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SELF-MANAGEMENT EDUCATION: A SELF-CARE INTERVENTION IN HEALTHCARE QUALITY IMPROVEMENT

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ABSTRACT

Chronic diseases have become a primary concern for healthcare systems worldwide. Resources are increasingly being diverted to the care of chronic conditions, with little effect on reducing the burden on both health systems and patients' quality of life. Approaching chronic disease care purely from the medical perspective and within the traditional healthcare system, originally designed to address acute illnesses, has not been effective. Self-management education represents a new paradigm of care for chronic diseases. It complements both clinical care and traditional patient education, in supporting patients to achieve the best possible quality of life with their chronic conditions. It is a key component of Wagner's Chronic Care Model (CCM). Self-efficacy, which refers to an individual's belief in his or her capacity to perform a particular behavior, has been considered an essential part of the strategic concept of self-management education. The three main models that promote self-management in chronic disease care are: the Stanford Model, the Expert Patient Program, and the Flinders Model. Promotion of self-management through education fits appropriately into the overall healthcare quality picture. This is demonstrated by: 1) its global recognition as an important component of the management of chronic conditions, and 2) evidence across studies that it has positive effect on physical and emotional outcomes, and related quality of life. For the future, it is important for self-management education interventions to be fully integrated into primary and secondary healthcare systems, to make education reachable to every chronic disease patient.

INTRODUCTION

Self-care, the care taken by individuals towards their own health and well-being, is a major goal of policy and service development across national and organizational settings[1,2]. A range of interventions have been developed and implemented to improve patients' self-care. They include: self-management education, self-monitoring and self-treatment, self-help groups and peer support, patient access to personal medical information, and patient-centered telecare[3]. This review focuses

on self-management education - the most common and well known self-care intervention in healthcare quality improvement. In short, the paper describes what self-management education means, why it matters, theoretical models underpinning it, and how it fits into the overall healthcare quality picture.

WHAT IS SELF-MANAGEMENT EDUCATION?

Self-management education (SME) is defined as a systematic intervention that involves active patient participation in self-monitoring (physical processes) and/or decision making (managing)[4]. It recognizes that patient-provider collaboration, as well as problem-solving skills enablement is key to an individual's ability for sustained self-care[5]. The education involves a variety of psychological and behavioral interventions; and a combination of didactic, interactive and collaborative teaching methods tailored to a patient's specific needs. Education sessions range from brief instructions, by lay leaders, physicians, dieticians or nurses, to more formal and comprehensive programs[6].

Educational programs for self-management exist for many chronic conditions, including diabetes, hypertension, asthma and arthritis. The core outcome measures for the evaluation of self-management interventions range from clinical to behavioral outcomes. The following outcomes have been consistently measured in studies of SME interventions: disease status (e.g. blood glucose control for diabetes)[7], severity and pain control[8], quality of life, self-efficacy and self-management behaviors (e.g. diet, exercise, self-monitoring)[9], functional status and disability, medication use and adherence, psychological well-being (e.g. depression/anxiety)[10], coping skills, health service utilization and cost, and patient satisfaction[11].

Self-management is often considered an aspect of patient education. However, the two activities can be distinguished from one another. Patient education focuses on delivering knowledge and skills to patients to enable them follow medical advice. SME, on the other hand, is concerned with empowering patients to take active control of their illness and apply problem-solving skills to meet new challenges[12]. Also, whereas SME involves a variety of teaching methods, patient education is delivered only through conventional, didactic approaches[3]. Hence, in designing SME interventions, these conceptual and methodological differences are worth noting.

SELF-MANAGEMENT EDUCATION: WHAT IS THE RATIONALE?

Chronic diseases have become a primary concern for healthcare systems worldwide. The World Health Organization (WHO) states that 24 million people per year (about 50% of all deaths worldwide) die as a result of chronic conditions[13]. In 2006 alone, chronic diseases such as heart disease, diabetes and chronic obstructive pulmonary disease were responsible for 35 million deaths worldwide[14]. Projections are that chronic conditions will account for 60% and 70% of the global disease burden by 2020 and 2035 respectively[14,15]. Chronically ill patients are frequent and long term users of health services. The evidence suggests that about two-thirds of encounters with health professionals are for the management of chronic conditions[16]. Resources are increasingly being diverted to the care of chronic diseases, with little effect on reducing the burden on both health systems and patients' quality of life[17].

