
POSTER ABSTRACT**Can Technology Support Healthy Ageing? Feasibility Study of a Wellbeing Management Platform for Self-care and Early Intervention in Older Adults**

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Background: Digital tools may support people to develop and maintain lifestyle changes and make “better-informed decisions about their health”.^[1] The use of wearable and smart devices may further enable the identification of subclinical fluctuations in health, facilitating early intervention and preventative care at the population level.^{[1],[2]} This study aims to assess the usability, adherence and feasibility of the Tinteán™ wellbeing management platform in supporting self-care and early intervention in community-dwelling adults over 55.^[3]

Approach: A total of 100 participants with at least one chronic health condition have been recruited on a voluntary basis from volunteer, community and social enterprises including ALONE (Ireland’s national elder support charity), Friends of the Elderly, disease-specific support groups (COPD Support Ireland, Diabetes Ireland, Asthma Society) and retired professionals associations (Garda Retired Members, Retired Teachers’ Association).^[4] Inclusion criteria include: being aged 55 years or older, living independently with a fixed address, owning a suitable smartphone, being independently mobile and living in or willing to travel to Dublin for in-person testing days. Prospective clients were contacted by wellbeing team members to complete a screening questionnaire (adapted from the Tilburg Frailty Indicator) to establish suitability, with those scoring five or above excluded from the study.^[5]

All participants have received a smart watch and scales, and 10% have been supplied with a smart home blood pressure monitor. Devices are linked with the Tinteán mobile app and readings are uploaded to a user dashboard daily. Results are flagged according to a threshold-based system derived from the HSE’s National Early Warning System and made available to healthcare providers via a unique QR code on participants’ apps.^[6]

At onboarding and subsequent 3-monthly intervals, participants undergo hearing, vision and cognitive assessments, as well as strength, mobility and balance testing under the supervision of a clinical physiotherapist. Participants also complete regular mental health questionnaires and record relevant life events (e.g., falls, GP visits). These measures of physical, mental, and social

health are tracked, and participants are connected with local health and/or social support services based on concerning scores or trends in these metrics.

Results: Preliminary results (study to end in March 2026) indicate high levels of acceptance and adherence among participants, despite the reportedly low acceptability of digital devices in this age group.[7] Participants have reported increased awareness of their health status, motivation to improve measures e.g., step count, and a sense of confidence in knowing that someone is looking out for them. Some participants have described feeling better able to advocate for themselves in interactions with healthcare professionals. The main alert categories to date are cardiovascular (55%), strength and mobility (15%), pain (9%), and mental health (8%). Preliminary limitations and issues include the deliberate selection of participants, the high numbers of alerts generated in free-living conditions, the corresponding requirement for healthcare professionals to follow-up the alerts and the complexity of refining the model to generate individualised thresholds for clients.

Implications: Pending finalisation of results, though likely applicable across different health system contexts and settings.