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# **Team-based approach to care shows success in fight against depression with diabetes, heart disease**

## **University of Washington/Group Health study**

### **published in New England Journal of Medicine**

SEATTLE—Many people in the U.S. have multiple common chronic diseases such as diabetes and heart disease, which complicates health care needs. When depression coexists with diabetes, heart disease, or both, health outcomes are often less favorable.

In a randomized controlled trial, testing a primary care intervention called TEAMcare, nurses worked with patients and health teams to manage care for depression and physical disease together, using evidence-based guidelines. The result for patients: less depression, and better control of blood sugar, blood pressure and cholesterol and improved quality of life.

Researchers at the University of Washington (UW) and Group Health Research Institute published their findings in the December 30, 2010 *New England Journal of Medicine*.

"Depressed patients with multiple uncontrolled chronic diseases are at high risk of heart attack, stroke and other complications," said Dr. Wayne J. Katon, a UW professor of psychiatry and behavioral sciences and an affiliate investigator at Group Health Research Institute. "We are excited about finding a new way to help patients control these chronic diseases, including depression. Then they can get back to enjoying what makes their lives worth living," he said.

Depression is common in patients with diabetes and heart disease, and it has been linked to worse self-management and more complications and deaths. Depression can make people feel helpless and hopeless about managing other chronic diseases. In turn, coping with chronic disease can worsen

depression. This tangle of health problems can feel overwhelming—for patients, their families and their health care providers.

To explore possible solutions, the trial focused on 214 Group Health Cooperative patients who were randomly assigned to either standard care or the TEAMcare intervention. In the TEAMcare intervention, a nurse care manager coached each patient, monitored disease control and depression, and worked with the patient's primary care doctors to make changes in medications and lifestyle when treatment goals were not reached. Working together, the nurse and patient set realistic step-by-step goals: reductions in depression and blood sugar, pressure and cholesterol levels. Patients assigned to the standard care arm of the study did not receive the nurses' coaching and monitoring services.

To reach these goals, the nurse regularly monitored the patient's mental and physical health. Based on guidelines that promoted incremental improvements, the care team offered recommendations to the patient's primary care doctor to consider changes to the dose or type of medication used for managing blood pressure, blood sugar, lipids or depression. This process is called "treating to target."

Katon said that the "treating to target" approach helped boost patients' confidence as goals were accomplished. "It reverses what happens when they set overly ambitious goals they don't reach, which discourages them, their families, and health care providers."

At one year—compared with the standard care control group—patients with the TEAMcare intervention were significantly less depressed and also had improved levels of blood glucose, low-density lipoprotein (LDL) cholesterol, and systolic blood pressure. These differences are clinically significant, particularly if achieved in large numbers of patients, Katon said.

"Each of these four disease control measures has been linked to higher risks of complications and deaths from diabetes and heart disease," he added.

The researchers have not yet completed their analysis of possible cost savings from the intervention, but they estimated that the two-year TEAMcare intervention cost \$1,224 per patient, on average. This is for patients whose medical care costs health care systems approximately \$10,000 per year, said Katon.

TEAMcare intervention patients reported enhanced quality of life and satisfaction with care for depression and either diabetes, heart disease or both. Patients were more likely to have timely adjustment of glucose levels, high blood pressure, cholesterol and antidepressant medications.

"TEAMcare is a truly patient-centered approach that enhances a primary care team to deliver optimal care for both physical and mental health in a seamless manner," said co-author Elizabeth H.B. Lin, MD, MPH, Group Health family physician and an affiliate investigator at Group Health Research Institute. "It recognizes there can be no health without mental health."

This trial is the culmination of more than 25 years of collaboration between the UW and Group Health to improve care for patients with chronic diseases including depression in everyday primary care settings.

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Other co-authors were: Paul Ciechanowski, MDCM, MPH, of the UW School of Medicine's Department of Psychiatry and Behavioral Sciences and an affiliate investigator at Group Health Research Institute; Bessie Young, MD, MPH, of the UW School of Medicine's Department of Medicine and Veterans Affairs Puget Sound Health Care; Michael Von Korff, ScD, Evette J. Ludman, PhD, Do Peterson, MS, and Mary McGregor, MSN, of Group Health Research Institute; Carolyn M. Rutter, PhD, of Group Health Research Institute and the Department of Biostatistics of the UW School of Public Health; and David McCulloch, MD, of Group Health.

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Beginning December 29, you can visit this Web site for more information about the TEAMcare trial: [www.teamcarehealth.com](http://www.teamcarehealth.com).

#### **UW Medicine**

The UW Medicine health system includes UW Medical Center, Harborview Medical Center, Northwest Hospital, the UW School of Medicine, UW Medicine Neighborhood Clinics, UW Physicians, Airlift Northwest, and the UW's partnership in the Seattle Cancer Care Alliance with Seattle Children's and Fred Hutchinson Cancer Research Center. UW Medicine has major academic and service affiliations with Seattle Children's Hospital, Fred Hutchinson Cancer Research Center, and the Veteran's Affairs Puget Sound Health Care System in Seattle and the VA Hospital in Boise. The UW School of Medicine is the top public institution for biomedical research in funding received from the National Institutes of Health. For more information about UW Medicine, visit <http://www.uwmedicine.org/>

#### **Group Health Research Institute**

Founded in 1947, Group Health Cooperative is a Seattle-based, consumer-governed, nonprofit health care system. Group Health Research Institute changed its name from Group Health Center for Health Studies on September 8, 2009. Since 1983, the Institute has conducted nonproprietary public-interest research on preventing, diagnosing, and treating major health problems. Government and private research grants provide its main funding.

