

Case Study

Loreburn Housing Association



Loreburn Housing Association focus on prevention using ARMED

With an increasingly ageing population, more complex care needs and a shortage of care services, we need new approaches to the way we support people in later life. Focusing on prevention and self-management helps people remain independent for longer and has the potential to reduce hospital admissions and ultimately save money for health and social care services.

ARMED from H.A.S. Technology combines pioneering predictive analytics modelling (developed with Edinburgh Napier University) with innovative wearable technology and health and social care data – providing a powerful tool to identify risks earlier in the care cycle, including risk of falling.

Forward-thinking housing association, Loreburn, have adopted ARMED to help predict customers with risk of falling, enabling faster support and better self-management. Following a successful pilot, Loreburn are rolling out the preventative technology to residents in sheltered developments.

The pilot focused on a group of customers who were considered at risk of falling or had a history of falls. Although only over 60s took part, the ARMED solution is neither age nor illness specific, allowing it to be utilised by any age group, including Loreburn's younger supported residents.

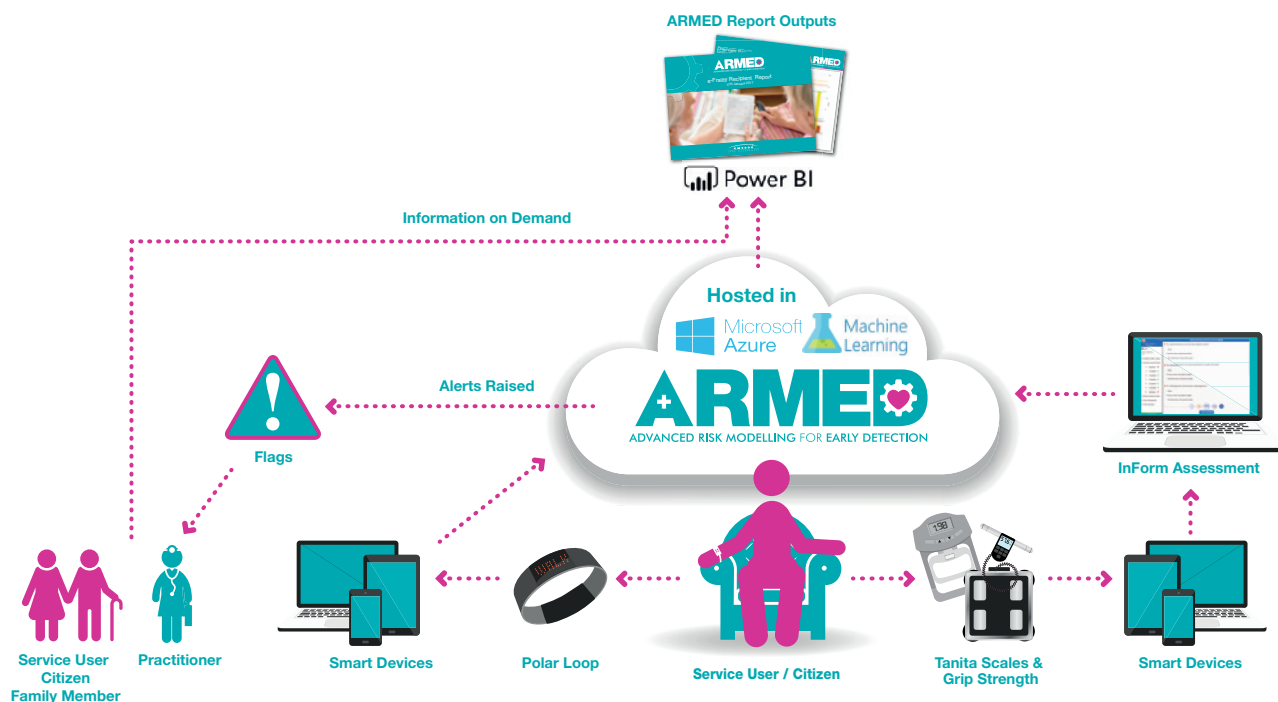
Customers wore a Polar loop which collects data on vital health signs 24 hours a day. This information is then synced, via Bluetooth, with a smartphone and uploaded to ARMED at regular intervals throughout a 24 hour cycle. Using sophisticated predictive analytics, the data is analysed giving a wealth of information about muscle mass, hydration, heart rate, sleep patterns and inactivity.

