Association Found Between Multiple Chronic Conditions and Hospitalizations

A new study in *Nursing Research* examined the association between combinations of multiple chronic conditions and hospitalization by older adults who receive long-term services and supports.

Researchers used existing data from a National Institute on Aging- and National Institute of Nursing Research-funded study. They also used latent class analysis to identify subgroups of individuals with specific combinations of multiple chronic conditions that likely occurred together. Identified subgroups were combinations of cardiopulmonary conditions (cardiopulmonary class), cerebrovascular paralysis conditions (cerebrovascular class), and all other conditions (all other conditions class).

Researchers found that individuals with a high probability of being in the cardiopulmonary class had a statistically greater number of hospitalizations compared to those with a high probability of being in the all other conditions class. They also found that individuals most likely to be in the cardiopulmonary or cerebrovascular class were more likely to be male, Black/Other race, and reside in a nursing home. Medicaid patients were overrepresented in the cardiopulmonary class compared to the cerebrovascular or all other conditions class.

Effective care management strategies are needed for early identification and intervention to prevent hospitalizations in chronically ill older adults, especially those with multiple cardiopulmonary conditions.


Older Adults Without Cognitive Decline May Have Alzheimer’s Disease Pathology

A study from Northwestern University suggests some older adults harbor extensive Alzheimer’s disease (AD) pathology in the brain without any evidence of the cognitive decline seen in the disease.

Researchers studied the brains of eight individuals older than 90 who were selected for superior performance in memory tests compared to their same-age peers who had a normal memory test performance. Three brains qualified pathologically as having AD despite the individuals’ superior memory performance when they were alive. They also examined five brains of patients with Alzheimer’s dementia with full AD pathology. Those brains showed significant cell death in the hippocampus. A similar pattern was observed in other areas of the brain that control cognitive function.


Plant Compounds May Improve Brain Function in Older Adults

The same compounds that give plants and vegetables their vibrant colors might be able to bolster brain functioning in older adults, according to a recent study in the *Journal of the International Neuropsychological Society*. It is the first study to use functional magnetic resonance imaging (fMRI) to investigate how levels of those compounds affect brain activity.

Researchers used fMRI to gauge the brain activity of more than 40 adults between ages 65 and 86.
while they attempted to recall word pairings they were taught earlier. Researchers analyzed brain activity and then determined the level of the compounds through serum samples and retinal levels.

They found that participants with higher levels of lutein and zeaxanthin did not require as much brain activity to complete the task. Participants with lower levels of lutein and zeaxanthin had to use more brain power and relied more heavily on different parts of the brain to remember the word pairings they were taught. Participants with higher levels were able to minimize the amount of brain activity necessary to complete the task.

The results showed no relationship between the levels of the compounds and number of words participants could recall, but demonstrated how the brain went into overdrive to compensate for any diminished cognitive functioning.


Fewer U.S. Older Adults Meet Criteria for Dementia

The percentage of American older adults with dementia is dropping, according to a new study in *JAMA Internal Medicine*.

Researchers used data and cognitive test results from the University of Michigan Institute for Social Research and School of Public Health’s long-term Health and Retirement Study to evaluate trends from 2000-2012 among a nationally representative sample of more than 21,000 older adults. Overall, 11.6% of those interviewed in 2000 met the criteria for dementia, but only 8.8% met the criteria in 2012. Over that time, the average number of years of education an older adult had increased by approximately 1 year, from 12 to 13.


"Fewer U.S. Older Adults Meet Criteria for Dementia"