LITERATURE REVIEW ON
CHRONIC DISEASE SELF-MANAGEMENT

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Table of Contents

Executive Summary .......................... 1

Introduction .................................. 4

Background .................................... 4
  Chronic care model ......................... 5
  Self-management ............................ 5

Methodology .................................. 6
  Search strategy ............................ 6
  Article selection and abstraction ........ 7

Results ....................................... 7
  Impact of Self-management strategies .... 8
  Successful self-management interventions 9
  Limitations of self-management .......... 10

Discussion ................................... 10

Appendix A .................................... 13
  Definition of self-management related concepts, care models and list of internet resources 13
  I. Definitions ............................... 13
     Self-efficacy: ........................... 13
     Information on self-efficacy: .......... 13
     Self-management: ....................... 13
     Information on self-management: ..... 13
     Peer support: ............................ 14
     Information on peer support: .......... 14
  II. Chronic Care and Self-Management Models 14
     The Chronic Care Model: .............. 14
     Information on the Chronic Care Model: 15
     Flinders Model: ......................... 15
     Information on the Flinders Model: ... 16
     Stanford Model: ......................... 16
     Information on the Stanford Model: .... 16
     Expert Patient Programme: ............ 16
     Information on the Expert Patient Programme: 16

Appendix B .................................... 17
  Table #1. Description of Types of Self-Management Interventions and Strategies 17

Appendix C .................................... 19
  Table #2. List of Attributes of Effective Self-Management Interventions and System Support 19
Literature Review on Chronic Disease Self-Management

Executive Summary

The burden of chronic disease in Canada grows yearly. In the Champlain LHIN region, three out of four people have at least one chronic condition. Health care resources are increasingly being diverted to chronic disease care, without reducing the burden on the patient or the health care system. Therefore, chronic disease management needs to be improved. This report synthesizes the highest quality evidence on self-management, a key way to improve chronic disease care.

The three main models of chronic disease self-management are the Stanford Model, The Expert Patient Programme and the Flinders Model. The Stanford Model uses peer educators to build self-efficacy, a concept that can benefit all people with chronic diseases. The model holds that people with chronic disease have similar concerns and, with specific skills and training, can effectively manage aspects of their own conditions. The Expert Patient Programme promotes patient knowledge by teaching the skills necessary for people to effectively manage their own chronic conditions, with support from physician team members. Finally, the Flinders Model emphasizes the role that physicians have in building patient self-efficacy and can do so by actively engaging patients using the principles of cognitive behavioural therapy (CBT) during patient-physician interactions. The focal point of each approach is an empowered patient with the skills and confidence necessary to manage aspects of their chronic diseases, in participation with their health care provider.

Self-management interventions have been studied around the world, with frequent focus on individuals with one chronic disease, rather than multiple. The actual self-
management strategies implemented vary significantly but include components such as patient educational support group meetings, the distribution of printed or electronic educational materials, motivational counseling, nurse home visits, case management, individualized care/action/cop ing plans, and periodic follow-up calls to patients to further education contents.

Due to the wide variation in self-management programme implementation, it is difficult to directly compare programme effects and existing systematic reviews on self-management have been unable to conclude which, if any, interventions consistently lead to improved clinical outcomes. However, traits and patterns of successful interventions do emerge from the literature. The attributes of specific interventions, rather than the model upon which they were based, was an important determinant of success. The most effective interventions included patient education sessions and motivational counselling, with group education sessions being most effective if offered in a community gathering place. Having proper education for trainers was important, while personal background of the trainer was not. Successful interventions addressed patient motivation in a multi-pronged fashion, such as offering training for providers to coach and support patient empowerment, in addition to providing group empowerment sessions for patients. Some effective self-management strategies related to diet and lifestyle were short term, repetitive and focused on specific behaviours.

Successful self-management interventions were most often linked with changes in delivery system design, such as adopting team-based care or using practice nurses for follow-up contacts. However, a number of studies identified barriers to incorporating a multifaceted chronic disease management programme. For providers with busy practices,
finding the time and funding to plan and organise system changes was difficult and a common reason that primary care practices could not adopt new models of care or were reluctant to do so. Frequently cited barriers for patients participating in self-management training programmes were timing and location of programmes, as well as poor integration with routine clinical care.

In seeking to reform chronic disease management in the Champlain LHIN, we can learn from these barriers and choose interventions that show success for a wide range of diseases. Health care teams, patients and community groups can select the programmes most suited to their needs and available resources, while being mindful that developing flexible and generic self-management training and support programmes may increase the number of eligible candidates and expand integration into routine primary care, where many chronic conditions are frequently managed at the same time.

