

Real games for health and the trouble with gamification

By: Jonah Comstock | Dec 4, 2012

Motivating behavior change has long been one of the biggest challenges and opportunities in mobile health. One avenue for addressing that challenge is to take lessons from a field that doesn't suffer from any engagement problems: gaming.

For the first year, the mHealth Summit 2012 featured a Games for Health pavilion, focused on companies using games and the lessons learned from gaming to innovate mobile health. Games at the conference seem to fit into two broad categories: simulations that increase readiness and preparedness for medical events and gamified tracking and motivating apps.

A lot of the energy in gamification is focused on using game mechanics to motivate people to healthy behaviors, such as staying active. Ben Sawyer, co-founder of Games for Health, said this is a natural space for mobile gaming.

“There are some really uniquely mobile ideas,” he said. “The [kind] of exercise that hits the largest part of the population is walking, so we see a lot of games built around that. This is something that really speaks to the ‘health games for everyone’ notion.”

Mindbloom is an example of such a company. Their “life game” pairs up each user with a virtual that represents the different spheres of life like health, career, and spirituality. To make the tree grow you have to water it by taking small actions toward those goals.

The company recently partnered with Elbrys to create Juice, an energy tracking app that uses the visual metaphor of a juice bottle. Users can input data from activity trackers or enter the information manually, and then compare the sleep, food, and exercise their getting to their energy levels through out the day. The app also offers a reward system that allows users to unlock content and tips.

Another game in that space is [HotSeat](#), which uses social motivation — users sharing and challenging other users — to get office workers to engage in mini-activity during 2-minute work breaks. Workers choose from a dropdown menu with everything from “walking” to “Gangnam Style” and the app will alert them to break and do their chosen activity or activities throughout the day.



Ben Sawyer

Activity motivating apps aren't just targeting the worried well or the workplace, they have found their way to healthcare facilities, too.

Doug Elwood of the NYU Langone Medical Center presented findings on a motivating game deployed at the hospital to get amputees moving with scheduled mini-dance parties. Although the app was extremely simple, Elwood said it really worked.

"Games don't need to be complex," he said. "We tapped into dance as a form of engagement."

While some companies are using games to motivate action in adults, others are applying a similar model to kids. Zamzee has developed an activity tracker, "safe" social media platform, and rewards system for kids to get them moving. The company just completed a clinical trial in September, which showed that the platform made kids move 58 percent more. Kids collect points by moving and completing challenges, and they can exchange those points for virtual rewards, like swag for their on-site avatars, or physical rewards, like pink duct tape sent through the mail.

But Dan Botwinick, Device and Operations Director for Zamzee, said the game is designed so the fun of the experience will keep kids playing even if they lose interest in the rewards: "Extrinsic motivation starts the behavior, but is less effective over time," Botwinick said. "A positive mindset sustains those behaviors."

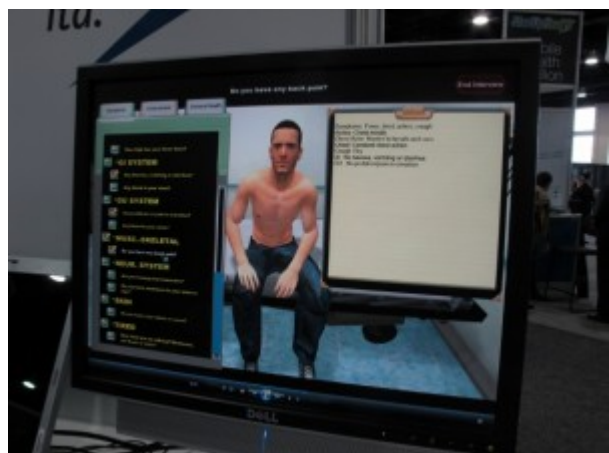
Micheal Fergusson, CEO of Canadian health games company Ayogo, echoed that sentiment a bit more brashly.

"Bribery is not a game," he said. "It's not enough just to give people rewards for doing the right thing. Points and badges are to games what page heading and chapter numbers are to books. I can put page numbers and chapter headings on my VCR manual, but that doesn't make it 'War and Peace'."

Ayogo builds motivating games targeted at adults and kids, including an app game for children with diabetes called "Monster Manor." The game rewards kids for checking their blood glucose regularly with short minigames that add up to unlock features and characters. It automatically sends the results to the parents' smartphone, and has a back-end built in where parents can give kids rewards directly through the game.

But Sawyer said games have great potential for pro-active care. "We think there's a world where we can get to you earlier about health and health-care," he said. "These are actually assets that you need ahead of time, so that at the point of hitting a health problem, you just plow right through it. You're prepared."

Several of the games at the summit fell into that category instead. BreakAway and Kognito produce computer games that act as simulators to train doctors, patients, or caregivers in situations



it can otherwise be hard to train for. BreakAway has a training tool where players interview a virtual patient and have to decide which questions to ask and make a diagnosis. They're also working on a large-scale hospital simulator that can be configured to help train emergency personnel for a catastrophic event. It looks like a hospital version of the classic video game The Sims. Kognito makes training tools for difficult conversations, like convincing a veteran to seek help for PTSD.

One of the most interesting companies working on that side is TiltFactor, a game company/researchlab out of Dartmouth whose board game and free app ZombiePox was designed as an education tool, to teach the importance of vaccinations. When people see that the only way to win the game is to focus on vaccinations rather than trying to cure a rapidly spreading disease, the developers believe they internalize the lesson, and hopefully will be motivated to get their shots.

Sukie Punjasthitkul, of TiltFactor, said that in tests, the lesson was better internalized by the group that played the tabletop version of the game than by the group that played the mobile-enabled one. He's not sure why that is, but the answer might provide some insight into what it really takes to change behavior through gaming.

So is mobile gaming the "Holy Grail" of behavior change? Most of the experts at the mHealth Summit this week agreed that driving behavior change required real games, not just gaming elements like attractive interfaces and point systems. "What's really important to me is that the intrinsic reward of a game comes from the actual process of play," Sawyer said. "That is hard to do if you're gamifying something that has a low frequency of engagement."