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## Customized wellness solutions using health technological platforms: An Exploratory Research Protocol

Rapid transformations in demographic and socioeconomic shifts are leading to a growing global demand for health and beauty products and services that demands holistic concepts of well-being. In addition, technological breakthroughs such as internet of things make it convenient and offer innovative solutions for well-being and engage consumers to track their own health conditions and fitness goals. This new health economy encompasses three key concepts: Well-being, well-conditioned and well-shaped; which are shaped by wellness segments and goals that influence purchasing decisions of consumers. The research protocol aims to examine the feasibility, challenges and capabilities in provision for each customer with an ecosystem or platform that organizes data and insights to create an individual health and fitness, nutrition and beauty profile. Convenience sampling of 100 consumers residing in private housing within five major districts in Singapore will be selected to participate in the study. Statistical package for social science 25 will be used to conduct descriptive statistics for quantitative data while qualitative data results using focus interviews, will be translated and transcribed to identify improvements in provision of these services. Rising income in emerging global markets is fueling the demand for these general wellbeing products and services. Combined with technological advances, it is imperative to understand how these highly personalized services with integrated technology can be designed better to support consumer preferences, provide greater flexibility and high-quality service and generate better health awareness among consumers.

### Keywords

Cortisol, Alzheimer's disease, Diabetes, Folic Acid, Folate, Vitamin B12

### Back Ground

The number of people worldwide living and dying with dementia is increasing. In the UK, approximately 700 000 people are living with dementia and approximately one-third of people aged over 65 will die with dementia. However, reports suggest that people with dementia may receive poor quality care towards the end of life; care may fail to meet their physical and/or emotional needs and may not consider the needs of family carers. Symptoms experienced in the last year of life by people with advanced dementia, such as pain,

breathing difficulties, pressure sores, impaired appetite and difficulty swallowing, are comparable to those experienced by people with advanced cancer. Referral to palliative care services for people with dementia is rare and less than 1% of hospice patients in Europe have a neurological diagnosis. However, for many people with advanced dementia their symptoms and care needs could be managed by generalist providers. We suggest that good care requires a broad, but cost effective, palliative approach, which is person-centered and tailored to meet individual needs. Our work responds to UK government initiatives for care in dementia and at the end of life.

The Compassion Programme is a 3-year National Institute for Health Research (NIHR) portfolio programme of research funded by Marie Curie Cancer Care. We have used mixed qualitative and quantitative evidence and a realist approach to develop a complex intervention, 'Compassion', designed to improve care for people with advanced dementia approaching the end of life. In this paper we present the protocol for an exploratory phase I study of implementation of the Compassion Intervention in two UK healthcare economies (Clinical Commissioning Groups). 'Compassion' is a complex intervention that delivers a model of enhanced integrated care; it is described in detail in a written manual. It has been developed through an iterative process bringing together data from a range of sources and locations.

A literature review.

A review of UK health and social care policy.

Workshops across the UK with health and social care professionals.

A workshop with patients with early dementia and a workshop with family carers.

Qualitative interviews with health and social care professionals.

Quantitative data from people with advanced dementia and their carers participating in a cohort study of clinical need and carer burden.

Consensus on intervention content was achieved using the RAND UCLA appropriateness method<sup>14</sup> with participants in workshops across all four countries of the UK. To enable a deeper understanding of how the intervention may exert its effects, individual components of the intervention have been mapped to sociological theories of process and impact. Details of these elements of the research will be reported separately.

We describe three overarching core components of the Compassion Intervention:

- Facilitation of integrated care;
- Education, training and support;
- Investment from commissioners and care providers.

In this exploratory study, we implement components 1 and 2, which, over time, may influence component 3. Each core component contains a number of subcomponents which we shall refine further using results from this study.

The Compassion Intervention will be delivered by what we describe as an 'Interdisciplinary Care Leader (ICL)' who has experience of working with people with dementia in care home settings. The ICL will be based within participating care homes and will work alongside

care home staff and associated health and social care professionals currently providing routine care. The ICL will receive training in the Compassion Intervention and supervision from the programme team to check adherence to the Compassion manual. Further training will cover standard procedures of clinical and information governance, safeguarding of vulnerable adults and the Mental Capacity Act. The ICL will seek to:

Understand which professionals are providing care, care pathways and services currently available;

- Develop joint working to enable integration of available services;
- Encourage a proactive structured assessment of the needs of residents with advanced dementia;
- Facilitate understanding and use of personal and advance care plans;
- Provide support to front-line staff to enable them to avoid unnecessary place of care transfers;
- Identify and support the training needs of care home staff;
- Foster a culture of respect, dignity and quality of care for all residents;
- Meet with family carers to ensure their needs and wishes are understood;
- Act as a central resource for health and social care professionals, care home staff and family carers.

The ICL will meet weekly with the existing core team responsible for the care of residents. This team will include the clinical lead professional (GP, geriatrician or old age psychiatrist) and a member of the care home staff (care home manager or floor/unit manager). The Wider Interdisciplinary Team: Monthly meetings will be held with the wider interdisciplinary team, which will include representatives from specialist palliative care, old age psychiatry, care of the elderly, social care. Educational and training needs: These will be addressed through shared working, use of online resources and formal topic-based teaching if required. Training will link to nationally agreed core competencies.