This review has focused on self-management and self-management support. While many questions remain about self-management approaches and interventions, the underlying trend supported improved patient health outcomes, meaning a self-management approach remains promising. Regardless, all self-management initiatives, and the efforts to support self-management, must be evaluated in order to develop effective programmes and institute delivery system changes that support self-management. As well, self-management is only one element of improved chronic disease care and achieving better chronic disease management in primary care requires more than self-management. Nonetheless, it is an important start.
Introduction

Chronic diseases such as diabetes, heart disease and chronic obstructive pulmonary disease claimed the lives of 35 million people worldwide in 2006 alone (1;2). The burden of chronic disease in Canada grows yearly. In the Champlain LHIN region¹, 73% of people over the age of 12 already have at least one chronic disease and 89% of people engage in one or more activity that places them at risk of developing a chronic disease (3).

Health care resources are increasingly being diverted to the care of chronic disease, with minimal effect on diminishing the burden on the health care system and on patient’s quality of life. Therefore, the management of chronic disease must be improved. A new approach to managing chronic disease is needed; one that deals with chronic diseases in a proactive manner, within a primary health care setting (4).

Many innovative approaches to chronic disease management have already been implemented in other parts of Canada and the rest of the world. This report will serve as a resource and tool for individuals and groups seeking to improve the care for patients living with chronic diseases in the Champlain LHIN by synthesizing the highest quality evidence on a key aspect of improving chronic disease care: self-management. Increasing the understanding of and support for self-management practices in the Champlain LHIN will have positive health outcomes for individuals suffering with chronic conditions and make vast improvements within the health system as a whole.

Background

Chronic diseases are conditions that develop slowly and get worse over time (3). With the help of modern medicine, the progression of chronic diseases can often be slowed but few people can be cured. Many factors contribute to the development and evolution of a chronic disease. For example, lifestyle choices (5) such as smoking, drinking, excessive amounts of alcohol, poor diet, lack of exercise, and many other factors put people at risk of developing a chronic disease, having a lower quality of life and/or dying prematurely. Thus, many people can prevent or change the progression of their disease, and associated symptoms, with proper education and support.

¹ The Champlain region is home to 1 188 800 people. The population is highly concentrated in Ottawa, Ontario but extends to Deux Rivières in the northwest, the Iroquois in the south and to Algonquin Park in the east, including Cornwall, Clarence-Rockland, and Pembroke/Petawawa (Government of Ontario, “Chronic Conditions in the Champlain LHIN: Health System Intelligence Project October 2007.”).
Chronic Care Model

Self-management skill development and support is a key component of the Ontario Chronic Disease Prevention & Management (CDPM) Framework, which the Champlain LHIN has adopted in order to advance CDPM in the region. Ontario’s Extended Chronic Care Model for Chronic Disease Prevention and Management is based on the Wagner’s Chronic Care Model (CCM), one of the most influential models of chronic disease management. This model recognizes that, with proper training and support, many people can change the progression of disease by becoming active agents in their own health. According to Wagner, chronic disease is best managed by productive interactions between a patient and his or her clinical health team, within a setting that utilizes a reliable, evidence-based approach to self-management. Wagner identifies six key elements to allow for better chronic disease management: (6) Delivery System Design emphasizes the importance of how primary health care is organised; Decision Support promotes clinician to clinician support; Clinical Information Systems calls for the development of innovative ways to store and access patient information; Community Resources and Policies build patient and clinician awareness about existing self-management programmes within the community; Health Care Organization, affirms the need for a fundamental redesign of the health care system from that of a reactive system to a proactive system of chronic disease management; and Self-Management, which is the focus of this review (6).

Self-management

Self-management refers to an individual’s ability to manage the symptoms, treatment, physical, psychosocial, and lifestyle changes inherent in living with a chronic condition. Self-management programmes seek to empower individuals to cope with disease and live better quality lives with fewer restrictions from their illness by developing self-efficacy, which is the level of confidence that an individual has in his or her ability to succeed in dealing with their own chronic disease. It is important to note the distinction between initiatives to build patient self-management and self-management support. Self-management support requires a provider or health care team to perform a certain set of tasks to create the self-efficacy necessary for a patient to deal confidently with their own range of emotional, physical, and physiological symptoms of their chronic disease (7). Self-management does not replace a health care team, but rather, encourages a reciprocal relationship between patient and physician, where self-management skills can be built and used at home, as well as in routine health care system interactions.

