CASE STUDY: PAIN RECOGNITION TECH

CHERYL BAIRD, GROUP DIRECTOR OF QUALITY AT ORCHARD CARE HOMES, BELIEVES THE CARE INDUSTRY NEEDS TO MOVE WITH THE TIMES AND EMBRACE NEW TECHNOLOGIES TO GAIN BETTER INSIGHTS INTO PEOPLE'S HEALTH AND SOCIAL CARE NEEDS TO OFFER RELIABLE, CONSISTENT SUPPORT FOR ALL.



Over the past 18 months Orchard Care Homes has invested heavily in technology to improve the wellbeing of those living at its 23 homes across England, and to give carers more confidence recognising and addressing pain in dementia patients.

Orchard is now fully digital, with technology playing a major role in the quality of care that it offers and the quality of tools available to its staff. Today, the group embraces modern technologies such as MedeCare E-MAR (Electronic medication), PCS (electronic care plans) and Access Care compliance to strengthen governance. These tools assist in promoting the best quality of care and enhance performance standards. Most recently, Orchard partnered with PainChek, which uses AI technology to assess pain via face analysis, to provide reliable, fast pain assessments.

Cheryl Baird comments: "We often find people living with dementia can become distressed when they are unable to voice pain or discomfort, so having AI technology at our fingertips has been vital. As a result, colleagues are more confident in their assessment and can provide the person with the medication and comfort that they need quickly. As a direct result of introducing PainChek since January 2021, the number of people with regular pain relief available has increased from 25% to around 75%, as pain is now being identified and treated effectively."

Of those living in care homes, it is estimated that 30-49% experience acute or chronic pain. People living with dementia or cognitive impairment are especially vulnerable to pain being poorly managed due to impaired communication. They can become distressed and may communicate this through non-verbal means, which can be viewed as behaviour caused by their dementia.

> **"USING FACIAL RECOGNITION TECHNOLOGY IS A REAL STEP FORWARD IN STRENGTHENING DEMENTIA CARE"**

Baird continues: "All too often, medical professionals rely heavily on the use of prescription medications, which can cause side effects or leave a person less able to connect and become withdrawn. Since we began using the AI tools, we have seen reduced use of antipsychotic drugs. We would urge other homes to consider investing in similar technologies to cater to those who are often unable to say when they are hurting or experiencing discomfort."

Orchard has installed the PainChek app on the care record handheld devices in its homes. The app is an evolution of a popular paper-based assessment and incorporates AI facial recognition. This identifies nine micro facial indicators of pain which are difficult to detect by eye. In addition, there are a series of observations recorded – vocalisations, movement, behaviour, alterations to their activity and physiological features. Suitable for use by nurses and care staff, the process takes under two minutes to complete. Once the app determines the level of pain, staff determine what analgesia or therapy is needed.

For day-to-day support, assessments are incorporated into current workflows such as medication rounds. In addition, staff are coached on ensuring the assessment is used when they observe a person becoming distressed in order to rule in or out pain as the cause. As a result, the group is able to review pain medication more frequently and modify prescriptions if needed to ensure pain is managed effectively.

Baird adds: "Recognising pain in people living with dementia or cognitive impairment is challenging. Unfortunately, care teams can neglect to consider pain as the reason the person appears distressed. Sadly, this can lead to people being prescribed medication such as benzodiazepines and antipsychotics to attempt to address the distress response behaviours. Using facial recognition technology is a real step forward in strengthening dementia care, a key area of our Dementia Promise, which aims to continually improve the health and wellbeing of those living with dementia."



"The workshops are a great resource and we have supported with tasks like simple mending and building bird houses. One gentleman loves to simply take things like bits of machinery apart and put them back together again."

> As part of its Dementia Promise, Orchard committed all staff receiving bespoke, evidence-based training. The programme comes in three levels catered towards caring for people with different degrees of dementia.

"All people who work in the organisation whether they work in IT or the kitchen for example will receive Level 1 training," Baird explains.

"Staff who support anyone in our care homes will do Level 2, including our maintenance operatives. Level 3 is in-depth, mainly for our Reconnect Communities and we will then open that up to advocates across all of the homes.

