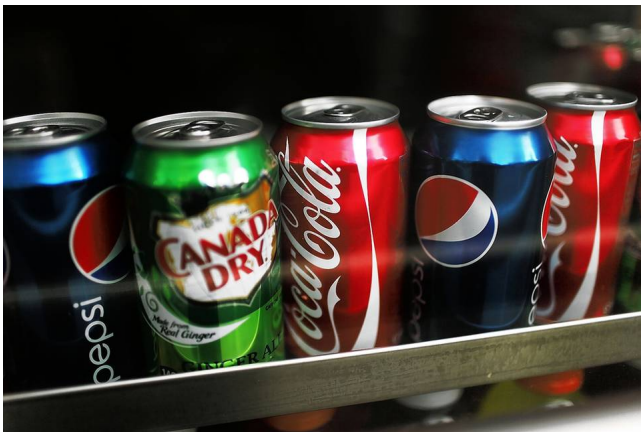


LIFE | HEALTH | JOURNAL REPORTS: HEALTH CARE

## Virtual Reality Simulations Offer Potential for Breakthrough in Preventive Care

Simulations show people the long-term effects of current behavior, like drinking soda. It's a powerful message.



When it comes to convincing patients that sugary drinks lead to obesity, a virtual-reality message sinks in far more deeply than an ordinary pamphlet. PHOTO: SPENCER PLATT/GETTY IMAGES

By **AMY WESTERVELT**

Updated June 28, 2015 8:07 p.m. ET

Everyone knows, in theory, that sugary soft drinks will make us fat.

But imagine watching a virtual-reality avatar of yourself sipping a soda. In the simulation, time flies by at super speed. With each sip, you see your hips and waist expanding. In the space of two minutes, you can see the effects of two years of accumulated globs of fat on your body.

This is just one example of how recent collaborations between health-care researchers and makers of virtual-reality simulations may promise a breakthrough in preventive care.

University of Georgia researchers have found, for instance, that when it comes to convincing patients that sugary drinks lead to obesity, the virtual-reality message sinks in far more deeply than an ordinary pamphlet.

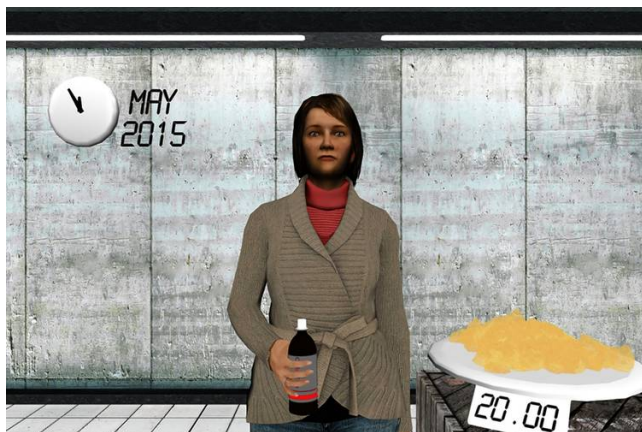
“We’ve found virtual reality to be much more effective than pamphlets or videos at getting the message across and prompting

behavior change,” says Grace Ahn, an assistant professor in advertising who leads Georgia’s virtual-reality research efforts.



PHOTO: GRACE AHN, UNIVERSITY OF GEORGIA

The brain experiences and processes a virtual-reality scenario in the same way it does a real experience, says Ms. Ahn, who



A simulation of the effects of drinking one regular 12-ounce soda a day shows an avatar gaining 20 pounds over two years. PHOTO: GRACE AHN, UNIVERSITY OF GEORGIA

has a Ph.D. in communications from Stanford University. Watching a video, in contrast, creates some cognitive distance between the viewer and the subject, she says.

Virtual-reality researchers have shown that letting people experience the future today makes them more likely to change present-day behaviors. That makes virtual reality a good fit for preventive health care, says Ms. Ahn. “There’s such a big temporal gap between what you do now and what happens to your health further on,” Ms. Ahn says.

The medium comes with a big price tag. The current starting cost for a single two- to five-minute scenario—the template into which individual avatars are introduced—is about \$150,000, says Mary Spio, chief executive of Next Galaxy Corp. , a New York company that creates virtual-reality scenarios for the health-care and other industries. It is one of several companies producing health-related virtual-reality content these days, including Jaunt Inc., of Palo Alto, Calif., and zSpace Inc., a Sunnyvale, Calif., company that incorporates a hand-held stylus with simulations to aid in surgical training.

The equipment required to run the simulations costs far less. A

simulation can be viewed using a smartphone equipped with a virtual-reality app and Google Cardboard, a boxlike viewer that folds around a smartphone. A viewer and app together may cost about \$30.

Due to the costly initial layout, early adopters in health care currently have tended to deploy simulations in ways that either cut costs or add revenue. It's increasingly popular for staff training, for example.

Miami Children's Health System worked with Next Galaxy to produce a virtual-reality CPR course. The health system charges \$4.99 for the app, and Next Galaxy will get 30% of the profits from the app sales, Ms. Spio says.

Simulations are also being tried as a way to give patients pre-surgery instructions. "A lot of malpractice suits arise from patients thinking they've understood the pamphlet they were given on a procedure," says Ms. Spio. "Hospitals hope that by allowing them to really experience the procedure ahead of time and see what will be happening to their body, they'll be able to cut down on that."

*Ms. Westervelt is a writer in Truckee, Calif. Email reports@wsj.com.*

Copyright 2014 Dow Jones & Company, Inc. All Rights Reserved

This copy is for your personal, non-commercial use only. Distribution and use of this material are governed by our Subscriber Agreement and by copyright law. For non-personal use or to order multiple copies, please contact Dow Jones Reprints at 1-800-843-0008 or visit [www.djreprints.com](http://www.djreprints.com).