Twice a week, Loreburn staff assisted customers during their weigh-ins using Tanita Body Composition Scales, and once a week they assisted with the grip strength test. Results were uploaded to ARMED.

“Cutting edge technology needs to be available to non-profits, charity organisations who can also deploy it and reap the benefits. This is what we have seen with Loreburn Housing Association. I had the chance to learn what they were doing, but more importantly what the technology provider ARMED is doing to help with the epidemic of falls among the elderly.”

Falls can lead to fatalities, but even if it's not a fatality, one of the challenges of an elderly person falling is the healthcare challenge that then ensues. The best way to deal with this is to have preventative care, delivered through sensors, wearable technology that works through machine algorithms.....this is exactly what Loreburn are rolling out with ARMED.”

Satya Nadella, CEO, Microsoft (speaking at 'Microsoft Future Decoded' 2018)



Outcomes and benefits for individuals

- The pilot was a positive experience for all those who took part. With immediate effect, those taking part became more active.
- The ability to monitor and measure the metrics associated with frailty and fall risks (such as hydration levels, low grip strength, inactivity, lack of sleep, low heart rate and heart rate variability) from the comfort of an individual's own home was seen as a positive by customers, family, carers and staff.
- During the pilot, one of the customers was found to have a decreased heart rate around a similar time each day. This information was flagged to staff, who contacted the customer's doctor (with their consent) and, following examination by the customer's own GP, they were placed on medication.
- All historical data is accessible to the customer's GP, providing a comprehensive picture of a variety of indicators that would previously have gone unrecorded.
- Real time activity stamps can be sent to the customer to alert them if they have been sitting for a prolonged period and activity is required.
- Real time flags (via email/text) can also be sent to the customer, sheltered housing staff, carers and family to alert them that the subject has been inactive (which can lead to dehydration, lack of sleep and the increased likelihood of a fall). In the worst case scenario, it could indicate that something untoward has happened to the wearer, allowing assistance to be summoned in a timely manner if required.
- By anticipating issues before they arise, the technology allows elderly residents to live independently in their own homes for longer, significantly improving their wellbeing and quality of life.

"This new technology is providing us with something that we haven't got but that's desperately needed. My wife has dementia and this technology could help keep us living together for longer, and also give our family reassurance."

Loreburn customer

Benefits to the housing association and wider Health & Social Care Partnership

- ARMED data empowers Loreburn's staff with evidence of an individual's state of health and quickly enables changes to be identified so preventative action can be taken.
- Reports can be easily built and customised to Loreburn's requirements, allowing information to be presented to relevant colleagues in a range of formats. This is useful for building into Loreburn's strategic plan around residents with deteriorating conditions and allows for more proactive housing stock management.
- With falls currently costing the NHS in Scotland almost half a million pounds a day, technology has the potential to save the public purse substantial sums of money by alerting sheltered housing staff to intervene and help prevent falls before they happen.
- From an integrated health and social care perspective, this technology could save money by avoiding unnecessary hospital admissions, ambulance call outs and reduce delayed discharge. The untold potential of this allows for resources to be deployed more effectively.

"The ARMED solution has huge and exciting potential to support falls prevention and provides our customers, their families and carers, with a tech solution that brings peace of mind while allowing people to live independently at home, for as long as possible."

We fitted our customers with the ARMED solution and almost instantaneously we got results."

Moir Charters, Head of Improvement & Innovation



ARMED provides a significant opportunity to support people better at home, encourage independence, self-management and ultimately reduce dependency on the healthcare system.

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