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Independent Living, Intelligent Insight: The Role of Everon Care in the Next Generation of TECS

Foreword

Across health, housing and social care, there is a shared understanding that the way we support people must evolve. The Minister for Health and Social Care (DHSC), Stephen Kinnock MP, has emphasised the importance of early intervention and the use of technology to maintain independence. Housing LIN fully supports this direction, recognising the enormous opportunity to reshape care and support at home through digital innovation.

As the UK moves towards a fully digital communications network, the potential for proactive and preventative care is unprecedented. The collaboration between Everon and Howz, working together as Everon Care, is a strong example of what that future looks like. By turning continuous pendant data into insight about daily life, sleep and wellbeing, Everon Care shows how existing technology can deliver early intervention and safer, more independent living whether in mainstream or specialist/supported housing.

And here at the Housing LIN, we continue to champion this type of partnership and evidence-based innovation. Everon Care demonstrates how collaboration, interoperability and ethical data use can bridge the gap between reactive response and proactive prevention, helping realise the DHSC vision of a preventative, community-based and technology-enabled care system.

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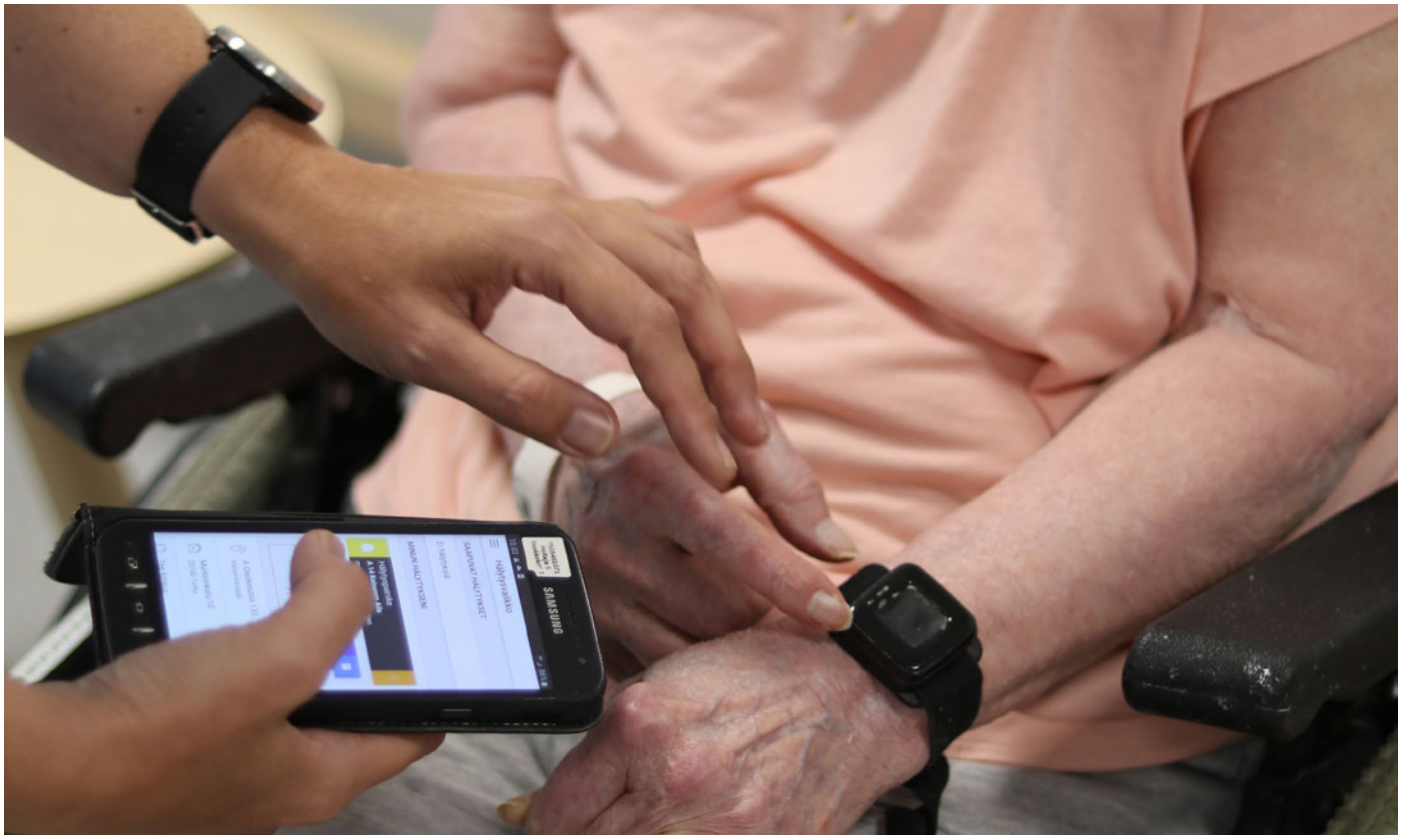
Introduction

