In-Home Sensors Help Predict Fall Risk

Each year, millions of individuals, especially those 65 and older, fall. Such falls can be serious, leading to broken bones, head injuries, hospitalizations, or death. Researchers have found that sensors that measure in-home gait speed and stride length can predict likely falls. This technology can assist health care providers to detect changes and intervene before a fall occurs within a 3-week period.

To predict falls, researchers used data collected from sensor systems at TigerPlace, an innovative aging-in-place retirement residence in Columbia, Missouri. The system generated images and an alert e-mail for nurses indicating when irregular motion was detected. This information could be used to assist nurses in assessing functional decline, providing treatment, and preventing falls.

Results from an analysis of the sensor system data found that a gait speed decline of 5 cm/s was associated with an 86.3% probability of falling within the following 3 weeks. Researchers also found that shortened stride length was associated with a 50.6% probability of falling within the next 3 weeks.


New App Helps Patients With Dementia Experiencing Memory Loss

Individuals with Alzheimer’s disease and other forms of age-related dementia sometimes have trouble recognizing friends and family or knowing what to talk about when they visit. A new application (app), Remember Me!, helps patients stay connected to their memories, and thus to their friends and family, and may help them keep a conversation going.

The app is installed on the phones of the patient and friends, family, and caregivers. Using global positioning system tracking and a connection to iCloud®, the app can flash an alert to the patient when one of the group members is nearby. The phone tells the patient who is approaching and his/her relationship to that individual, and displays a slideshow of previously uploaded pictures. If the patient receives a text or phone call from an individual registered in the app, a screen pops up with similar information. Once a conversation begins, the app can assist with reminders based on stored facts and previous conversations, suggesting questions to ask based on information it has about life events.


Incarcerated Older Adults Experience Distressing Health-Related Symptoms

More than 550,000 adults 55 and older are arrested and detained every year, and that number is increasing rapidly. However, little is known about the special health burdens in this population. In a first of its kind study, researchers reported that two thirds of incarcerated older adults experience at least one distressing health-related symptom, such as a chronic disease, physical pain, or emotional suffering.

Researchers interviewed 125 inmates 55 and older from an urban county jail. Most participants (86%) reported incomes below the federal poverty line. In addition, a significant majority of respondents said they had at least one symptom of physical distress (44%), psychological distress (56%), extreme loneliness (45%), and/or concerns about their
Increasing Information Technology Sophistication Can Lead to Improvements in Nursing Homes

A significant part of the American Recovery and Reinvestment Act was the $25 billion invested in health information technology (IT) to improve quality, safety, and efficiency in health care while also reducing health disparities. However, nursing homes did not receive the same level of investment in technology as hospitals, leading to little understanding of how IT sophistication is impacting patient care in nursing homes. New research from the University of Missouri shows increases in IT sophistication can lead to potential improvements in health care quality measures.

To understand the relationship between IT sophistication and quality measures in health care, researchers are assessing national trends in IT adoption every year over a 3-year period using an IT Sophistication Survey. The assessment provides scores based on IT capabilities, extent of IT use and IT integration, and how they are used in resident care, clinical support, and administrative activities.


Injuries (STEADI) initiative to help health care providers make fall prevention routine. STEADI is based on clinical guidelines and provides information and resources for patients, caregivers, and all members of the health care team. STEADI includes information on how to screen for falls, online training for providers, videos on how to conduct functional assessments, and informational brochures for providers, patients, and caregivers.


Aging Experts Provide Guidance on Older Adults to Policymakers

To advise policymakers and health leaders on the key health care challenges facing the next presidential administration, the National Academy of Medicine launched the Vital Directions for Health and Health Care initiative. Aging experts were asked to provide guidance to inform U.S. policy on better health for an aging population and recommend priority opportunities.

The experts identified four vital directions central to the health and well-being of older adults:

• Develop new models of care delivery to address the clinical and financial challenges presented by frail patients with multiple impairments.
• Strengthen the eldercare workforce to conduct research, provide specialized care as needed, and lead educational efforts to enhance the geriatric competence of all health care practitioners.
• Promote the social engagement of older adults and enhance efforts to support work and volunteer opportunities to reverse the decades-long trend toward disengagement of older adults.

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Transform care for advanced illness at the end of life that is too often uncoordinated and fragmented. Improve system weaknesses through evidence-based approaches.


Risk for Feeling Lonely is Partially Due to Genetics

Loneliness is linked to poor physical and mental health, and is an even more accurate predictor of early death than obesity. To better understand who is at risk, researchers conducted the first genome-wide association study for loneliness—as a life-long trait and not a temporary state. They discovered that risk for feeling lonely is partially due to genetics, but environment plays a bigger role. The study also found that genetic risk for loneliness is associated with neuroticism and depressive symptoms.

Researchers examined genetic and health information from 10,760 individuals 50 and older that was collected by the Health and Retirement Study. As part of this study, participants answered three well-established questions that measure loneliness:

- How often do you feel that you lack companionship?
- How often do you feel left out?
- How often do you feel isolated from others?

The study accounted for gender, age, and marital status, as married individuals tend to be less lonely than unmarried individuals.

Researchers found that loneliness is a modestly heritable trait—14% to 27% genetic, as compared to the previous estimates of 37% to 55%. This new estimate of the genetic contribution to loneliness may be lower than previous estimates because the researchers relied on chip heritability, a method that only captures common genetic variations and not rare genetic variation.

Researchers also determined that loneliness tends to be co-inherited with neuroticism and depressive symptoms. Weaker evidence suggested links between heritable loneliness and schizophrenia, bipolar disorder, and major depressive disorder. In contrast to previous studies, the researchers did not find loneliness to be associated with variations in specific candidate genes, such as those that encode dopamine or oxytocin.


do:10.3928/00989134-20161012-03

Screening for Self-Harm, Suicide Ideation, and Suicide Attempts Declines With Patient Age

In a recent analysis of patient charts from eight different emergency departments, documented screening for self-harm, suicide ideation, or suicide attempts declined with age, from approximately 81% in younger age groups to 68% among individuals 85 and older.

The prevalence of patients identified as having suicidal thoughts and behaviors through these screenings also declined with age, with a peak among young and middle-aged adults (9%) and a low among patients 75 and older (1.2%).