



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.

ILLNESS “BLOOMS”: FORECASTING WHICH OF TODAY'S LOW-COST PATIENTS WILL EXPERIENCE TOMORROW'S MOST COSTLY AND DANGEROUS HEALTH CRISES

When it comes to annual health-care spending, we are not all created equal. The most costly 10 percent of the population account for the majority of health-care costs in any given year. More problematic, the composition of the most costly 10 percent changes year-to-year. Better predicting who these individuals will be would often allow their clinicians to adjust treatment to prevent costly and debilitating episodes of care.



Most current methods used to predict tomorrow's top 10 percent select from patients with high spending or an early pregnancy in the prior year. But research jointly conducted by CERC, Stanford's Biomedical Informatics Research Center, and epidemiologists at the University of Aarhus used a globally unique Danish database with more than 1,000 variables per patient. We found that most of next year's top 10 percent were *not* among the prior year's top 10 percent. Costly illness blooms were best predicted using a combination of statistical methods rarely used in health care and by novel variables such as a recent uptick in the frequency of primary care visits.

Our findings have been submitted for scientific publication by first author and PhD student Suzanne Tamang. We have also engaged two American health insurers to test whether our newly discovered solution will help U.S. clinicians to prevent tomorrow's most costly and dangerous illness blooms.

CHANGING CARE TO HELP YOUNG CHILDREN FULFILL THEIR POTENTIAL

What happens to a child from conception through the first five years of life goes a long way toward determining their lifetime health and learning trajectories. Can clinicians efficiently make a much greater contribution to help children get the best possible developmental start?

To answer this question, we recruited a 2015-16 team of post-doctoral CERC research design fellows including obstetricians, midwives, pediatricians, and health psychologists. After a careful review of existing scientific literature, observations at high-performing health-care sites throughout the country, and the review of emerging science and technology, the team has composed a testable new economical care method to promote physical, emotional, cognitive, and social development. The team is now refining its new care composite and estimating its costs and benefits with visiting scholars from across the U.S. whom CERC is hosting during the first quarter of 2016.



APPLYING CERC RESEARCH NATIONALLY TO BOOST PHYSICIAN EFFICIENCY

What would happen if tens of thousands of physician practice sites across the country formed a network to learn from each other and from emerging CERC research on how to improve quality and slow the rise in health-care costs? The

Centers for Medicare and Medicaid Services (CMS) are betting \$685 million that the result will be better care with less health spending.

CERC was selected by the American College of Physicians (ACP) to help more than 140,000 physicians to succeed in this mission. Our role will be to incorporate discoveries from our recent research funded by the Peterson Center on Healthcare on features of more efficient primary care sites into the ACP's web-based physician self-improvement tools. CERC will also help the ACP measure physicians' ability to adapt the features.

