AI Preventing 84% of Falls, Reducing NHS pressures and Empowering Care Teams

Categories
Fall prevention
Fall detection
Reduced Response Time
Lifestyle Monitoring
Increased Resident Safety
Increased Staff Satisfaction
Increased Peace-of-mind

Organization Name
Hartland House & NHS Lancashire and South Cumbria ICB
Main Contributors: The team of Leanne Scrogham & Rebecca Etherington of Hartland House
Sue Capstick & Debb Gent of 'NHS Lancashire and South Cumbria ICB'

Organization Description:
Hartland House is a 31-bedroom residential care facility offering personalized care for up to 32 residents in a homely setting in the beautiful village of Milnthorpe, Cumbria. Hartland House is managed by the Abbeyfield Lakeland Extra Care Society, part of the worldwide Abbeyfield group.

Technology Partner
Nobi Smart Lamps

Nobi's Smart AI-Lamps for fall prevention, fall detection and smart care help seniors to live safe & happy in residential care facilities or at home, as long as possible; and helps to transform health & social care in a fast-aging world.

Project Description
In a quiet corner of England's scenic Lake District in Cumbria, a pilot between the UK's National Health Service (NHS), agetech specialist, Nobi Smart Lamps and a residential care facility is transforming falls detection and prevention as the NHS grapples with ever-increasing pressures under which it is struggling to cope.

Teams within the NHS are exploring preventative measures that will keep people out of the healthcare system. They are exploring how new digital technologies can support people in the community and how the social care and healthcare systems can work better together to alleviate NHS pressures.

This project sees a local NHS Integrated Care Board (ICB) funding Nobi's AI-powered smart lamps at the Hartland House care home to explore the lamps' capabilities regarding falls prevention.

The proactive team at Hartland House had diligently reported their falls data and it was for this reason that that the home was selected by the ICB for the pilot. The success of the pilot compelled the management team to install the lamps across the whole home just 4 months into the six-month pilot. Now, using the AI enabled Smart Lamps across the whole home, they have been able to cut the incidence of falls in the care home by 84%.

An ICB is the NHS body responsible for developing a plan for meeting the health needs of the population, managing the NHS budget and arranging for the provision of health services in a geographical area.

The problem

Falls are the leading cause of hospital admissions in Cumbria (and indeed across the whole of the UK), placing pressure on both care staff and the NHS.

The UK is well-known for its National Health Service (NHS) which is free at the point of delivery. Access to NHS services is based on clinical need, not an individual's ability to pay. Whilst this concept is to be applauded, the NHS is overwhelmed by demand.
The service is at breaking point with ambulance response times exceeding national targets and hospitals so overloaded that it's not uncommon to find ambulances queuing to offload patients, beds fully occupied leading to patients being treated in corridors.

This highlights the need for action and cost-effective solutions.

Safety Technology Category
Fall Detection, Fall Prevention, Lifestyle Monitoring

System Embodiment
Nobi combines optical care sensors and artificial intelligence in a stylish, life-saving lamp that seamlessly fits into any interior. Nobi chose for 'vision' (optical sensors) to give it's AI all the tools needed to ensure unrivaled performance and become a gold standard in fall detection with 100% of falls detected and no false negatives. Nobi's biggest differentiator (made possible by AI) is its fall prevention features, making it possible in residential care facilities to prevent 84% of falls. This makes it possible for care staff to make the switch from cure to prevent.

Implementation Approach

The pilot initially saw Nobi Smart Lamps placed in eight bedrooms at the 31-bedroom Hartland House care home. Residents are over the age of 65 and include those living with dementia.

The lamps replaced the main pendant lamp in each room.

For the initial 8-bedroom phase of the pilot, the bedrooms of residents with the highest incidence of falls were selected.

The capabilities of the lamps were introduced in a phased manner, to allow the AI to learn the movement patterns of the residents, and to allow the staff to acclimatize to the new technology. The Nobi Lamps communicate through an intuitive app on the care teams phones, and the Registered Care Manager has a dashboard in the office, allowing her to oversee any alerts.