TECS (Technology Enabled Care Services) is well established in the UK. Warden call systems were introduced in the 1960s, giving older people living in sheltered housing the means to call for help in an emergency at a time when most homes didn't have a telephone. As landlines in private houses became more commonplace, community alarm services connected individuals to monitoring centres (also known as Alarm Receiving Centres or ARCs), the first of which opened in 1979. In the following years, Community Alarm Services became part of most local authorities' support for older people.

Technology progressed, and by the early 2000s additional telecare sensors were available to monitor for environmental concerns in the home such as gas, carbon monoxide and water leaks, as well as events in the home such as opening doors, activity in rooms and bed/chair occupancy. Wearable devices were then introduced that can detect a person falling and automatically call the monitoring centre, and GPS trackers that can enable the user to summon help away from home and share their location. Today, around two million people in the UK rely on TECS for 24-hour reassurance that they can get help in an emergency.

But TECS is now in the process of a step change in both capability and purpose. The UK's communications infrastructure is planned to become fully digital by January 2027. This in turn will make it more practicable to turn the information gathered by TECS sensors into actionable insight. Systems that were previously purely responsive can become more proactive and preventative. Supporting services and families can have the information they need to provide the right care at the right time. Upstream health and care interventions can be made possible, reducing pressure on secondary care. Individuals can remain independent at home for longer.

A joint project by Everon and Howz, working together as Everon Care, explored the ways wearable technology can be used to monitor patterns of daily life. The goal was to understand how routine data could be used to right-size care packages and detect changes that may indicate a need for additional support or early health intervention.



Why detecting change is important

Change is one of the most reliable indicators of an emerging health or wellbeing concern. In clinical and care settings, deviations from an individual's usual patterns of activity, movement or rest are often the first visible sign that something is not quite right. The ability to detect and respond to changetherefore represents a crucial step towards truly preventative and person-centred care.

Extensive research supports this principle.

- Reduced mobility is consistently associated with increased risk of falls and loss of independence.
- Increased bathroom frequency may indicate urinary tract infections, dehydration or other medical issues that can escalate rapidly if undetected.
- Disrupted daily routines are known to exacerbate cognitive decline, anxiety and depression, particularly in older adults.

By identifying meaningful shifts in behaviour early, services can respond before an incident occurs, rather than after. In practice, this means a chance to adjust support, contact a family member or intervene clinically at the right moment.

The Everon Care proof of concept has demonstrated that these indicators can now be derived from the data already generated by existing wearable and pendant devices. This finding has significant implications for both cost-effectiveness and scalability.

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From data to insight:

The Everon Care approach

The collaboration between Everon and Howz set out to understand whether the continuous data stream produced by Everon's digital pendant could provide the level of detail required for Howz's established machine learning analytics.

Unlike standard alarm pendants, which only transmit data during an emergency, the Everon device sends a regular stream of accelerometer readings. This creates an opportunity to identify behavioural trends in near real time.

