CWRU to develop technologies for virtual coaching to help patient-doctor communications

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Millions of people suffer from chronic ailments like heart disease, high blood pressure or diabetes, and need critical information from their healthcare providers to manage those diseases.

Sometimes patients find it uncomfortable asking a doctor of another age, gender or race for information. Hopefully virtual coaching under development through the Center of Excellence for Self-Management Advancement through Research and Translation (SMART), a National Institutes of Health-funded Center of Research Excellence in Self-management Research at the Frances Payne Bolton School of Nursing at Case Western Reserve University, will improve communications.

The nursing school is leading an interdisciplinary research team for the two-year, $1.3 million National Center on Minority Health and Health Disparities study: "Electronic Self-Management Resource Training to Reduce Health Disparities" (e-SMART-HD).

John Clochesy, Independence Foundation Professor of Nursing Education, will direct researchers from the schools of nursing, medicine and engineering; the Mt. Sinai Skills and Simulation Center; and Beachwood-based software company, LogicJunction, in developing technologies with avatar doctors similar to the ones found in computer games to help patients hone their communications skills.

According to Clochesy, about 80 percent of healthcare is managed by individual patients or family caregivers. Having the right information is important in the treatment of these chronic illnesses and doing what the doctor prescribes.

Millions of Americans are impacted by chronic illnesses, but in particular, minority groups have disproportionately higher rates of almost all the major illnesses.

Clochesy says e-SMART-HD might close the health disparity gap by focusing on teaching the patient the skills needed to be successful in managing their health through better communications with the doctor.

"We want people to get the healthcare information they need to manage their chronic illnesses," says Clochesy.

The goal is to eventually have this technology available in hospitals and clinics to help patients after they receive a diagnosis. He envisions patients stopping by a kiosk before a doctor's visit and practicing how to ask the important questions.

Working in partnership LogicJunction, a leader in developing real-time interactive 3D software technology, will create avatars that can act as patients or health care professionals in role-playing to practice communication skills.

Edward Wagner, LogicJunction's director of sales, says, "Different patient profiles can be created to emulate the human experience. These avatars are highly realistic with speech, animation, emotion and artificial intelligence."

"It is an engaging and immersive experience," says Wagner.

In the busy world of the clinics and hospitals, some patients may not always see their regular doctor. Learning how to communicate with an unfamiliar doctor or healthcare provider of another race, gender or age group can impact whether people get the information they need, says Clochesy.

Patients might feel uncomfortable asking questions to an unfamiliar doctor, says Clochesy, but the exposure through avatars of different races and genders might bridge those differences.

In the first nine months of the study, the researchers will conduct focus groups with people from the African-American, Latino, Russian immigrant, and gay, lesbian, bisexual and transgender communities to find out what themes arise during doctor visits that prevent adequate communications between the patient and doctor.

Researchers then will take those concerns and write scripts for doctor-patient conversations and have a group of patients test out the scripts during simulated doctor visits with live actors through the Mt. Sinai Skills and Simulation Center.

Based on observations and information gathered in the next nine months during the trial simulations, LogicJunction will help create avatar doctors in a web-based program. The avatars will give patients a variety of communication scenarios that teach how to communicate and get information they need to take care of themselves between doctor appointments.

"At the end of using e-SMART-HD, we hope to have evidence that patient communication has improved with healthcare workers by interacting with this technology, and that it makes a difference in their health," said Clochesy.

Funding for the study is part of the stimulus funds from the American Recovery and Reinvestment Act funds and will employ four new workers—a research associate and three research nurses.

Source: Case Western Reserve University (news : web)