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CONFERENCE ABSTRACT

An Intelligent Health and Wellbeing Advisor for Senior Citizens

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Background: The global population is ageing rapidly. This results in a growing number of seniors facing complex health challenges that extend beyond medical care. These challenges require continuous support for their physical, mental, emotional, and social wellbeing. However, traditional healthcare models often fall short in providing the personalized guidance seniors need, while many digital health tools present barriers in accessibility and usability.

To address this gap, we propose an Intelligent Health and Wellbeing Advisor powered by Artificial Intelligence (AI). This innovative solution empowers seniors to better understand their health, make informed decisions, and actively manage their overall wellbeing, ultimately improving their quality of life.

Approach: The Intelligent Health and Wellbeing Advisor utilises human-centred AI to integrate diverse information sources, including health datasets and websites. Data is collected via user inputs and wearable devices. The AI system processes it to deliver simple, trustworthy, and actionable insights. A conversational AI interface, designed for ease of use by seniors, enables natural interaction, offering explanations and guidance tailored to their needs.

Public and Patient Involvement (PPI) has been central to the design process, ensuring the advisor meets real-world user preferences. Recognizing individuals as health partners is vital within the framework of the 9 Pillars of integrated care, especially as digital technologies continue to evolve rapidly.

Results: The Advisor is designed as a module within the Conversational Health Agent for Person Empowerment (CHAPE - cohealth.ivi.ie/chape2). It engages users through a few simple questions and combines their responses with their profile and wearable data to generate a comprehensive wellbeing index. Additionally, it provides detailed individual scores, insights, and tailored advice across various health dimensions, including physical, mental/emotional, social, and spiritual/motivational wellbeing.

CHAPE was introduced to the public on 21st October 2024, during the Research Week event at Maynooth University. Attendees praised the Advisor's user-friendly design and effectiveness, reporting a greater sense of empowerment in managing their health and wellbeing. Many expressed enthusiasm for supporting the Advisor's future development.

Implications: The Intelligent Health and Wellbeing Advisor marks a significant step forward in person-centred digital health for seniors. By empowering older adults to proactively and independently manage their health, this technology has the potential to alleviate pressure on healthcare systems while addressing the critical need for personalized health support in a demographic often overlooked by traditional digital solutions. The Advisor aligns with the UN Sustainable Development Goals of 'Good Health and Well-being' and 'Reduced Inequalities'.

Future developments and scaling of this AI-driven solution could further enhance the application of human-centred AI, enabling individuals to take greater control of their health and wellbeing. The project underscores the importance of involving users directly in the design and evaluation process to ensure AI health solutions meet the unique needs of senior citizens. By fostering informed and empowered health management, the Intelligent Health and Wellbeing Advisor offers a pathway to more sustainable and inclusive healthcare in ageing societies.