Chapter 5
Preventing Alzheimer's Wandering:
The Potential of Involving Communities

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ABSTRACT

With increased life expectancy, the incidence of age-related cognitive impairments, faced by the elderly and older generations, is growing. Among the population with cognitive impairments, those that suffer from Alzheimer's disease are the most common. The Alzheimer's disease is a chronic degenerative brain disorder that is characterised by a failure of memory and, in some instances, by disorders in language, perception and planning. As a consequence of the progressive damages imposed by the illness, patients will increasingly seek and need assistance. This paper presents a tool to aid the development and managing of caregiving communities, comprising immediate family members, relatives, neighbours and healthcare professionals, to assist patients with Alzheimer's disease. Such communities could have a strong impact on the quality of care provided to the patients. At the same time, it is hoped that involving communities will significantly improve the quality of life of Alzheimer's patients and their families while reducing the costs related to the care provided.

INTRODUCTION

Nowadays, concerns over the safety and well-being of the elderly are becoming overwhelming. Currently, in developed countries with a growing population of the elderly, the question of how to take good care of those who are aging has started to arise as the son-and-daughter generation for these love ones appears to lack the time needed to provide the needed assistance for their parents. In this context, and to reinforce this growing trend, Dara-Abrams (2008) refers to the field of Gerontechnology, developed in the late 1980s, as a field aiming to aid the elderly by combining gerontology with new technologies. As stated in Fozard (2005), many such technologies are emerging in several domains, including health and self-esteem, housing and daily living, mobility and transport, communication and governance, work and leisure.

As the need to help the elderly increases, an awareness of how they can be helped become something needing our attention. Accordingly, Graafmans and Taipale (1998) defined the Gerontechnology's Five Ways, which are essentially the five key approaches to assist the elderly in their daily lives, namely the way of prevention, enhancement, compensation, care, and research. For each of these Five Ways, Dara-Abrams defined some tasks and associated applications. For instance, for prevention, she defines tasks such as monitor, intervene or teach health habits. As for associated applications, she mentions falls prevention, nutrition or strengthening training. Here, our emphasis is on prevention of the adverse effects of the Alzheimer's disease on those who tend to suffer from it, namely, on tracking of the elderly as well as the use of caregiving communities to generate a collaborative help.

With the constantly growing elderly population in modern societies, it is not surprising that a large group of the elderly will have or be affected with some kind of dementia. Of all dementia diseases, the Alzheimer Disease (AD) is the most common (Alzheimer's Association, 2012), which explains the focus of our study falling upon those elderly people plagued by this disease. The same association states that AD *is caused by various diseases and conditions that result in damaged brain cells or connections between brain cells*. They also point out ten key aspects that are symptoms and signs of AD: memory loss that disrupts daily life; challenges in planning or solving problems; difficulty completing familiar tasks at home, at work or at leisure; confusion with time or place; trouble understanding visual images and spatial relationships; new problems with words in speaking and/or writing; misplacing things and losing the ability to retrace steps; decreased or poor judgment; withdrawal from work or social activities; and finally, changes in mood and personality. Some of these aspects are particularly important because of the potential dangerous consequences they may have such as getting injured or even killed.

As stated by Michael and McNamee (2006), dementia becomes a very serious issue when an Alzheimer´s patient (AP) starts to "wander". Considering the prevalence (ie., existing cases) and incidence (ie., appearance of new cases) of AD, The consequences of the AD are becoming more significant. According to the Alzheimer's Association (2012) 5.4 million Americans of all ages are estimated to have AD in 2012. Amongst the people aged 65 or older, one in eight will have AD. In fact, the incidence is increasing dramatically with age, starting with 53 new cases per 1,000 people aged 65 to 74 and going up to 231 new cases per 1,000 people over age 85. Showing the growing impact of this disease and the urge to ease its consequences is the fact that currently one American will develop AD every 68 seconds, and by the mid-century, the 68 seconds will be reduced to only 33 seconds.

A detriment issue relating to AD has to do with the costs of the care provided. The Alzheimer Association, in its 2012 report (Alzheimer's Association, 2012) states that over 15 million Americans provide unpaid care for a person with Alzheimer's or other dementia and that care can be provided not

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