



Discovery Park Impact

Transforming Healthcare Delivery Systems

NEED

The United States is the undisputed world leader in developing revolutionary medical equipment and pharmaceuticals, yet healthcare process breakdowns cause more than 98,000 deaths and 1 million injuries each year. Total national health expenditures in 2005 exceeded \$1.9 trillion, or 16% of the nation's gross domestic product, and the system is plagued with inefficiency, unnecessary redundancy, gaps in information flow, lack of patient engagement, misuse of resources and under-utilization of engineered models. Those barriers generate more than a \$500 million of system waste per year.

INITIATIVE

With \$3 million in initial funding from Regenstrief Foundation, the Regenstrief Center for Healthcare Engineering (RCHE) at Purdue's Discovery Park was established in February 2005 to catalyze the transformation of healthcare-delivery systems by applying the principles of engineering, management and science. RCHE established partnerships with the Indiana University School of Medicine, Ascension Health, and Indianapolis-based St. Vincent Health, to actively participate in research and serve as "living laboratories" for collaboration and testing of research outcomes.

IMPACTS

- Center research has been conducted by 84 faculty research associates who represent a wide variety of healthcare research interests and expertise.
- \$23.7 million has been generated in project funding and collaborative relationships have been formed with strategic partners (Ascension Health, St. Vincent Health, WellPoint Inc., and Community Health Network), project partners (Veterans Administration, Indiana University Medical Group, and Indiana University School of Medicine), and sponsors (Indiana Hospital Association, Indiana State Department of Health, Regenstrief Foundation and Regenstrief Institute).
- RCHE played a central role in creating the Healthcare Technical Assistance Program, which has generated \$2.5 million in revenue since 2005. In fall 2007, the center officially established a research sub-center, the Center for Health Outcomes Research and Policy.
- RCHE has contributed to the establishment of the healthcare engineering signature area in the College of Engineering, healthcare systems concentration in the School of Biomedical Engineering, and Doctorate of Nursing Practice in the School of Nursing.
- RCHE is founding member of the Healthcare Engineering Alliance, a network of healthcare engineering researchers at the University of South Florida, University of Arkansas, North Carolina State University and North Carolina A&T State University.