Central to the success of this pilot has been the enthusiastic adoption of the technology by the registered manager at Hartland House and her team. She has championed the technology with care staff, the care home's trustees and residents' families.

In addition to monitoring falls prevention, the pilot has also explored and collected data on falls detection and the impact on care staff as well, of course, on improved outcomes and quality of life for residents.

The lamps had such significant impact on the lives of residents and care staff that they were rolled out across the whole home just four months into the six-month pilot programme.

Outcomes
Fall Prevention and Real Time Fall Detection

- At night, Nobi's **automated lighting** prevents disorientation and ensures people can find their way when waking up and going to the bathroom.
- Additionally, when residents get out of bed or leave their room, **Nobi notifies caregivers, enabling them to offer proactive assistance and prevent falls**. This feature also allows care workers to prioritize frequent fallers.
- If a fall occurs, **the Nobi communicates with the resident**, asking if they have fallen. If the response is anything other than a clear 'no', care teams are immediately alerted.
- Also, Nobi provides carers with privacy-protected images of the 15 seconds leading up to and after a fall, allowing them to **identify the cause and gather crucial information to prevent future falls**.

The Results – Falls Prevention

- Number of falls reduced by 84%.
- Care staff have access to data to facilitate proactive and preventive care

The Results – Long Lies

- Care staff are alerted immediately. This has led to a huge reduction in the average response time, falling from 57 minutes to under 2 minutes.
- Reducing "Long-Lie Falls" to Zero: Because Nobi ensures immediate help after a fall, safety and well-being are improved. Also, by preventing long-lie falls, Nobi significantly contributes to shorter hospital stays, decreasing healthcare costs.

20% of falls are categorized as "long-lie falls." And it's worth noting that 50 percent of older individuals who remain on the floor for over one hour after a fall die within six months.

The Results – Falls Detection

- The Nobi lamp detects 100% of falls

Potential Impact on the NHS - AI for game changing disruption

According to current figures 45% of reported falls in care homes result in in an ambulance callout. With reported falls per year in care homes at 600,000, and the cost of an ambulance call out at £252 this means that the NHS is spending hundreds of thousands of pounds on these avoidable call outs.

If Nobi lamps were rolled out across the 600,000 care home beds in the UK they could prevent 1,381 falls per day and save the NHS £156,585 every single day.

Significantly, these lamps offer a solution that could prevent many of these patients from being hospitalized in the first place.

Additional Benefits

Time Saving for Staff: Once integrated with smart devices and digital patient records, Nobi can automate administration of patient data, saving time for care staff. Nobi also makes it possible to eliminate the need for nightly surveillance rounds, freeing up time for more meaningful tasks and reducing disturbances to residents' sleep.

Hartland House report that each time a resident falls, a significant 6 hours is lost on paperwork and the necessary admin and reporting. With the reduction in falls, the time saving each month has been significant.

Higher Job Satisfaction and Reduced Staff Turnover: Nobi's time-saving features can contribute to higher job satisfaction among care workers by empowering them to focus on tasks that truly make a difference.

Peace of Mind: Nobi's reliable fall detection also provides peace of mind for families and care staff, eliminating the stress of not noticing a fall incident.

What the team at Hartland House say

Leanne Scrogham, Care Manager at Hartland House said: "If other care homes don't get these lamps, I think it will be the biggest mistake they'll ever make. They should be in every care home in the country without a doubt."

"Nobi's technology has been a game-changer for us," said Rebecca Etherington, Health and Wellbeing Lead at Hartland House.

"The system's ability to detect falls and alert our care staff immediately has significantly reduced response time, ensuring our residents receive prompt assistance when they need it most.

"The peace of mind it provides to both our staff and the families of our residents is invaluable. Nobi has truly made a difference in enhancing the safety and well-being of our residents."

For more information about Nobi

www.nobi.life

Case visuals can be downloaded via these links:
- Nobi in room
- Nobi product shot 1
- Nobi product shot 2
- Nobi in bedroom