



BETTER HEALTH CARE WITH LESS HEALTH SPENDING

The Stanford Clinical Excellence Research Center (CERC) is discovering new care delivery methods to solve our nation's persisting crisis in the affordability of excellent care.



THERMAL IMAGE OF AN ADULT CALLING FOR HELP AFTER FALLING AT HOME. UNLIKE CONVENTIONAL VIDEO CAMERAS, THERMAL CAMERAS CAN "SEE" AT NIGHT. MANY EVENTS THAT ARE CRITICAL TO HELPING FRAIL SENIORS AVOID EMERGENCY ROOMS AND UNWANTED NURSING HOME PLACEMENT OCCUR AT NIGHT WHEN LIGHTING AND REASONING ARE DIMINISHED. THE CERC-AI LAB'S SYSTEM DOES NOT DEPEND ON CLEARLY REASONED BEHAVIOR, SUCH AS PUSHING AN EMERGENCY BUTTON.

CERC-AI LAB TEAM WINS GLOBAL COMPETITION VIA A SYSTEM TO SAFEGUARD FRAIL SENIORS

One of the first critical workflow support systems developed via CERC's Partnership in AI-Assisted Care (PAC) with the School of Engineering won top prize in a global competition sponsored by military camera manufacturer FLIR. The winning solution uses thermal cameras and "deep learning" computer algorithms to determine, from body position and motion, if a person alone at home needs medical help. The system was developed as part of CERC's research on helping seniors avoid costly, unwanted nursing home placement.

The research team is training a camera-connected software layer to accurately discern 17 different threats to medically secure independent living for seniors in early stages of cognitive decline.

The system will be fine-tuned in San Francisco in collaboration with the senior housing division of On Lok. Originating in San Francisco's Chinese community, On Lok is a nationally recognized provider of diverse geriatric health care, social services, and housing in multiple Bay Area counties.

FRESH MINDS TO MAP TWO NEW FORMS OF LOWER COST CLINICAL EXCELLENCE

The 2015-16 class of ten CERC fellows includes physicians, psychologists, management scientists, and a nurse-midwife. One CERC team aims to build on a 2012 CERC innovation to further reduce the cost and improve outcomes of cancer care. It will consider the feasibility and estimate the cost impact of operating a “control tower” that continuously tracks, coordinates, and aligns care with newly available cancer therapies as well as patients’ evolving clinical status and personal preferences. A second team will focus on more affordable and effective forms of care during the earliest years of life—from awareness of pregnancy through the first five years of childhood. The class also includes several implementation fellows who will focus on accelerating careful pilot testing, evaluation, and learning from previously established CERC pilot testing sites throughout the U.S.



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CERC “BRIGHT SPOTS” RESEARCH COLLABORATION WITH MIT ECONOMICS FACULTY

CERC’s “America’s Most Valuable Care” research has uncovered “bright spots” in American medicine: frontline clinical teams that deliver high-quality care at a remarkably low total cost of health care over the course of a year or episode of treatment. The next challenge is to help observed “best practices” spread into the mainstream of U.S. health care.

To catalyze fresh thinking about high velocity spread of complex changes in methods of clinical work, CERC will collaborate with MIT organizational economist Robert Gibbons to convene a small national interdisciplinary conference. The gathering of top scholars will formulate testable new hypotheses about how to accelerate adoption of nuanced innovations in work methods. It will consider experiences in education, government, business, and health care. The end-goal is to shorten the cycle time for successful innovation uptake. The conference will be hosted at Stanford’s Center for Advanced Study in the Behavioral Sciences (CASBS) where Professors Gibbons and Milstein originated their trans-disciplinary conversation.