Self-management support differs from traditional approaches to disease management, or case-management, which are often based on didactic, educational programmes or provider-driven interventions focused on specific conditions. Self-management support centres on the individual, and their family supports, by using collaborative goal setting and a variety of self-efficacy strategies that can include effective problem solving, monitoring their own condition, relapse prevention plans, patient education, group supports (often peer-led) and shared decision making.

2 See Appendix A, Definitions, for a full explanation of the CCM.
There are three main models of promoting self-management in chronic disease care; Stanford Model, The Expert Patient Programme and the Flinders Model. The Stanford Model of self-management is based on self-efficacy theory and reasons that improvements in patient’s self-efficacy about chronic diseases will lead to better health outcomes and lower health system utilization. It is based on the premise that people with chronic diseases have similar concerns, are capable of taking responsibility for managing aspects of their conditions, and will have better outcomes with specific skills and training. The programme uses peer educators and a standardized 6-week group programme applicable to many chronic diseases (8).

The Expert Patient Programme, (9) developed in the United Kingdom and based on the Stanford Model, seeks to promote patient knowledge, and the skills and confidence necessary to manage their chronic conditions through training and support from members of the practice, such as a team nurse. Finally, the Flinders Model (10) of self-management is complimentary to the Stanford Model and promotes the role of the physician or provider in building self-efficacy skills with the patient and actively engaging the patient in using these skills during patient-physician interactions. It is a one-on-one model based on cognitive behavioural therapy (CBT) principles. It also offers a generic approach to chronic condition self-management that can be applied to a wide range of health conditions.

At the heart of each self-management approach is an empowered patient with the skills and confidence to better manage chronic diseases and interact with the primary health care system. The models differ in the specific ways that skills are developed and supported. Implicit in these models is the premise that patient education is not enough. To truly empower patients, they must be actively and confidently engaged in their own chronic disease management and monitoring. The rest of this report will share the findings from a review of the most recent literature on self-management programmes and explore these in the context of the Champlain LHIN’s population and health system.

**Methodology**

After identifying the existence of a 2006 systematic review specifically on chronic disease management, including patient self-management, (4) our efforts focused on searching scholarly publications for the period 2006 to February 2008 on chronic disease self-management.

**Search strategy**

Medline, CINAHL and EMBASE were searched using combinations and variants of the following MeSH and key word terms: 1. self-management, self-care, self-administration, self-help, self-efficacy, patient education, patient compliance, patient participation, and 2. chronic disease, chronic illness care, chronically ill, chronic condition, long term care,
cancer, diabetes mellitus, heart disease, hypertension, stroke, asthma, chronic obstructive pulmonary disease, arthritis; 3. primary health care, family physician, family health care, community health services; and 4. systematic reviews, meta-analysis, randomized controlled trials (RCT) and qualitative studies. We included hospital settings only if the intervention actively involved primary care providers. We excluded studies published before 2006, not written in English, conducted in settings from non-industrialized countries, testing a device or a drug, focusing on mental health or on patients children and youths (usually younger than 18 years).

**Article selection and abstraction**

Team members read the references and abstract of the publications identified for selection. The main criterion for selection was whether the intervention, or its main component, targeted the patient’s self-management skills (self-management focus). To aid the reviewer, we developed and tested a tool for selecting and ranking the publications (from ‘very low’ to ‘very high’ priority), which also took into account whether the intervention was disease specific or general and the level of detail in the description of the intervention. We extracted information from randomized controlled trial (RCT) articles on the study’s setting, target population, targeted condition(s), design, intervention type/description, outcome measures, results and possible adaptability to the Canadian/Champlain region context.

**Results**

Much research has been done on methods to improve chronic disease care over the past decade. Of the self-management strategies actually implemented, the characteristics vary significantly. Previously, most implementations were based on theoretical models for self-management, such as the Stanford model, Flinders Model or the Expert Patient Programme. More recently, however, implemented programmes frequently blend elements from different models to apply to specific population groups and/or diseases. For example, many include the use of publicly available patient education resources. Most interventions continue to focus on individuals with an existing specific disease, such as diabetes, rather than addressing the common situation of people with multiple chronic conditions.