This growing burden of chronic illnesses highlights the limitations of approaching chronic disease care purely from the medical perspective and within the traditional healthcare system originally designed to address acute illnesses[3]. A new care paradigm is thus necessary - one that involves both high quality clinical care and effective self-management - enabling many people to prevent or change the progression of their condition[18]. SME encourages a reciprocal relationship between patients and care providers, where self-management skills can be built and used both at home and in routine healthcare system interactions. It complements both clinical care and traditional patient education, in supporting patients to achieve the best possible quality of life with their chronic conditions[19].

According to Corbin and Strauss, chronically ill patients face three sets of tasks: 1) medical management of their conditions (e.g. taking medication, changing diet, and self-monitoring of blood sugar); 2) carrying out normal roles and activities; and 3) managing the emotional impacts of their illness[20]. Applying Corbin and Strauss' framework, programs to manage chronic diseases need to include contents that address all three tasks. Although most patient education and health promotion programs deal with the medical and behavioral management, most do not systematically deal with all three sets of activities[9]. Thus, SME is vital in chronic disease care[12]. It enables patients acquire a wide range of self-management skills such as: problem solving; decision making; relaxation and fatigue symptom management; anger, fear and frustration management; cognitive and communication skills; and partnership working with care providers[21,22].

WHAT ARE THE MAIN THEORETICAL CONCEPTS AND MODELS UNDERPINNING SELF-MANAGEMENT EDUCATION?

Self-management skill development and support is a key component of Wagner's Chronic Care Model (CCM), one of the most influential models of chronic disease management. The model emphasizes the need to train and support patients to become active agents in their own health. According to Wagner, chronic disease is better managed by productive interactions between patients and their clinical health teams, within settings that utilize reliable, evidence-based approaches to self-management[23]. Within the CCM, six key elements for better chronic disease management are identified: 1) delivery system design, 2) decision support, 3) clinical information systems, 4) community resources and policies, 5) healthcare organizations, and 6) self-management[24].

Many theoretical models have been developed from the field of psychology and behavioral science to promote self-management in chronic disease care. The three main ones are: the Stanford Model, the Expert Patient Program, and the Flinders Model. Developed by Stanford University in the United States of America, the Stanford Model postulates that improvements in patient's self-efficacy about chronic diseases will lead to better health outcomes and lower health service utilization[25]. The model is based on the premise that chronic patients have similar concerns, are capable of managing aspects of their conditions, and will have better outcomes with specific skills and training[11]. The program, which is applicable to many chronic diseases, is a standardized 6-week group education, and uses peer educators as instructors[25]. The Expert Patient Program, developed in the United Kingdom, seeks to promote the knowledge, skills and confidence needed by patients to manage

their chronic conditions through training and support from professionals, such as nurses[26]. The Flinders Model promotes the role of care providers in building self-efficacy skills with patients, and actively engaging patients in using these skills during provider-patient interactions. It is a one-on-one model based on cognitive behavioral therapy (CBT) principles[27].

To some extent, the models differ in the ways skills are developed and supported. However, at the heart of each model lies Bandura's self-efficacy theory. Self-efficacy refers to an individual's belief in his or her ability to successfully learn and perform a specific behavior[28]. The theory suggests that patients are empowered and motivated to manage their conditions when they feel confident in their capacity to attain this goal. Self-efficacy is enhanced through skills mastery, modelling, re-interpretation and social persuasion[21].

HOW DOES SELF-MANAGEMENT EDUCATION FIT INTO THE OVERALL HEALTHCARE QUALITY PICTURE?

Self-management is now a common term associated with many health promotion and patient education programs. Promotion of self-management through education has been classified as one of the quality improvement strategies targeted at patients, alongside reminder systems[29]. But beyond this conceptual classification, is there any evidence to demonstrate that SME indeed fits into the overall healthcare quality picture? This question can be addressed from two viewpoints: 1) the recognition of SME as a key domain of the quality of chronic disease care; and 2) the link between SME interventions and health outcomes.