Method overview

1. Data from Everon pendants was processed using the Howz analytics tools to establish a baseline routine.
2. The data was cleaned to remove periods when devices were not worn or the user was away from home.
3. The Howz Pattern of Life algorithm (PG Circ) was applied to determine day and night structures and detect changes
4. Apple Watch data was collected and analysed as a ground truth reference for sleep analysis.
5. The two datasets were compared using logistic regression to test for consistency and reliability.

Findings

- Everon's data was found to have the granularity and stability required for Howz's machine learning models.
- The combined approach could reliably identify day/night structure and detect changes in routine over time.
- Sleep quality and duration could be inferred from the same data stream, aligning closely with the Apple Watch control data.

In other words, it is now technically and practically possible to detect early signs of change in health and wellbeing using the very devices already worn by many older adults across the UK.

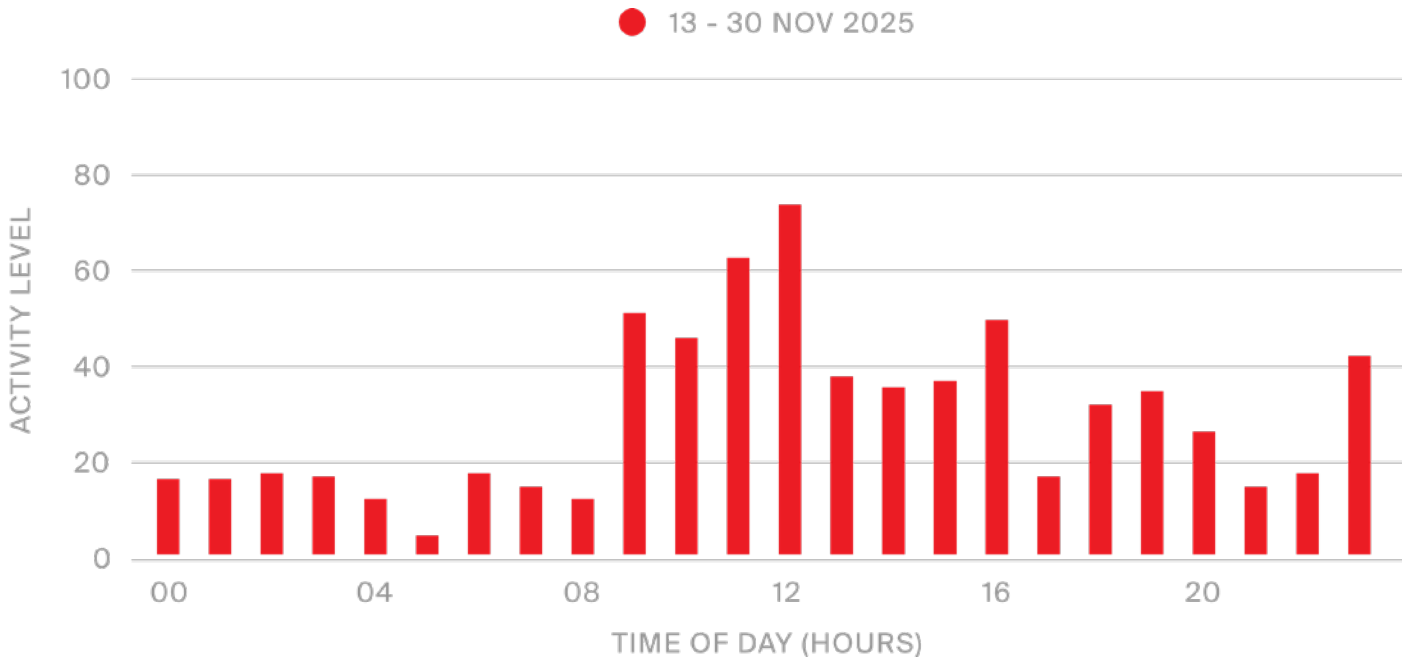

Figure 1: Movement patterns across the home by time of day, demonstrating how active a user is through a 24 hour period, and indicating day/night separation. This highlights how typical activity cycles derived from Everon pendant data.

