



ADVANCED RISK MODELLING FOR EARLY DETECTION



Technology to support an aging population



ARMED for prevention and self-management

The shifting demographics will continue to have a significant impact on the demand for health and social care services. Now is the time to adopt innovative digital approaches. By identifying at-risk individuals sooner, there is potential to save millions of pounds from the public purse, by changing care delivery, self-management and reducing hospital admissions. Technology has the potential to allow people to live independently in their own homes for longer, significantly improving their wellbeing and quality of life.

ARMED (Advanced Risk Modelling for Early detection) is an innovative prevention and self-management solution from H.A.S. Technology*. ARMED was developed with input from Edinburgh Napier University and support from the Digital Health & Care Institute.

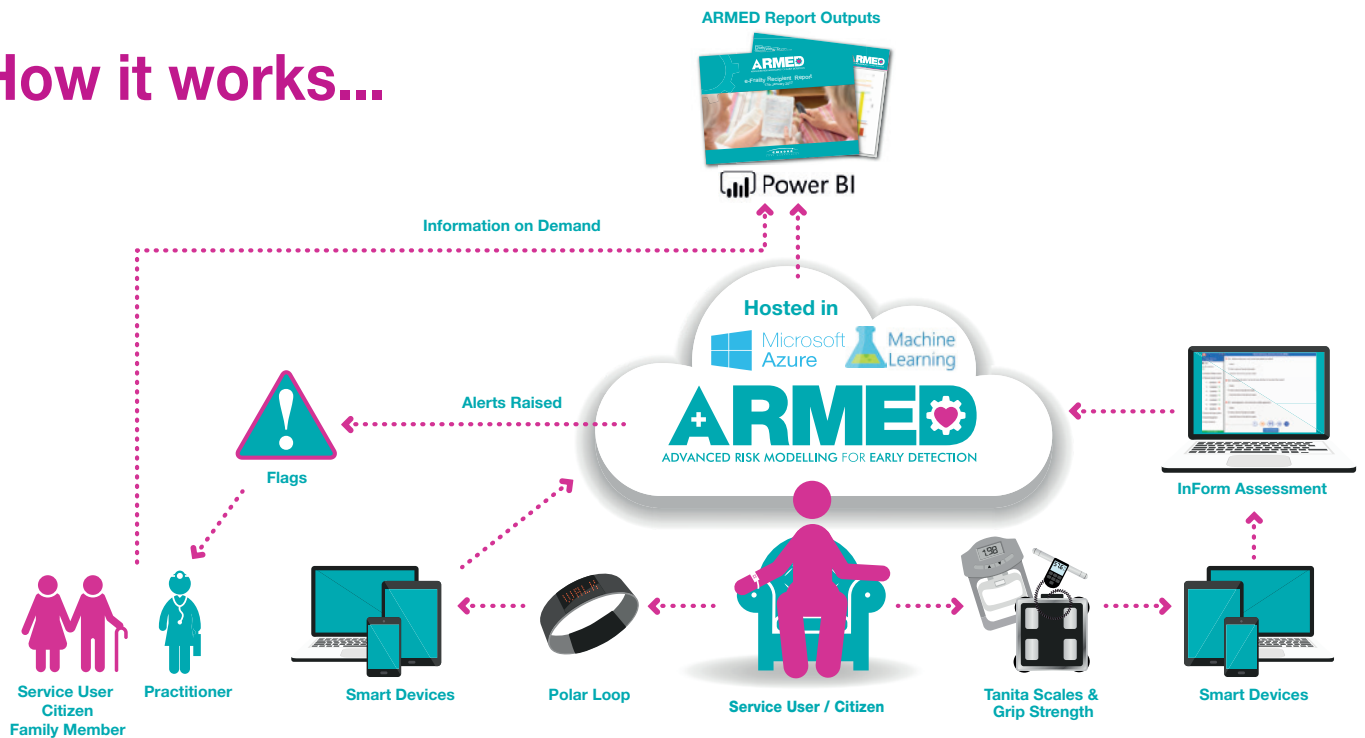
ARMED combines pioneering predictive analytics modelling with innovative wearable technology, and health and social care data, providing a powerful tool to identify risks (including risk of falling), earlier in the care cycle.

ARMED focuses on key metrics associated with frailty and risk of falling, such as low grip strength, muscle mass, hydration levels, low heart rate and heart rate variability. These can easily be monitored and measured from the comfort of an individual's own home using the latest wearable technologies.

Data captured helps identify a variety of frailty indicators that would have previously gone unnoticed, such as Service Users who are significantly dehydrated or have a reduction in grip strength. It helps identify risk trends through Service User weight loss or a reduction in muscle mass, despite an increase in weight and direct fat. It highlights restlessness at night, which flags up ongoing risk during the day.

*H.A.S. Technology is a global provider of cloud-based workforce management and social care technology. The Group includes a number of technology brands including care management specialist, CM (previously CM2000).

How it works...



Data is collected around the clock from a Polar device worn by the individual. This is complemented with regular data from Tanita body composition scales and strength grip.

ARMED is hosted on Microsoft's Azure Platform leveraging all the power of Microsoft Machine Learning and PowerBI tools. This provides high levels of security to maintain confidentiality, integrity and availability of customer data.

Data from wearables is combined with social care data, including care visit monitoring data where available. The predictive modelling allows alerts to be used to highlight risk. Community trials have identified that warning flags are being raised approximately 32 days in advance of a potential incident, allowing for early intervention and appropriate support.

ARMED picks up on gradual deterioration that may not be obvious to family and Carers, in everyday contact with an individual, until it's too late.

Making a difference

"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."

Moiria Charters, Head of Improvement & Innovation,
Loreburn Housing Association

"The ARMED technology is mind-blowing – I enjoy watching those numbers build up. It gives me a lot of confidence. I get readouts that show my individual data and I know the Healthcare Professionals that are trying to keep me in check have this information. If they tell me I should be doing more or less of something they can show me the evidence and impacts."

ARMED User

"The ARMED technology gives me reassurance and is making me more aware of how active I keep."

ARMED User



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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