

Cognitive Problems Can Worsen the Effects of Heart Failure

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(PhysOrg.com) -- Surviving heart failure calls for making lifestyle changes, taking medications and following a doctor's orders. Some of the nation's 5 million heart failure patients have trouble adhering to these changes and end up returning to the hospital.

Researchers from Case Western Reserve University, Kent State University, Summa Health System and University Hospitals Case Medical Center have received a four-year, \$2.7 million grant from the National Institutes of Health's National Heart, Lung and Blood Institute to find out if subtle or hidden cognitive impairments cause adherence problems in [heart failure](#) cases.

The research project, called "Heart ABC: Adherence, Behavior and Cognition," will contribute important information about which types of cognitive impairments are related to specific problems in self-management.

Treating heart failure costs the health care system about \$43 billion annually. Recent indicators point out that between 25 percent and 50 percent of these [patients](#) might have unrecognized [cognitive problems](#) that impair their ability to make decisions about their health.

These decisions can range from keeping doctor's appointments to taking medicines at the appropriate times, according to Mary Dolansky, assistant professor of nursing at CWRU's Frances Payne Bolton School of Nursing. She is one of the lead investigators on the study.

This will be one of the first studies to look at the connections between subtle cognitive impairment, particularly on a battery of tests for mental functions, and adhering to a complex medical regimen such as taking their medications, eating a low-salt diet and knowing when to call the doctor if their condition worsens.

Dolansky will co-lead the project with Joel Hughes, associate professor of psychology at Kent State University.

They will study 400 patients between the ages of 50 and 85 from Summa Health System and University Hospitals. Other co-investigators are John G. Gunstad, Kent State; Richard Josephson, CWRU School of Medicine; Joseph Redle, Summa [Health System](#); James Fang, University Hospitals; Nahida Gordon and Shirley Moore, Frances Payne Bolton School of Nursing, CWRU.

The team has expertise in nursing, behavioral medicine, neuropsychology, cardiovascular medicine and patient self-management. The strength of the study is the interprofessional team, which will approach the study from these different backgrounds.

"Self-management is complex," Dolansky says. Heart failure patients may be on three to eight medications, have to reduce salt in their diets and cannot gain weight.

Dolansky and Moore are part of a team of researchers in nursing who examine how people manage their illnesses and have advanced knowledge about self-management through research projects at the nursing school's NIH-funded Center Self-Management Advancement through Research and Translation (SMART Center).

A potential hidden cognitive problem among HF patients is the inability to make decisions about what to do if their condition changes. For

example, HF patients who have a cognitive problem and who experience sudden weight gain may not think to notify their physician. Over time, their condition will worsen, thus resulting in an unnecessary trip to the emergency room.

The researchers will administer a number of psychological tests that can reveal hidden impairments.

Then the patients will be monitored for how well they adhere to their medications, diet, and weight levels for 21 days. They will have follow-up monitoring at 3, 6, 9 and 12 months.

"Our findings will have important implications for screening heart failure patients and understanding how we can best intervene to help patients self-manage their heart failure," Hughes adds.

New interventions or medications can be designed to help people keep on track with all the different things they have to do to keep healthy and stay out of the hospital.

Provided by Case Western Reserve University

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