The Social Network: a concept to improve the quality of life for an ageing population while reducing loading on the NHS

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The current tumultuous financial climate leaves the National Health Service (NHS) facing budget cuts and needing to reallocate resources in order to provide a cost-effective yet high-quality service when caring for patients.[1] More economically developed countries such as the UK have an ever increasing life expectancy and therefore a growing elderly population. In the last 40 years, the number of individuals aged 65 years and older has increased by 47%, and those aged 75 years and older has increased by 89%, with this trend set to continue.[2] This has resulted in an increasing incidence of age-related diseases and a greater demand on social care and mental health services, with predictions that spending on older adult care will double in the next 15 years.[3] It is clear that the two contradictory situations cannot continue together, and this was the basis of our task.

During an Innovation Conference held at Imperial College London, a Design Workshop was held, focused on finding ways to reduce the current strain on the NHS while improving the quality of healthcare for individuals. A team of three medical and two mechanical engineering undergraduate students, chosen at random and supervised by a member of staff from the Department of Bioengineering, created a plan to improve the quality of life of older adults. Our aim was to create a sustainable and innovative method, which would meet the needs of the older adult population, help improve their lifestyle and health, and hence reduce some of the burden on healthcare services.

The team began by identifying key issues related to ageing, to focus our approach to the brief. Through brainstorming, the team determined seven different problems to be some of the most common issues that older adults face. These were falls, depression, memory loss, reduced fitness, impaired mobility, poor nutrition and cold weather.[3–5] After further discussion, these issues, initially identified as 'different', seemed to suggest common themes, and that focusing on these themes would in time have a knock-on effect on multiple issues. For example, the group believed that depression and further ill-health might be exacerbated by an isolated and solitary lifestyle, with reported incidence of individuals going months at a time without speaking to anyone—an unacceptable experience endured by a significant proportion of older adults.[6] It was suggested that one of the main reasons behind this isolation was from a reduced capability for mobility, both spatially and digitally, to where they could communicate with other people. Factors for this included costs of travelling, limited technological knowledge and loss of motivation.[7] Therefore, a strong social support network would be beneficial to the well-being of older adults, as bringing together these individuals would be a major step in helping to tackle several of these identified issues.[8]

We propose to create a system by which individuals can come together to learn new skills, socialise and interact with others in order to address the challenges posed by the key issues highlighted above. Lessons in technology could be one of the services provided, minimising the feeling of being
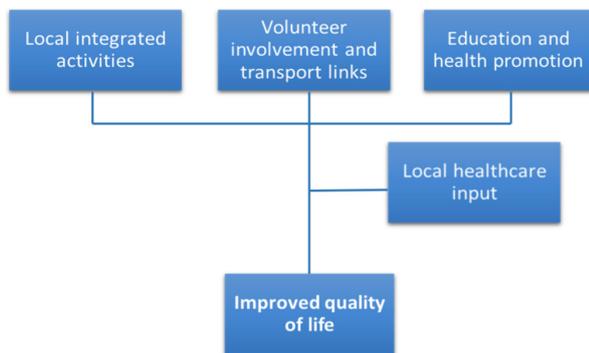
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Figure 1 Simplified outline of the proposal for The Social Network.

left behind experienced by some due to the fast paced advances of this technological age. The provision of exercise sessions and healthy cooking tutorials would be an enjoyable way to promote good health while socialising. Implementation of a healthcare drop-in centre could reduce the pressure on general practitioners and secondary healthcare facilities by assisting in the basic health needs of the community. Encouraging older individuals to take on an active role by teaching lessons, organising bake sales and carrying out other activities of interest could also encourage their continued well-being and improve their quality of life. This initiative would use existing structures and services such as churches, pubs and community shuttle buses among others to reduce running costs. The recruitment of volunteers and volunteer organisations such as University of the Third Age (U3A), which already provide some of these services, could also help to minimise cost, and access to their expertise could help to ensure the initiative is set up and run effectively, maximising its benefit to the older adult population.

