Northeastern University awarded $8 million Center for Medicare and Medicaid Innovation “Triple Aim” Systems Engineering grant to improve healthcare processes

The Healthcare Systems Engineering Institute at Northeastern University was awarded a major $8 million 3-year grant from the Center for Medicare and Medicaid Innovation (CMMI) to conduct a National Demonstration Project of the value that the systems engineering methods used in other complex industries can have to reduce healthcare costs, improve quality and safety, reduce waits and delays, and improve clinical outcomes and overall population health.

Under this grant, led by principal investigator Dr. James Benneyan, Northeastern will create a model regional healthcare systems engineering extension center that partners with several local healthcare systems, applies systems engineering methods to targeted common problems to significantly impact each leg of the CMMI “triple aim” of better outcomes, better health, and at lower costs, and develops an implementation plan for national spread.

The CMMI grant funds the first phase of a large scale 10-year project to establish a national network of similar healthcare systems engineering regional extension centers across the U.S. that develop and embed regional industrial and systems engineering improvement science academic departments and other resources into their local healthcare systems, saving billions annually while training a targeted future workforce of 15,000 healthcare systems engineers.

Dr. Benneyan is a nationally-recognized expert in the application of systems engineering to improve healthcare, director of the Healthcare Systems Engineering Institute at Northeastern University, the largest healthcare systems engineering program in the U.S., and principal investigator, director, or co-director of three federally-awarded healthcare engineering centers funded by CMS, the National Science Foundation, and the Veterans Health Administration.

“We are excited and humbled by this award. The actual care for health itself – the clinicians, staff, and medical science - is excellent across the U.S. But the delivery processes, systems, and structures through which care is delivered and health is maintained are broken and are bankrupting our country.” Adds co-PI Dr. Vinod Sahney, Northeastern University Professor of Healthcare Systems Engineering and co-founder of the Institute for Healthcare Improvement, “We are thrilled to have this opportunity to work with so many wonderful colleagues locally and nationally, and with all the other CMMI awardees working collectively to improve healthcare access, equity, and quality across our country.”

Northeastern’s healthcare systems engineering program is rooted in the University’s “research through application” philosophy and includes undergraduate through graduate and post-doctoral fellowship programs, 5 centers and research laboratories, academic and professional masters degrees, cooperative education, and summer internship programs.

Further information on this initiative and Northeastern University’s healthcare systems engineering program can be found at www.coe.neu.edu/healthcare.