



**1<sup>st</sup> World Congress on Healthy Ageing, Kuala Lumpur, Malaysia**

**ABSTRACT 205**

Authors

Stephen Benton, Bryan Manning and Boris Altemeyer.

Title: System and Behavioural Redundancy in Technology Deployed to Support Active Ageing.

Key words: Redundancy, wearable technology

University of Westminster London, UK

In general, health care services are planning for technological systems to augment the provision of care, as demand escalates and the resource declines. Consequently, the role for personal and proactive self-care adds a significant option for hard-pressed services. As Health Care Agencies register the growing impact and challenges associated with the shift in population demographics, the pressures on resources are set to escalate. It is consistently argued that consequent demand will outstrip the capacity for services to maintain even existing levels of care, with a short fall in capacity exacerbated by improved survivability and longevity of previously acute conditions. Health systems around the world, not withstanding significant differences between industrialised and developing nations, are facing the prospect of nearly 40% of their population being over 65 by 2051. The care environment is set for a wide range of technological innovations and applications, tasked with filling the 'resource' gap between effective care capacity and individuals/population care need. Consequently, the risk for inappropriate system design is high. This paper examines the impact of what is termed 'inclusive design', a term developed out of the idea that products (including physical infrastructures and wearable technology) should be designed to meet the actual functional needs and behavioural aspirations of the end users and therein reduce system redundancy and maximise user uptake. This paper draws on a UK ESRC funded collaborative research where design played the key role in exploring how assistive smart textiles and wearable technologies could be used in clothing in order to enhance the daily activities and Quality of Life (QoL) of the active ageing