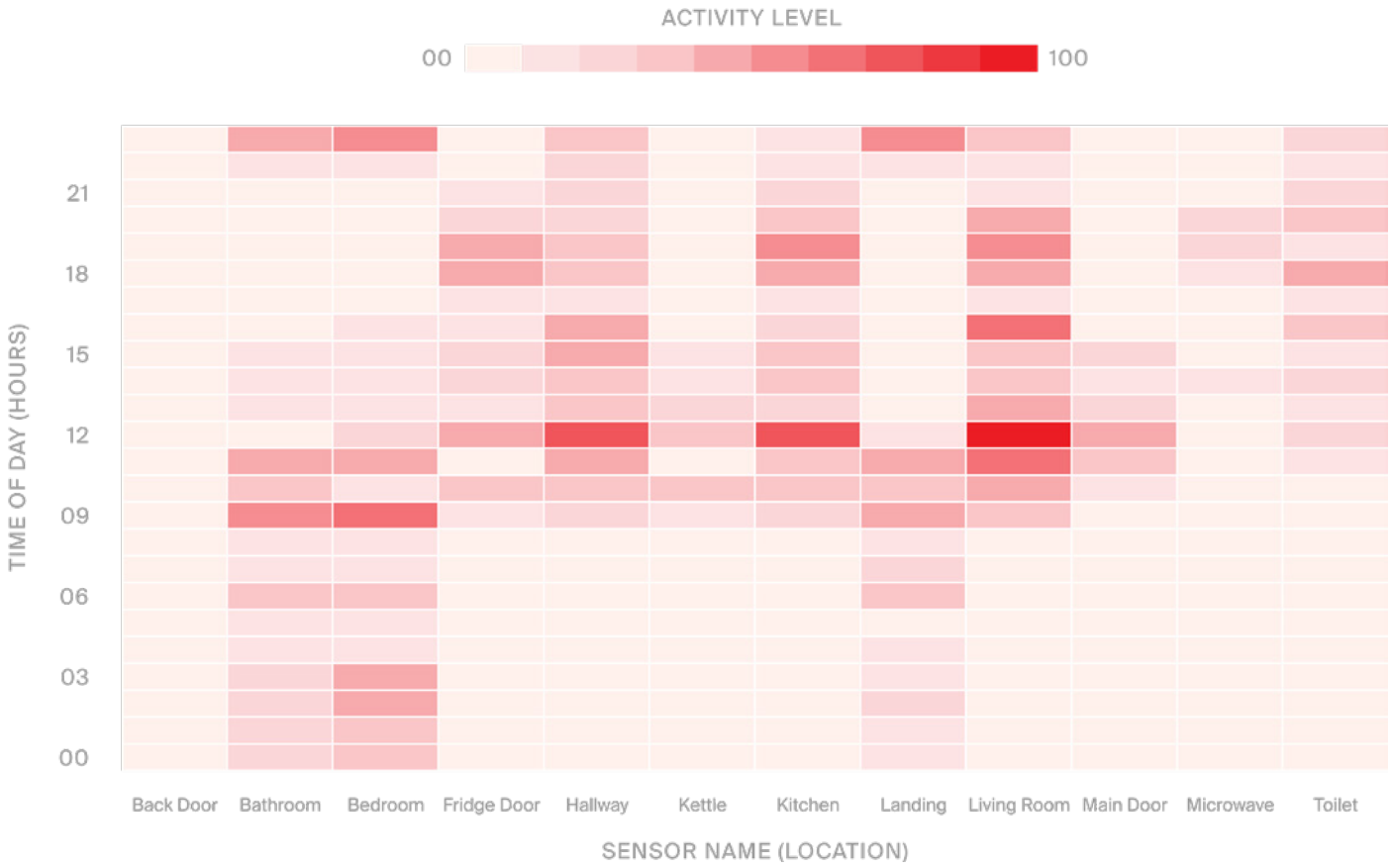

Figure 2: Heatmap showing intensity of movement captured by the Everon pendant, plotted by time of day and location. The distribution of activity levels supports routine modelling and the detection of anomalies over time.

