

Strong community networks linked to fewer recurring heart problems, new study finds

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Home may be where the heart is, but it could be one's surrounding community that helps keep the ticker healthy, according to a new study led by researchers at the University of California, Berkeley's School of Public Health.

Specifically, the study found, low-income patients with existing heart problems are significantly less likely to have another heart attack or a recurrence of chest pain if they live in a county with higher measures of trust, cooperation and social networks - something researchers call "social capital." This was true even after researchers accounted for such factors as gender, age, race or ethnicity, and the existence of other concurrent health problems.

"This analysis points to a real effect on real people," said study lead author Richard Scheffler, UC Berkeley professor of health economics and public policy. "It speaks to the value of clubs and social organizations in providing health information and reducing stress, both of which are known to reduce heart disease."

The full study is to be published online in the Feb. 28 issue of the journal *Social Science & Medicine*.

"This is the first study to demonstrate a link between community social capital and prognosis following heart disease," said study co-author Dr. Ichiro Kawachi, professor of social epidemiology in the Department of Society, Development and Human Health at the Harvard School of



Public Health. "Other research has linked social capital to health outcomes, but most of these studies have been cross-sectional, and therefore difficult to draw conclusions about cause-and-effect relationships. The findings of this study take us in the right direction."

The researchers based the degree of social capital in any given county upon the number of people employed in various organizations, including religious, civic, political, social and alumni groups.

There is growing evidence that cardiovascular health is linked to where a person lives, but it had been unclear whether location served as a proxy for other unmeasured factors, including the type of medical treatment or health care available there.

To address this gap, UC Berkeley researchers partnered with Kaiser Permanente Northern California, a non-profit integrated health care delivery system.

Data was obtained from actual clinical records of nearly 35,000 Kaiser Permanente patients who had been hospitalized for acute coronary syndrome - a term describing symptoms of decreased blood flow to the heart - in Northern California between 1998 and 2002. Patients were tracked for symptoms of recurring heart problems. To protect patient privacy, only authorized Kaiser Permanente personnel had direct access to the clinical records for this study.

"Because we're using actual clinical records instead of self-reported medical information, we have a clearer picture of a person's health status and medical treatment," said Scheffler, who is also director of the Nicholas C. Petris Center on Health Care Markets & Consumer Welfare at UC Berkeley's School of Public Health. "And because all the patients are in the same health care system, we avoid the problem of comparing people with different kinds of health plans or who don't have insurance



at all. We also were able to follow patients over time to track any recurrence of heart problems, which is very unique."

The authors noted that patients in low-income areas have the most to gain from higher social capital.

"Our findings are consistent with the hypothesis that social capital helps more those in the lower socioeconomic spectrum," said study co-author Dr. Carlos Iribarren, research scientist at Kaiser Permanente Northern California. "Those with greater economic advantage don't seem to benefit, or benefit less, because they have other resources available to them."

The researchers pointed out that patients did not need to be members of any of the community organizations measured in order to benefit.

"An area with a high density of social networks and resources changes the character of a community, regardless of whether any one particular individual joins or not," said Scheffler. "It's the opposite of having a liquor store on every corner. You don't have to shop at the liquor stores to be impacted by the type of environment they create."

Thirty-five of California's 58 counties were included in the study. The eight counties found to have the highest levels of community social capital are, in descending order, San Francisco, Lake, Sacramento, Santa Cruz, Marin, Tuolumne, Nevada and Alameda.

"The majority of information available about the determinants of health is based upon individual behavior," said Leonard Syme, UC Berkeley professor emeritus of epidemiology and study co-author. "This study clearly shows that the world within which people live also has an important impact on health."



Other co-authors of the study are Timothy Brown, UC Berkeley assistant adjunct professor of health economics; and Irina Tolstykh, research scientist at Kaiser Permanente Northern California.

Source: UC Berkeley

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