

## Proactive care saves lives of seniors, study finds

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Can a patient-centered, care management program utilizing nurse care managers and interdisciplinary teams, supported by electronic tracking and care coordination systems reduce the rate of deaths and hospitalizations among chronically ill older adults? The answer – based on a three-year study involving more than 3,400 chronically ill seniors led by Oregon Health & Science University researcher David A. Dorr, M.D. – appears to be "yes."

The study – described in the December 2008 *Journal of the American Geriatrics Society* – has broad implications for how the care of the more than 130 million Americans with chronic illnesses, two thirds of whom are 65 or older, is managed.

"This study underscores the enormous societal costs of a health care infrastructure that does not adequately support the interdisciplinary services and care coordination needed to prevent adverse outcomes for older adults with multiple chronic illnesses," said Dorr, the study's lead investigator and an assistant professor of medical informatics and clinical epidemiology at OHSU.

"Patients coping with two chronic health conditions are eight times as likely to die within a year as peers with one such illness, " said Dorr. "Someone with three or more chronic illnesses has 40 times higher odds of being hospitalized than a person with a single chronic illness and 91 times higher odds than someone with no such illness. We also know that chronic conditions account for 83 percent of all healthcare spending and



that the majority of cost increases in Medicare spending are due to patients with five or more chronic illnesses."

The study – conducted between January 1, 2002 and June 30, 2005 at 13 primary care clinics at Intermountain Healthcare, a large not-for-profit integrated health care system in Utah – found that deaths among the 1,144 patients in the "intervention" group receiving optimum care, called Care Management Plus (CMP), were significantly lower in the first and second years than among the 2,288 patients in the control group whose members received the usual care.

Seven Intermountain clinics served the CMP patients and six the control group patients. Each CMP patient was matched with two control patients based on age, hospitalization records, comorbidity scores, gender, and specific chronic illnesses. The average age of all patients was 76. Three quarters of them had two or more chronic illnesses. Just over 64 percent were females.

In all, 6.5 percent of CMP patients died in the first year of enrollment versus 9.2 percent of control patients; 13.1 percent of CMP patients and 16.6 percent of controls died in the second year. CMP was a particular benefit for patients with diabetes – who constituted 48.7 percent of all patients in the study and had a significantly higher number of comorbidities. Their mortality rate at one year was 6.2 percent vs. 10.6 percent for controls; at two years it was 12.9 percent vs. 18.2 percent.

Hospitalizations were only slightly lower overall for CMP patients than for controls, but for diabetes patients in the CMP group they were significantly lower – 21.2 percent versus 25.7 percent for controls at one year and 30.5 percent versus 39.2 percent for controls at two years.

Intermountain Healthcare has a long history of innovative use of computers in improving healthcare. At the CMP clinics, computer tools



were combined with a registered nurse who received extra training. Physicians referred patients with complex conditions to the nurse care manager who completed a patient assessment focused on self-efficacy, knowledge, readiness to change and patient-directed goal setting. The care manager then created with the patient a detailed care plan supported by specialized computer tools, including structured protocols and guidelines for various conditions and diseases, a care management tracking (CMT) database and detailed electronic patient worksheet. The care manager suggested medication changes or other treatments when indicated, helping physicians respond to patients' needs more quickly and efficiently. The tools helped organize and prioritize the teams' work.

"Family practice and internal medicine physicians are drowning in the huge number of things to consider for their patients, especially those with multiple conditions and medications," said Cherie P. Brunker, M.D., co-principal investigator and Geriatrics Chief, Intermountain LDS Hospital and assistant professor of geriatric medicine, University of Utah Center on Aging. "Computer tools and a specially trained care manager can make all the difference."

"It is clear," Dorr concluded, "that to provide the kind of high quality and efficient coordination of care tracked in this study across the nation's health care system will require the redesign of primary care as well as reform of the payment system and reinforcement from policymakers, but it would be an investment in the future health of the chronically ill patient population."

To access the study, "The Effect of Technology-Supported, Multidisease Care Management on the Mortality and Hospitalization of Seniors," go to <a href="https://www3.interscience.wiley.com/journal/121475821">www3.interscience.wiley.com/journal/121475821</a>

Source: Oregon Health & Science University



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