

# agedhealth

PRODUCTS, SERVICES AND SOLUTIONS FOR A BRIGHTER AGED CARE FUTURE



## REINVENTING AGEING

LEGAL RISKS IN DELIVERING CARE AT HOME  
ELECTRONIC CHARTING REVOLUTION  
NO SILVER BULLET TO STAFF CRISIS

# PREVENTING FALLS WITH SENSOR TECHNOLOGY



**A** consortium involving aged care provider Whiddon and national science agency CSIRO hopes to improve falls prevention in residential care using sensor technology. Falls are Australia's number one cause of injury hospitalisation and death, contributing to 42% of injury hospitalisations and 40% of injury deaths, according to the Australian Institute of Health and Welfare.

HSC Technology Group, aged care provider Whiddon, Anchor Excellence and CSIRO have teamed up to change these statistics and improve outcomes for older Australians. The consortium is running a feasibility study involving Talius, a new sensor platform algorithm originally developed and tested in an in-home care setting by CSIRO as part of their Dementia and Aged Care Services trial using the Smarter \$U+ Home platform, involving sensor technology to prevent falls in residential aged care.

Consulting Clinical Research Director for HSC Technology Group Dr Maggie Haertsch said the prevalence of falls is unacceptably high in residential aged care and more research is required to ensure quality and safer care.

## SMART DETECTION

The consortium has received an Aged Care Research and Industry Innovation Australia (ARIIA) grant valued at around \$400,000 to run the feasibility study.

"The ARIIA funding will be used to develop the BEST CARE Project, which will provide an excellent opportunity to be smarter in detecting functional changes early and help design care to enable older people to have timely support as their needs change," Haertsch said.

"The aged care workforce is currently under stress and there is much that this technology can do to help. The first step toward implementation of the technology is to address how to make it easy for adoption."

## IDENTIFYING ADOPTION BARRIERS

Talius uses a combination of sensors placed around the residential aged care home with settings adjusted to individual risks to identify factors that can lead to a fall. The study will explore the acceptability of these autonomous sensors and the use of an individual's 'sensor story' to inform residents, their families and care staff of the older person's wellbeing. The study will also identify any barriers to adoption and the impact of this technology on the organisation's operations.

Principal Research Scientist at CSIRO's Australian e-Health Research Centre Dr Marlien Varnfield said the use of CSIRO's monitored smart technologies in home care has demonstrated that for older adults with Home Care Packages, the intervention benefited their social-care-related quality of life.

"Using similar sensors and the aggregation of this data into the Talius platform for the prevention of falls in residential aged care is a logical next step," Varnfield said.

## MONITORING AND ALERTS

Aged care provider Whiddon is introducing Talius to improve residents' safety and to support staff to continue to provide high-quality care. The Talius platform combines information from different types of sensors to provide real-time information about residents' care needs to mobile devices and healthcare dashboards used within the service.

This technology using the Internet of Things (IoT) can reliably monitor and alert staff to an older person's changed health status. Talius is sensor agnostic and can link any number of sensors autonomously collecting data into its platform. In this study there will be six different types of sensors with a total of 967 sensors installed throughout the home.

CEO of HSC Technology Group Graham Russell said the technology-using sensors have been trialled by CSIRO in people's homes.

"Many aged care providers asked me if this technology could also be used in residential aged care homes as they saw how the data moved from a reactive to proactive solution," Russell said.

"I am very pleased that we have won this grant and with the collective expertise of our partners, refine our approach. Using autonomous data collected through the sensors ensures dignity for older people — it is not invasive like a camera or CCTV, and can be very sensitive to help predict a change," he said.

## SMART SENSING MESSAGING SYSTEM

Whiddon's Executive General Manager Technology and Property Regan Stathers said, "We are excited to introduce Talius, linking real-time information through a variety of the sensors into one dashboard and alerts to handheld devices.

"The Talius platform provides us with information that informs care and up-to-date information on the residents' changing needs. This technology is like a smart sensor messaging system and we are eager to better understand the experience of our residents and staff using Talius," he said.

Managing Director of Anchor Excellence Cynthia Payne said the organisation was delighted to be involved in this collaboration to help find solutions to the serious impact of falls.

"As part of this research program, we will be working with the clinical team to identify high-impact, high-prevalence risks for each resident and ways the Talius platform can send out alerts and prompts that support the team with their care," Payne said.

"This is an area of great need in the sector and the ARIIA grant is enabling this innovation to take the next step towards implementation. We are looking forward to seeing the results and how this can support innovation across the sector," she said. ■



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