Grantee Profile: Visiting Nurse Service of New York Center for Home Health Care Policy & Research

Tackling the Dual Problem of Medication Complexity and Cognitive Impairment

The Visiting Nurse Service of New York (VNSNY) Center for Home Health Care Policy & Research launched IMPACT-CI, a promising medication optimization technology diffusion project. With $91,857 in grant funds from the Center for Technology and Aging, the multi-faceted, information technology (IT) based project will support home care nurses and other caregivers as they manage medications in cognitively impaired patients with multiple chronic illnesses.

Half of home care patients require assistance in administering their medications and also have some level of functional impairment. The average home care patient takes six to eight medications, with 20 percent taking nine or more. Poor medication management is one of the most frequent risk factors leading to unplanned hospitalizations and emergency room visits.

"Better management of medications among cognitively impaired older adults with complex chronic illnesses could mean preventable emergency department visits," said Penny Hollander Feldman, Ph.D., principal investigator of the study and director of VNSNY's Center for Home Care Policy and Research. "The technology being funded in this project provides our home care nurses with cutting edge tools to help keep patients safer and improve management and adherence to complicated medication regimens."

IMPACT-CI (Improving Medication Management Practices and Care Transitions through Technology -- Focus on the Cognitively Impaired) is a randomized, controlled trial that enables VNSNY nurses to use software on their tablet computers to more efficiently direct their time and energy with patients at risk of a potentially serious medication problem.

By integrating a computer algorithm into the VNSNY system, a medication regimen complexity index (MRCI) score for each patient is developed. The MRCI score allows for a highly nuanced indicator of complexity and potential for adverse effects. It takes into account dosing frequency, delivery (orally, inhalant, injection) and special instructions -- such as "take with meals," "dissolve," or "take on alternate days."

Additionally, a decision support tool has been integrated into the nurses' tablet computers, providing guidance for medication reconciliation, medication adherence, and, strategies for communicating with patients' primary care physicians.

"The VNSNY Center for Home Care Policy & Research will be demonstrating how an important technology can make a significant difference in the quality of life for older adults who rely on medications to manage chronic conditions," said David Lindeman, PhD, director of the Center for Technology and Aging. "The project lays a foundation for speeding the adoption of important technologies across the country."

This initiative also allows the Center for Home Care Policy and Research to leverage a three-year, $1.2 million IMPACT study grant from the Agency for Health Care Research and Quality (AHRQ), a federal agency committed to helping improve the nation's health care system.

"Proven, cost-effective information and communication strategies to improve medication management in the home health care setting are sorely lacking," said Dr. Feldman. "Findings from the IMPACT-CI study will accelerate progress toward filling a critical knowledge gap and help us introduce new and better measures for preventing medication-related adverse events."

Established in 1993 by the Visiting Nurse Service of New York, the Center for Home Care Policy & Research has become recognized as the pre-eminent research center for home care and is the only one of its kind in the nation. The agency conducts scientifically rigorous research to promote the delivery of high-quality, cost-effective care in the home and community and support informed decision making by policy makers, payers, managers, practitioners, and consumers of home-and community-based services. The Visiting Nurse Service of New York is the largest not-for-profit home care organization in the United States. For more information, please visit www.vnsny.org/research.

The Center for Technology and Aging Medication Optimization Diffusion Grants Program is designed to expand use of technologies that help improve medication use in older adults with chronic health conditions. A detailed summary of projects and the Medication Optimization Position Paper are available on the Center's Web site (www.techandaging.org).

Quick Facts
• Medication management is the most common of all health care interventions[1-3]
• Poor medication management is one of the greatest contributors to adverse patient events[1-3]
• The challenge of managing complex medication regimens is compounded by cognitive impairment[4]
• In 2006, Medicare-certified home health agencies served 8 million clients[5]
• Home health care clients often have multiple chronic conditions and multiple medications[6]
• Nearly 40% of home health episodes for older adults are for people with cognitive impairment[6]

References:

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