Chapter 16
Technology Acceptance and Care Self-Management:
Consideration in Context of Chronic Care Management

Patcharin Wannatawee
University of Reading, UK

Muna Alhammad
University of Reading, UK

Stephen R. Gulliver
University of Reading, UK

ABSTRACT

With an aging global population, the number of people living with a chronic illness is expected to increase significantly by 2050. If left unmanaged, chronic care leads to serious health complications, resulting in poor patient quality of life and a costly time bomb for care providers. If effectively managed, patients with chronic care tend to live a richer and more healthy life, resulting in a less costly total care solution. This chapter considers literature from the areas of technology acceptance and care self-management, which aims to alleviate symptoms and/or reason for non-acceptance of care, and thus minimise the risk of long-term complications, which in turn reduces the chance of spiralling health expenditure. By bringing together these areas, the chapter highlights areas where self-management is failing so that changes can be made in care in advance of health deterioration.

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1. INTRODUCTION

In the UK, the number of people aged over 65 increased from 8.4 million people in 1981 to 10.2 million people in 2011. There is, therefore, a growing need for appropriate care provision for those with chronic illness; a problem compounded for local authorities by a limited amount of resources (Bathurst, 2011). Since people are now living longer, population numbers are increasing. The population reference bureau (2012) estimates that world population would rise from 7,058 million (currently) to 8,082 million and 9,624 million by 2025 and 2050 respectively (PRB, 2012). However current healthcare systems around the work are primarily designed in order to serve a mainly healthy population, and not the increasing percentage of chronically ill often associated with an increasing obsese, terminally unwell and/or aging population. A chronic disease is a condition that is not cureable, with symptoms relapsing due to the cause relating to functions of bodily organs being permanently impacted (Evashwick, 2005). This long-term illness affects both the patient, their families, yet also potentially the national economy and society; since such health problems can lead to significant complications if not managed well. Patients with chronic disease are particular impacted by fragile physical, mental health and spiritual well being (Branch et al., 2005).

One of the major chronic illnesses, in most developed countries, is diabetes. Diabetes, which is also becoming epidemic in many undeveloped and developing countries, is a metabolic disorder where the patient has higher than normal blood sugar levels. Diabetes can, however if unmanaged, bring many complications that can cause disability, which subsequent results in high cost care. In 2011 the number of people with diabetes was estimated at about 4.45 per cent of the current UK population, making the number of known cases equal to 2.9 million persons (NHS, 2011). It is now estimated, however in reality, that more than 1 in 20 people in the UK has diabetes (i.e. 5%+ diagnosed or undiagnosed). The UK diabetes organisation (2012) reports that the population of people living with diabetes is estimated to rise to five million people in the UK by 2025. This rise equates to an increase of 400 people every day, i.e. over 17 people every hour - three people every ten minutes. Since these people will live (on average) longer, this is causing significant pressure on resource allocation. The NHS (cited in Diabetes in UK, 2012) estimates that approximately £10 billion is spent on direct diabetes care each year, i.e. equal to 10 per cent of the NHS budget. The total cost (direct care and indirect costs) associated with diabetes in the UK currently stand at £23.7 billion and is predicted to rise to £39.8 billion by 2035. One in ten people admitted to hospital has diabetes, and more than 37.7 million prescription items were dispensed in primary care units across England (at a net cost of £713 million).

Because of the high cost of health care, morbidity and mortality rates, prevention and healthy living promotion, it is vital to manage the issue of chronic illness care. Disease prevention is linked to behaviour and health promotion has been articulated for centuries. Hippocrates himself (C. 460-377 B.C) stated that "If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way towards positive health" (Curry and Fitzgibbon, 2009). Therefore, prevention though risk behaviour modification and management is needed, and an individual-to-public commitment is required in order to make the changes possible. Furthermore, optimal health outcomes through risk-behavioural modification can be achieved strategically for large populations of individuals. High-risk population groups can be identified at pre-disease stage (i.e. prediabetes or prehypertension stages; Curry & Fitzgibbon, 2009), or during the diagnostic processes (e.g. for obesity, hyperlipidemia, hypercholesterolemia, or type 2 diabetes) and appropriate behaviour management can be taken via use of appropriate technology engagement.