



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.

FIGHT FIRE WITH FIRE? DEVELOPING AI TO CURB SCREEN TIME'S THREAT TO EARLY PARENTING

A strong developmental start during early childhood propels lifetime health and career success. CERC researchers are examining the feasibility of a “fitbit for early parenting”—a passive, privacy-protected AI system that would rely on computer vision to encourage parenting activities shown to support infants' and toddlers' physical and cognitive development.

CERC researchers began by listening to the perspectives of low-income moms and couples on their own parenting. Parents' deepest worry was the allure of their smart phone screens. Lacking resources for childcare, texting and emailing with friends is their lifeline to adult companionship—yet they worry that it interferes with developmentally important interactions, such as returning their baby's gaze or timely comforting. Their intuition is spot-on. These reciprocal interactions boost cognitive, language, physical, and emotional development that shapes lifetime health. More important, a recently published study linked parents' screen time with impaired child development

Having completed initial interviews, CERC researchers will now validate their preliminary findings via a national survey of 300 low-income families. Incoming CERC faculty member and computer vision scientist Serena Yeung, PhD, will join the study team in September as a co-investigator with pediatrician Lee Sanders, MD, MPH, and statistician Jill Glassman, MSW, PhD.



NEW RESEARCH TO DISCOVER BRIGHT SPOTS CARE FOR FRAGILE PATIENTS

As health-care systems around the world face incentives to improve “value-for-money,” focus is increasingly turning to groups poorly served by existing health systems, including individuals with complex long-term conditions, frailty, or unmet severe social needs. This is due partly to the highly disproportional costs incurred by these patients and growing recognition that some clinical teams are much more successful at preventing these frequently dangerous and costly health crises.

The research will build on recent distillations by the National Academy of Medicine and a team of three CERC care design fellows of prior research on care for medically fragile Americans. The CERC study will pinpoint the plausibly scalable attributes of primary care clinical teams that attain exceptional value in caring for three distinct high-need, high-cost sub-groups: disabled poor people under the age of 65 insured by both Medicare and Medicaid; frail elders; and Medicare beneficiaries with multiple complex chronic illnesses.

To identify today’s “bright spots” in caring for these three populations, CERC-sponsored researchers ranked a national sample of primary care sites on measures of low risk-adjusted total per capita Medicare- and Medicaid-allowable health spending and measures of health-care quality. From survey results based on a sample of 600 sites, CERC researchers will select 27 sites for visits to pinpoint tangible attributes of care delivery that distinguish high-value care teams from their national peers.



A THAI INVITATION TO EXTEND OUR AI RESEARCH TO IMPROVE CARE FOR ELDERS

Throughout the world, the care of elderly family members naturally falls to the next generation, and particularly to working-age daughters. A government-industry partnership to modernize Thailand—RISE THAILAND—will fund CERC to extend its research on the use of AI to more rapidly detect ominous signs of preventable in-home health emergencies. Success would also enable more working-age Thais to participate in boosting the growth of Thailand’s economy.

CERC researchers, including Thai-educated Vittavat Termglinchan, MD, and design school graduate student Samira Daswani, are traveling to Bangkok to better understand the most deeply felt unmet needs of 20 pairs of elderly individuals and their family caregivers whom they will subsequently track throughout the course of the study. The participants will keep a diary of their everyday challenges and fluctuation in their health and emotions.



The objective of this initial research phase is to better understand the “jobs to be done” before presuming that AI tailored to the unmet needs of American elders are the right answer for Thailand. The design phase of research will also explore the need for new Thai regulatory policies and investment in rural connectivity.

One of Thailand’s large banks will assist the CERC research team. Like many large Thai companies, the bank is concerned with improving the ability of Thailand’s workers to more fully participate in the workforce. Thai political leaders share industry’s worry that absent technological support for safe, respectful care for Thailand’s rapidly expanding senior population, its ability to modernize is at risk. This will be CERC’s first initiative aiming to lower the combined cost of health care and illness-related loss of household income.