

TITLE: MoveSmart AI: An AI-Supported Wearable Intervention to Reduce Physical Inactivity in England

Background

The issue of physical inactivity is one of the key health challenges in England. The prevalence of 27% of adults reported inactive (less than 30 minutes of moderate/vigorous activity per week) in terms of national surveillance means that there is still a need to prevent (NHS Digital, 2026). Non-digital methods used before (e.g., community walking schemes, mass-media campaigns) may be able to enhance awareness, but will have a hard time with long-term compliance. Online solutions like the NHS Active 10 walking application and digitally provided lifestyle programmes are expected to help with large-scale self-monitoring and behaviour change (NHS England, 2025). MoveSmart AI expands on the concepts of wearable tracking with AI-driven, customisable objectives, feedback, and community opportunity notifications, and clearly anticipates the risks of digital exclusion (Badr, Motulsky and Denis, 2024).

Behaviour Change Theory

The Transtheoretical Model views behaviour change as a gradual process involving pre-contemplation, contemplation, preparation, action, and maintenance (Abrash Walton et al., 2022). MoveSmart AI provides tailored cues to raise awareness of inactivity dangers in early stages, followed by goal-setting and activity tracking to encourage habit change. Continuous monitoring and reward-based feedback help consumers sustain exercise habits. Digital health treatments with phased behavioural support had higher adherence than uniform interventions that presume equal change readiness (Doran et al., 2022). Technological solutions must be complemented by inclusive public health policies to eliminate digital health inequities since socioeconomic restrictions and digital literacy may affect stage development.

Health Promotion Values and Principles

Current health promotion focuses on equity, empowerment, participation, and inclusivity, as well as health in all policies and health-supportive environments (WHO, 2022). MoveSmart AI complies with these values by enabling users with personalised feedback and collaboratively designed goal plans and motivating participation by showing them how to join the community by providing prompts that reduce costs by offering the user relevant local activities (Potvin and Jourdan, 2022). Nevertheless, digital health tools may have an inadvertent negative impact on inequalities in cases of social patterned uptake (Konig et al., 2025; Badr, Motulsky and Denis, 2024). As such, the equity lens embedded in MoveSmart AI, i.e., subsidised access routes, streamlined onboarding, and a multilingual/digital-literacy, will allow the distribution of benefits equally among population groups.

Expected Outcome

MoveSmart AI will enhance physical activity by enhancing prolonged activity with customised feedback and adaptive goal setting. Nevertheless, results are not expected to be homogeneous: digital interventions may be unequally adopted/influenced by deprivation and education and technology is not going to address the structural barriers alone (Shrestha et al., 2026; Konig et al., 2025). The risks of bias and privacy threats through AI adoption are also evident and may undermine trust and adoption, unless the transparency and governance are clear (Alderman et al., 2025; Hasanzadeh et al., 2025). Accordingly, the provision of the intervention in conjunction with the community provision and equity protection is the key to impact rather than technical performance.

Conclusion and Implications

Policies could be implemented by integrating AI-aided prevention instruments with the transformation of prevention and the digital journey of England, and implementing the relevant evaluation and regulation (UK Parliament POST, 2025; UK Government, 2025). The implications of education are the enhancement of digital health literacy of users and practitioners to facilitate equitable adoption (Badr, Motulsky and Denis, 2024). The implications of research will be long-term trials to gauge compliance and disparate effects according to deprivation, and documenting datasets and auditing algorithms to ensure equity (Alderman et al., 2025; Agnes et al., 2024). When applied through the equity prism, MoveSmart AI has the potential to facilitate scalable behaviour change and reduce the threat of digital inequality.

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