

WHAT ARE MY CHOICES?

“I don’t see McDonald’s as the enemy. If you make one change at McDonald’s to make an item healthier, you’ll have more public health impact than any other intervention because McDonald’s has such a reach around the world.”

Dr. Jared McGuirt thinks we should pay more attention to billboards.

“Advertisements in our environment have simple messaging; the graphics are very intentional. These companies know what they’re doing,” says the assistant professor of nutrition. “We should take our cues from the business sector.”

His research focuses on our food environment and interventions to nudge people toward healthier choices, like billboards nudge consumers to buy products.

“We know that the environment influences choices,” says McGuirt, who has a master’s in public health and a PhD in nutrition intervention and policy. “So how can we modify the environment or the way people interact with it, to influence their eating behaviors?”



When McGuirt arrived at UNCG in 2017, the Spartan Village complex was about to open a Bestway supermarket. McGuirt seized the opportunity to study how the new living arrangement changed students’ dietary patterns. Here, he demonstrates how Bluetooth beacons will be placed in the store.



This is the first time anyone's formally evaluated the impact of a mixed-use development where people are living in such close proximity to a new supermarket, McGuirt says.

GETTING SOLDIERS FIT

Military leadership has noticed rising levels of obesity among service members, rendering them "unfit to fight." So officials at Fort Bragg reached out to McGuirt, who has investigated the food environment in North Carolina for over 12 years, for help. When he assessed the military base, he found a "gauntlet of fast food" and other less healthy options. These findings were presented to Army officials, including the U.S. Surgeon General.

To address the issue, McGuirt and his collaborators have created a layered approach that leverages soldiers' cell phones. First, the researchers are setting up geo-fencing – a virtual perimeter – so that when soldiers enter the base, they receive notifications with information about the base's healthier food venues.

They're also placing Bluetooth messaging beacons within each eating area. As a soldier approaches a venue, they will receive information about healthy options available there. They might be at a fast-food restaurant – but did they know the restaurant has salads?

"It's really hard to convince people to just totally change their diet," McGuirt says. "But we can design the environment in a way to make it easier for them to make healthier choices."

REACHING THE DIGITAL GENERATION

One of McGuirt's largest interdepartmental collaborations targets children's nutrition knowledge and behavior, with a focus on five- to ten-year-olds and their parents.

The group – which includes Dr. Christopher Rhea in kinesiology and Dr. Omari Dyson in peace and conflict studies – is building out a virtual-reality nutrition program, with funding from the federal Health Resources and Services Administration.

In the program, an avatar addresses kids by name and gives them personalized, interactive guidance and recommendations. For

"We're not going to demonize anything, because that's just going to turn people off. I'm not going to go out there and say 'You can never drink soda.' With the food environment nudges, we'll say, 'Why don't you try a diet soda instead because you're going to not consume as much sugar? Why don't you try peanuts instead of potato chips?'"

example, in one module kids pick out healthy ingredients to make a smoothie, with guidance from the avatar.

The team acquired data from Google and the USDA to identify typical food options available in different areas. That way, kids aren't being asked to work with items that are too expensive or inaccessible.

The avatar is key to the program's success and the wave of the future, says McGuirt. "Companies like Facebook know it's more persuasive when it looks like a person is giving you information." Think Alexa or Siri, but the next generation.

The team will compete next year for a \$125,000 prize, with the aim of expanding the interactive program to more age ranges and locales.

When the pilot ended, participants asked how they could keep using the program, McGuirt says. "They liked that it was interactive and very different from what they were used to in terms of health information."

COVID AND ACCESS TO HEALTHY FOOD FOR CHILDREN

Millions of American kids rely on school for nutritious meals, so widespread closures from COVID-19 meant school districts had to put together school meal pickup sites rapidly, to feed those children.

But are the designated sites accessible for the kids that need them most?

McGuirt is collaborating on several projects to examine pickup site locations in North Carolina, in the four largest American cities, and elsewhere across the U.S. It's about optimization, McGuirt explains. "We want to account for factors like neighborhood income and food deserts – areas with limited access to healthy foods."

The results could help inform decisions made by stakeholders like the USDA, school districts, and state policy makers – both during the pandemic and in the future.

"Every year there are summer school meal programs. Our findings could also help them," says McGuirt.

"I'm trying to get people to recognize that place matters. Let's see if we can make nutrition and health more accessible for everyone."

by Dr. Yen Duong • learn more go.uncg.edu/mcguirt