The concept of classes and workshops should be extended beyond just that pertaining to the use of technology. It can include health promotion, focusing on conditions where older adults are at a high risk, such as breast self-examination for women, osteoporosis awareness and prevention exercises. With input from the proposed local drop-in healthcare centre, the uptake of influenza vaccinations can be increased to help tackle the annual surge of hospital admissions during the winter season. While actively trying to address the major issues of depression (as a consequence of social isolation), nutrition and exercise,[9] it is also important to engage with older adults to better understand issues of importance to them individually. Aside from bridging the gap between family and friends, hence reducing social isolation,[7] the use of information technology can pave the way for the positive use of eHealth,[10] an emerging concept in itself, which could reduce costs and improve access to healthcare.

This concept provides a fresh and innovative solution to many of the problems surrounding an ageing

population. While there are currently charities providing some facilities for those above 65 years of age, this initiative would be the first of its kind to integrate already existing programmes within the community (including local government and primary healthcare services) to provide a more holistic approach to community-based care for older adults (figure 1). For example, integration with The Scout Association, which has long provided support to older generations through voluntary work, allows a more flexible approach in which new skills can be learnt in a proactive manner, new acquaintances can be made and a social support network can be strengthened. This integration with pre-existing charitable organisations, together with the peripheral role of primary healthcare involvement in one place (figure 1), makes this initiative unique and increases viability.

The exploration of the role of the arts in achieving this system could also be advantageous to our ageing population. Aside from being activities of interest, the arts are known to be beneficial in maintaining both physical and mental health.[11] This channelling of the arts is usually done with the aid of professionals known as art therapists. Art therapy is defined as the use of art and other visual media in a therapeutic and treatment setting, hence art therapists are registered healthcare professionals that specialise in dealing with emotional, behavioural or mental health problems, as well as various disabilities and illness.[12] These professionals do so through the use of art, music, dance-movement and drama therapy among other methods. Music therapy has been seen to aid individuals in decreasing their anxiety, achieving emotional balance[11] and aiding in the treatment of depression,[13] which aligns with goals to improve mental health in the community. One study highlighted the cognitive and psychological benefits of theatre training in elderly adults, with improvements in recall, problem solving and self-esteem observed.[14] Another study showed a reduction in the number of doctor visits, falls and pharmacy use in older adults participating in a choir.[15] Therefore, activities such as these can be designed to encourage participants to interact and create a self-sustained environment, which could then counter social isolation and its effect.

When thinking of healthcare, it is easy to focus mainly on physical factors and outcomes. Taking into account the WHO definition of health ('a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'),[16] it becomes apparent that we as a society often neglect the importance of fulfilling one's emotional needs, an area mental and social well-being covers too. Although true for people in all stages of life, it is even more vital for older adults to retain the feeling of safety and ensure the maintenance of a meaningful life.[17] Although the concept of older adult-focused communities is not new, they often lack emphasis on fulfilling social needs, as well as physical and safety needs.[18]

One of the main benefits of using such a system is the potential to reduce the financial dependence on the NHS[19] and the potential to become primarily self-sustaining in the long term. However, to begin with, an initial input would be needed in order to create social networks and facilitate the supply of resources such as buildings and transport services and so on. The team decided that the next best course of action to follow for this would be to approach charities who would be able to potentially make financial contribution towards the scheme and may also be interested in collaboration, with classes and meetings being run by volunteers and charity workers. To this end, charities such as Help the Aged, Age Concern and U3A among others would be ideal, as their key aspirations and valuable expertise are already aiding older adults. This would give a good framework to develop on and it would allow the scheme to progress and expand across the UK.

The Social Network would combine the effectiveness of schemes such as befriending, group activities, charity involvement, primary healthcare services and the recruitment of volunteers,[20 21] bringing it all under one roof (figure 1). This could increase the quality of life, reduce disease burden and streamline the process of ensuring social isolation for our older adults soon becomes a thing of the past.

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