Interoperability and integrated care

Condition	Findings
Older adults with poor sleep quality	47% fall rate compared to 27% in those with normal sleep quality (Finkelstein et al., 2013)
Sleep duration less than 5 hours	1.8 times higher risk of falling (Krause et al., 2017)
Excessive sleep (more than 9 hours)	26% higher fall risk (Finkelstein et al., 2013)
Elderly with sleep disorders	55% experienced falls compared to 35% without disorders (Jeong et al., 2016)
Sleep fragmentation and physical impairment	Less than 4 hours of sleep associated with 4.6 times higher fall risk (Belenky et al., 2023)
Chronic insomnia	42% experienced falls compared to 28% without insomnia (Krause et al., 2017)

With Everon data and Howz machine learning, nights of poor sleep quality and quantity can be detected. This means services can be alerted when a pattern of disrupted rest might signal increased risk.

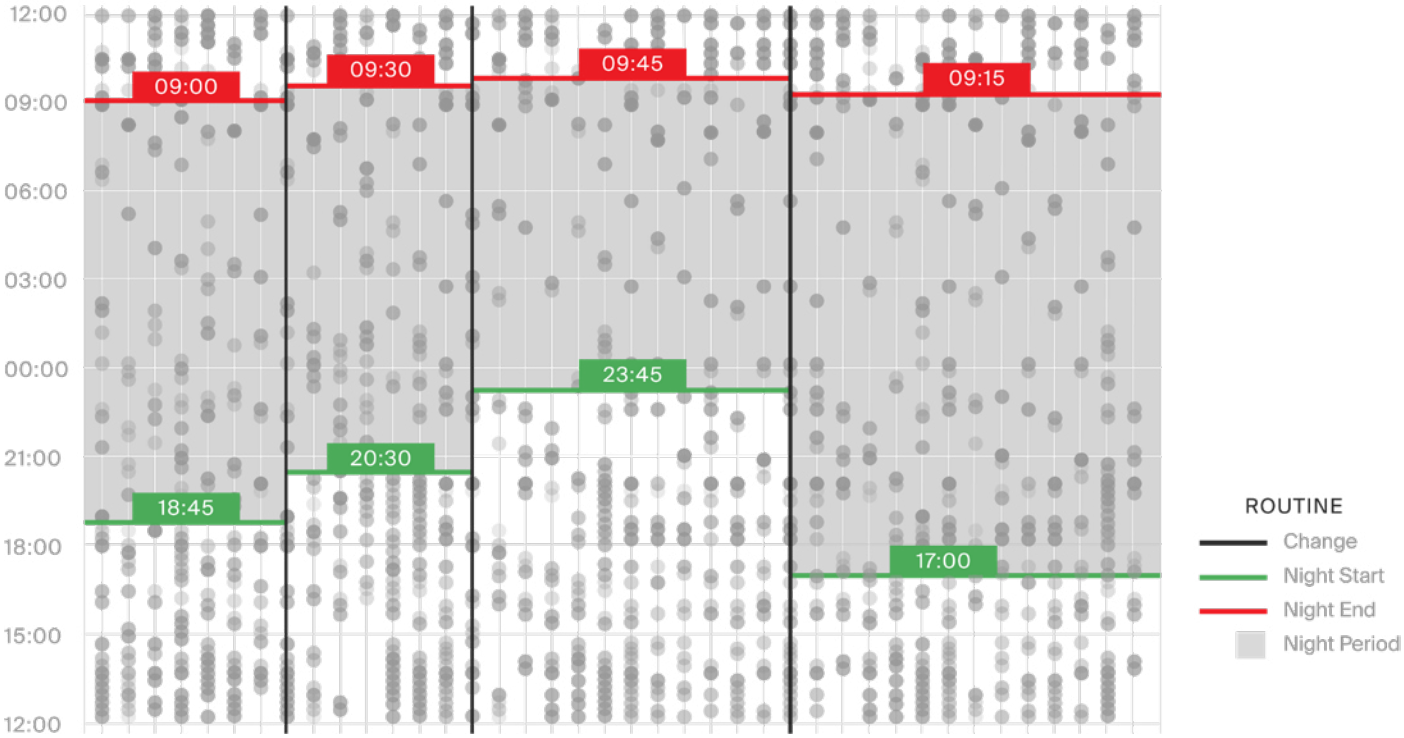

Figure 3: Machine learning analysis of Everon activity data highlighting nights with disrupted sleep and reduced sleep efficiency. Changes in sleep patterns are detected through accelerometer-derived movement and rest signals.

