth Innovation, Mobile Technology, Online Social Networking, and Informal Learning to Promote Physical Activity," is funded by a three-year, \$1,476,300 grant from the U.S. Department of Agriculture.

Scott Going, UA professor of nutritional sciences, is the principal investigator of the grant. Co-principal investigators include Nobuko Hongu, an assistant professor and nutrition extension specialist in the UA nutritional sciences department; Mimi Nichter, UA associate professor of anthropology; Barron Orr, associate professor and geospatial extension specialist in the UA Office of Arid Lands Studies; Kirk Astroth, director, Arizona 4-H Youth Development; and Denise J. Roe, professor in the UA Zuckerman College of Public Health.

The prevalence of childhood obesity in the U.S. continues to rise, and while a number of factors contribute to the problem, Going and his colleagues are focusing on "screen-time" technology. Mounting evidence shows that young people who spend their days sitting in class at school and being sedentary during their free time with computers, televisions and video games are more likely to gain weight than those who engage in physical activities.

The current consensus, Going said, is that many programs combat obesity with limited, short-lived success. Reaching the significant majority of youth who traditionally do not participate in formal healthy lifestyle education programs, either on their own or led by an expert, requires an informal approach that engages youth where they are in their everyday lives. Going thinks that can happen by capitalizing on mobile phone technology and online social networks through the design of a youth-friendly nutrition and physical activity, or NPA, program.

"The goal of our bottom-up approach is to work closely with youth to develop activities that utilize popular technology, such as GPS, digital photography, instant messaging and seamless connectivity now available in cell phones and virtual communities like Facebook or MySpace," Going said.

The first step for the programming team is to develop baseline integrative software "widgets" to track, map and share NPA on mobile phones and in social networking Web sites. Widgets are a kind of graphical user interface that allows computer users some limited access to Web data, like the weather bugs people have in their task bar, or Google maps on iPhones.

The research team will work closely with 30 adolescents, ages 12 to 18, who will be mentored by software developers as they customize the technology to people's particular interests.

Following development and pre-testing, the researchers will assess the "stealth

health" impact of the teen-produced widgets on NPA programs, and implement them in diverse, after-school education programs with 200 adolescents.

The final step will be encouraging future youth-led, stealth NPA innovation through a national competition seeded by 4-H, YMCA and America On the Move.

"The widget will be designed to be easily modified by youth and used in ways they enjoy," Going said. The most innovative adaptations will be published through the national partners and their diffusion and adoption by others—something the investigators call "the contagion effect"—and the impact on NPA will be evaluated. Youth participation in development is a key.

"Our intent is to demonstrate the potential of a technology and an informal education approach for promoting NPA in youth," Going said. ★

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