

**DiSomma Foundation Major Gift to Grow Jump ARCHES' Health Care Endowment Past \$100 million: OSF HealthCare-U of I Partnership Expands to Serve the Most Vulnerable through New Innovation Research and Development**

[OSF HealthCare](#) and the [University of Illinois at Urbana-Champaign's \(U of I\) Grainger College of Engineering](#) are growing their partnership to create the future of community wellness and health care by harnessing creativity and applying it to social and behavioral health problems, many of which are key to improving health and wellness in all communities—urban and rural, well-resourced and underserved.

The expansion of [Jump ARCHES](#) (Applied Research for Community Health through Engineering and Simulation), a part of [OSF Innovation](#), includes a \$25 million gift from the DiSomma Family Foundation to the endowment pool held within the [OSF HealthCare Foundation](#), an additional \$12.5 million commitment from the OSF HealthCare Foundation, and the equivalent of \$12.5 million in endowment support from University of Illinois Urbana-Champaign.

The expanded collaboration will include The Grainger College of Engineering and for the first time, it'll bring in the Center for [Social and Behavioral Science at the University of Illinois at Urbana-Champaign](#).

Dr. John Vozenilek, vice president and chief medical officer for Jump Simulation, says the larger collaboration will intentionally focus on the greatest challenges with solutions funneled through an academic center that has expertise in best practices and behavioral research.

“With this engineering know-how and device development know-how and social science know-how, we’re going to be able to create solutions that are not just good ideas, but are creating great impacts in our communities.” [\(VIDEO\)](#)

The Jump ARCHES expansion will allow for an increase in yearly grants from \$2 million to \$4 million to engage health providers and U of I researchers to improve community health and patient care through supportive medical devices, robots, artificial intelligence and process improvements.

Kesh Kesavades, the director of the [Health Care Engineering Systems Center \(HCESC\)](#) at the U of I, says construction is underway on a 2,500 square foot Life Home on the south side of the Champaign-Urbana campus. There, researchers will test devices and place potential users in the home to examine how remote monitors and in-home virtual assistants can help a growing population of Baby Boomers age gracefully and safely in their homes.

“Which can assist people living in the home for maybe providing them with medication at the right time or helping them reach out to people for getting their groceries for example,” said Kesavades who has already begun preliminary research in this area. [\(VIDEO\)](#)

With expanded research money available through Jump ARCHES, researchers and clinicians will create and test cloud-based systems and sensors to measure health vitals such as body mass index, body temperature and blood pressure. Algorithms could check if there is an immediate need to notify a doctor or the user’s emergency contacts.

For the first time, Jump ARCHES will focus some research on human factors that influence whether people will actually adapt to technology options to help them age in place, including concerns about personal privacy.

“So eventually this becomes useable so people find it as a part of their life, not as something they find is interfering with their life – it should be naturally as a part of your life,” according to Kesavades. [\(VIDEO\)](#)

One big initiative will tackle the opioid crisis including underlying conditions that if treated well, could prevent opioid addiction. Vozenilek says technology could also be used to predict people at risk for opioid dependence.

“Artificial intelligence can play a role and there are many other techniques that will help us that aren’t strictly technical,” according to Vozenilek. “There are many techniques we’re going to be bringing online that have to do with human-to-human outreach through community health workers for example.” [\(VIDEO\)](#)

For rural residents who don’t have easy access to facility-based care, researchers will use ethnographic research to understand the “why” behind daily behavior and structure solutions that’ll work for the mindset of certain health care consumers. Urban areas could also be impacted by data analytics that’ll examine by zip code, areas where people are at the highest risk for barriers to good health including food insecurity, transportation, even loneliness which is at epidemic levels among older Americans.

Kesavades and OSF Foundation President Tom Hammerton believe this endowment is the largest in the world dedicated to health care engineering. Hammerton says OSF HealthCare’s mission of serving with the greatest care and love means finding resources to transform and radically improve health care delivery using a collaborative approach and that’s not always easy.

“Philanthropy can break down that barrier. The stipulations of the gift, as crafted, have incentivized us to collaborate in an appropriate way,” said Hammerton. [\(VIDEO\)](#)

The DiSomma Family Foundation has contributed a total of \$85 million toward efforts to transform health care and Jump ARCHES grants have funded 34 ground-breaking projects over

the last five years, including a new process for 3D bio-printing to develop the next generation of printed hearts for training and pre-operative planning as well as a virtual reality skill trainer for training medical students how to intubate patients. The VR trainer is now being used by medical institutions in the U.S. and abroad.

Jump ARCHES' expanded efforts will also contribute to the new [Discovery Partners Institute](#) and [Illinois Innovation Network](#), statewide initiatives to accelerate innovation, economic growth and job creation.

“It goes well beyond our geography. This is about transforming health care minimum in the United States, ultimately the world and we’re gonna be in that space,” said Hammerton. “We’re shooting for the moon.” [\(VIDEO\)](#)

Through a new OSF-led [Peoria Innovation Hub](#), Jump ARCHES researchers and clinicians will find additional support and expertise to drive advancements to solve complex challenges in health and wellness, agriculture, automation and food quality and safety.