Importantly, these effects are often reversible through timely intervention, providing actionable purpose to the insight.

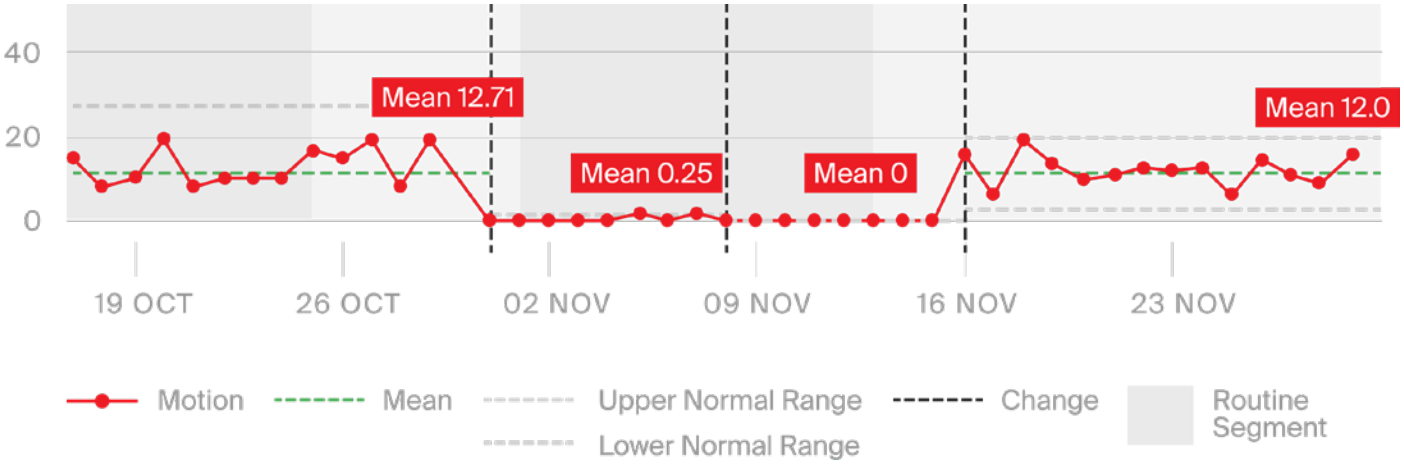

Figure 4: Nighttime activity trend over time showing fluctuations in rest time during the night. These trends help identify emerging changes in wellbeing or increased falls risk.

Why this matters for housing, health and care

The implications of this work extend beyond technology into the design and delivery of care.

Falls remain one of the most significant and costly challenges facing the NHS and social care system, estimated to cost £3.4 billion each year, with over £2.3 billion attributed to hospital care and £1.1 billion to ongoing social care and rehabilitation.

At the same time, national policy is shifting decisively towards prevention. The Department of Health and Social Care (DHSC) has made clear that future priorities for health and care are:

1. Community based
2. Technology enabled
3. Preventative

Everon Care embodies this vision. By combining reactive technology (pendants and alarms) with proactive analytics (AI-driven insight), it creates a single service capable of both responding to emergencies and predicting them.