Self-management education as a domain of the quality of chronic disease care

Globally, SME is recognized as an important component of the management of chronic conditions. Policy makers frame it as a key element in the shift towards user-focused and patient empowerment. For instance, enhancing self-management is one of the core components of delivering patient-centered care in the UK[3]. The US Medicare Modernization Act has established a disease management model called the Chronic Care Improvement Program. A key aim of the program is to encourage and support patients in self-management activities. Enrolled patients receive individualized care management plan that includes SME and the use of health technologies for health monitoring[3]. In Canada, many national health strategies, including healthy aging and Canadian Diabetes strategy, emphasize the role of SME in chronic disease care[30]. In Australia, SME has been identified as one of the four key action areas along with prevention across the continuum, strengthening early detection and early treatment, and integration and continuity of prevention and care[31]. Beyond national policy frameworks, SME is central to many national and international health organizations and associations. The American Diabetes Association, as well as the National Institute for Health Care Excellence (NICE) in the UK, recommends that SME should be offered from the point of diagnosis[32,33]. The World Health Organization also recognizes SME as essential for optimizing the care of chronic disease and helping patients to manage their lives as effectively as possible[34].

The link between self-management education and health outcomes

The philosophical assumptions underpinning SME interventions are that they will improve well-being and clinical outcomes, strengthen self-determination and participation in healthcare, and reduce healthcare utilization and healthcare costs[12]. There is strong evidence across studies that SME programs have positive effects on physical and emotional outcomes, and related quality of life[25]. The programs consistently result in greater energy and reduced fatigue[11], fewer role limitations[25], better psychological well-being[35], enhanced partnerships with physicians[9], improved health status[10], greater self-efficacy, and reductions in pain and symptoms[36]. A recent study by Namarata and colleagues has confirmed these earlier findings. The authors conducted a quasi-experimental pre-post study to evaluate the effectiveness of a SME program in Singapore. Participants reported less pain ($p=0.03$) and shortness of breath ($p=0.02$), as well as general improvements in self-reported health ($p=0.02$) and quality of life ($p=0.01$)[37].

There is also evidence that SME programs reduce healthcare utilization. For instance, a randomized community based outcome trial by Lorig, Ritter and Gonzalez[38] revealed that patients who participated in the SME program had fewer emergency room visits. A meta-analysis of generic programs[11] showed a significant reduction in the number of hospitalization days. Finally, a review of professionally-led SME programs for patients with chronic obstructive pulmonary disease found that the programs were associated with a reduction in the rate of hospital admissions[39]. Even though some authors[40] assert that the effects of SME interventions on health services use are moderate, available evidence shows that these effects often result in more appropriate utilization of healthcare resources[31].

CONCLUSION

SME is a vehicle for helping patients enhance their self-care abilities in the management of chronic conditions. In brief, it helps patients to learn strategies and develop key skills and confidence to: cope with symptoms, manage fatigue, handle stress, reduce depression, manage medications, adopt healthy eating lifestyle, communicate well with care providers, remain active, and visit health facilities less frequently, which subsequently results in a reduction in healthcare expenditure.

As healthcare systems are reorienting the focus of care from illness treatment to promoting health and improving the management of chronic diseases, SME is likely to receive even greater attention in the future. It is thus helpful for organizations and policy makers to do more in the expansion of access to this critically important health service. Presently, SME is limited to few chronic disease patients. Research suggests that less than half of patients with chronic diseases receive SME[41]. One main reason for the low coverage is that most of the interventions are organized separately from healthcare systems; usually by voluntary organizations[42], which sometimes neglect the marginalized sectors (people with limited education and low economic resources) of the community.

In the future, it is important for SME interventions to be integrated into primary and secondary healthcare systems, to make education reachable to every chronic disease patient. Integration, in this sense, does not suggest that classes should be restricted to only healthcare settings (i.e.

hospitals, clinics, health centers, etc.). Integration more broadly implies the incorporation of SME into the care pathway for chronic disease patients. Programs could also be organized in community and non-medical settings such as: churches, mosques, community centers and libraries. In this way, healthcare professionals could be more and better involved to play diverse roles, including serving as conduits for patients with chronic conditions to enter self-management programs, guiding patients through the process, and reinforcing what is learned during clinical encounters.

Earlier attempts at integrating SME programs into national health systems have had limited success[43], and this has been due primarily to the lack of engagement of healthcare professionals and unavailability of appropriately trained personnel to handle self-management courses[31]. Barriers to engaging healthcare professionals include uncertainty of the benefits of SME programs and limited local evidence on the impact of such programs on patients' self-care abilities[31]. Thus, for self-management programs to be successfully integrated and sustained in the healthcare sector, two suggestions are proposed: 1) provision of effective training to ensure sufficient numbers of people with the capacity to handle self-management classes, and 2) convincing professionals and patients of the effectiveness of SME interventions in the management of chronic diseases. More research is needed to explore successful ways of integrating SME programs into routine clinical care for chronic disease patients. This area has received less attention in the literature.

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