"In Level 3 we start to focus on what can trigger distress in the environment. That could be noise. We get people thinking about all of that. A lot of care homes can be quite infantilising with big bright colours and big pictures and that can sometimes cause people distress. Our Reconnect Communities are quite calming with lots of different spaces such as reading nooks and planting rooms. If they want a bright red bedroom, they can still have it, but the communal spaces are not childlike, they are more like a home. We also go into physical health because sometimes if you have a diagnosis of dementia other ailments can be forgotten. A lot of these people are still living with diabetes and heart disease and COPD.

"We want to have at least a handful of people trained to Level 3 in every home where one of the big objectives is family support, as that is currently in need. These levels are about involving people in their care plans, activities and normalising life and how we can empower those who have, in some respects, been written off. It's about empowering carers to advocate for people living with dementia and help them live a full life.

"To wrap up the training sessions, we do a pre- and post-service valuation covering audits, the environment and knowledge."

Investment in technology is a further core component of the Dementia Promise.

"We already had Person Centred Software's electronic care planning and Medecare medication management when I joined, which has been invaluable," Baird explains.

Introducing the intelligent pain assessment tool PainChek, was further instrumental in supporting the Dementia Promise. Using AI technology, PainChek recognises and records facial muscle movements indicative of pain. The system then calculates an overall pain score and stores the result which supports the implementation of pain management interventions and the ongoing monitoring of their effectiveness.

"We are quite harsh on ourselves. We measure ourselves as either low risk, medium risk, high risk or very high risk."

"We have carried out over 50,000 PainChek assessments," Baird says. "PainChek supports us with our falls prevention work. We are using it with everybody. The main benefit is making sure people have proper prescribed pain relief which has helped drive down anti-psychotic use. If people have fallen over, we can see if they have hurt themselves if they can't communicate that. We use before and after PRN medication to test its effect, and we have managed to get people's medications changed so that they are more comfortable. It's helped drive down multi-medication use because some people were on lots of pain medication and we have been able to use the data to go back to the prescribers and look at possible alternatives.

"We are using that feedback to see which of our homes need training next," Baird says. "It gives us that pre- and post-data and allows us to monitor that things are going in the right direction."

With Orchard having implemented fully integrated care systems, Baird is able to pull all of that data every month into a metrics spreadsheet, which she sends out to the whole organisation, including the board, for transparency so that they can see where improvements need to be made.

Implementation of the new technology has helped achieve impressive results with medication errors down by 50% and falls reduced by 16% in a year.

More recently, Orchard has implemented Access Care Compliance for its audits which includes feedback from staff, residents, medical professionals and families and friends.

"With the Access Care Compliance audits I can see very quickly where a home needs focused support and either myself or my team will go in and provide that support," Baird says.

The implementation of technology has helped Baird and her team drive care quality levels, with all but one of the provider's 23 homes now rated Good by the CQC.

"We have internal quality monitoring inspections aligned to the KLOEs but go into a bit more detail," Baird notes. "We are quite harsh on ourselves. We measure ourselves as either low risk, medium risk, high risk or very high risk."

Baird says she had no doubt that Orchard's one remaining Requires Improvement home, Nesfield, would be rated Good if inspected now and expressed her frustration at the 18-month wait the service has endured since its last inspection.

"That home is not Requires Improvement and we can't get that rating changed because there is no risk around it," Baird complains.

The care quality director described the CQC's inspection regime as "very inconsistent" adding her hope that its new framework which is expected to be rolled out by the end of the year would provide a "truer picture of care quality".

"It's really difficult for them to come into a home and say what has been good, bad or indifferent in one or two days, you need to look at a longer time frame of what has been going on," Baird says. "I don't see how the current way of working gives a true picture of care quality with so much dependent on what is going on at the home on that particular day. We hope the new model of inspection will change this."

Despite the sluggish inspection system, Baird expresses confidence in reaching Orchard's target of 100% Good or Outstanding in the not too distant future.

The Dementia Promise looks set to play a key role in helping Orchard achieve that goal. ct