For housing providers, this offers a unique opportunity. Data-led insights can help staff understand residents' changing needs, identify those at greater risk, and coordinate with health and care partners before a crisis occurs. As providers work through the national analogue-to-digital transition, there is recognition that replacing analogue telecare with like-for-like digital versions is not enough. Digital systems offer far greater potential than simple alarm handling. They create the foundation for proactive monitoring, shared data pathways and early intervention. Integrating insight and analytics into new digital TECS infrastructure enables housing organisations to futureproof their investment and deliver services that are not only safer, but more preventative and more personalised.

The digital switchover is a once-in-a-generation moment for TECS. Providers that use it to embed proactive analytics into their new digital infrastructure will be better placed to deliver safe, preventative services and meet future regulatory and commissioning expectations. This aligns directly with the HousingLIN agenda of enabling home-based independence and integrated neighbourhood care models, where intelligent use of data helps people live safely and confidently in their own homes for longer.

• Case Example

Using data insight to target night care effectively

In one council, staff were concerned that an extra care housing resident might be getting up and wandering at night, potentially increasing their risk of falls. By analysing movement data through Howz, it was shown that the resident was not active overnight, allowing care funding to be redirected to others with higher need. This simple intervention provided reassurance for the family, reduced unnecessary night-time monitoring, and ensured resources were used where they could make the greatest difference.

Interoperability and integrated care

A central principle of the Everon Care model is interoperability - the ability for systems and data to work together seamlessly.

This means existing TECS equipment can be enhanced rather than replaced, protecting investment and reducing friction in commissioning. By building on the current technology estate, housing, health and social care partners can create flexible pathways that adapt to the individual rather than forcing individuals to fit rigid service models.

Interoperability also widens the circle of care. Families, housing officers, community responders and clinicians can all access relevant, consented information to provide the right level of support at the right time. This strengths-based approach promotes independence while ensuring safety.

Barriers and enablers

Implementing proactive technology in real-world settings involves practical challenges.

Commissioning structures

Current funding models often separate housing, health and social care budgets, making it difficult to share responsibility for preventative outcomes.

Pathway change

Integrating new analytics requires shifts in operational practice and confidence in the data.

Perception and choice

Some individuals may resist technology that feels intrusive. Transparent consent processes and clear communication are essential.

Actioning insight

Generating data is not enough; services need resources and accountability to respond to the information provided.

Despite these challenges, the benefits are compelling. Data insight allows objectivity to coexist with compassion. It provides a factual basis for understanding when and where human support is most needed, while upholding dignity and independence.

Conclusion

The UK's health and social care system faces growing pressure. Resources are stretched, demand is rising and traditional models of reactive care are no longer sustainable. As the national analogue-to-digital transition progresses, providers are rethinking how telecare fits within a modern care system. To maintain both quality and affordability, the system must evolve towards prevention, early intervention and the intelligent use of existing digital infrastructure.

The Everon Care proof of concept demonstrates a tangible path forward. By drawing actionable insight from the technology already in people's homes, Everon and Howz have shown that it is possible to detect meaningful change, and that these changes correlate with key risks such as poor sleep and falls. This matters because digital TECS equipment is now capable of generating richer data than analogue systems ever could, creating new opportunities for earlier understanding of need.

This partnership exemplifies how TECS can support the DHSC's vision for a preventative, community-based, technology-enabled future. It also highlights the critical role that housing providers can play in realising that vision, bridging the gap between home, health and care at a time when digital telecare is being deployed widely across housing and community settings.

Everon Care is more than a technical integration. It combines the reliability of established telecare with the intelligence of modern analytics, helping to ensure that digital services do more than replicate analogue ones. In doing so, it points towards a future where technology not only responds to emergencies, but helps prevent them, enabling people to live safely, confidently and independently in their own homes for longer.

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