Self-management interventions have included components such as educational sessions for patients, varying from a single one-hour individual session to biweekly or monthly group sessions over a period of several weeks to months, some of which can be support group meetings. The content of the sessions could also vary widely, including reviewing the patient’s health condition and behaviour, provision of feedback to the patient, identification of barriers to and benefits of behaviour change and setting goals specific to the patient’s needs and preferences (tailored goal-setting). The education content could also be general (applicable to several chronic conditions) or specific to a condition. More

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3 See appendix A for resources affiliated with specific models.
recently, self-management interventions have used internet-based interactive instruction, including bulletin boards and on-line moderators. Other intervention elements used in self-management include the distribution of printed or electronic educational materials, motivational counseling, nurse home visits, case management, individualized care/action/coping plans, and periodic follow-up calls to patients to further educational contents.

At the provider level, self-management support interventions can include demonstrating or engaging a patient in focused problem solving and goal-setting strategies. Providers also benefit from other strategies that indirectly support patients’ self-management, such as audit and feedback, education sessions, reminders and multidisciplinary teamwork.

Impact of Self-management strategies
Of all the elements of the CCM, self-management has been shown to be the most effective at improving outcomes across the wide range of diseases and populations in which it has been studied. Just as the interventions to promote self-management themselves are heterogeneous, the outcomes measured as indicators of success are varied. Indicators of successful self-management and self-management support have included clinical outcomes such as blood pressure, and HbA1c levels, resource utilization such as follow-up visits, hospitalization rates, as well as patient-centered markers such as sense of self-efficacy, quality of life and knowledge of condition.

It is difficult to directly compare the effect of different self-management interventions because of the wide variation in programmes and their objectives or outcomes. Further, self-management interventions were often implemented as part of multifaceted reforms in chronic disease care. Thus, it is a challenge to separate the effect of the self-management intervention from that of other elements of the chronic care model initiated at the same time. Successful self-management interventions studied were most often linked with changes in delivery system design, such as moving to team-based care or using practice nurses for follow up contacts (4). However, the incremental benefit of adding other CCM interventions to a self-management strategy is unclear. A recent review found only a modest improvement in positive outcomes with multifaceted interventions, as opposed to single-strategy interventions to reduce risks to prevent or minimize diabetes complications (11).

Although the original studies on self-management involving the Stanford Model in the United States (12-14) and the early Expert Patient Programmes in the UK (15;16) showed improved self-efficacy, high levels of patient satisfaction, and lower health care utilization, more recent studies around the world have not always replicated these results in a significant manner (17-19). Systematic reviews of interventions for specific diseases have not concluded that any intervention consistently leads to improved clinical

4 See Appendix B for a list of self-management interventions studied.
5 HbA1c levels indicate the average blood glucose or “sugar” level of a period of 4 weeks to 3 months.
outcomes, again largely due to the variation in interventions and outcome measures. There is also limited published research on the Flinders Model beyond small pilot and non-randomized trials making it difficult to draw definitive conclusions on the successes and limitations of this approach.

Several recent high quality RCT studies have shown mixed benefits of self-management strategies in different population groups. For example, a moderate and sustained drop in HbA1c was found by Kulzen et al studying self-management group education for patients with diabetes. In contrast, other recent randomized controlled trials of self-management training for patients with diabetes have not found significant drops in HbA1c (20;21). Thoolen et al found a moderate drop in BMI and systolic blood pressure for patients with diabetes enrolled in a self-management course. Notably, self-management strategies combined with delivery system design changes, such as nurses making scheduled follow up calls, showed repeated decreased hospitalization rates across a number of conditions such as heart failure and COPD (22-24). As well, self-management interventions have been shown to increase patient self-efficacy even in culturally diverse populations (25). However, an RCT in the general patient population with multiple chronic conditions did not show a similar positive association (26).

Self-management strategies have repeatedly shown little or no positive impact on several conditions including osteoarthritis (18;27) and hyperlipidemia and asthma (4;28;29). Further, the use of health resources was sometimes not decreased by improved self-management interventions as improved self-efficacy can result in increased accessing of services or increased medication use (30-32).

**Successful self-management interventions**

Patterns of general traits of successful interventions emerge from the literature. The attributes of the interventions rather than the model upon which they were based was a more important determinant of success. Among the self-management interventions studied the most effective ones included patient education sessions and motivational counselling (4;11;23). Group education sessions often proved more effective than individual teaching (4;33) and group education sessions offered in community gathering places rather than a medical centre showed more positive effect (4). The background of the trainer, medical, allied health, or peer was not significant. However proper training for the educator was important (4;34). Successful interventions addressed motivation to change, such as group empowerment education sessions for patients combined with training of providers to coach and support patient empowerment and motivation (20). Some effective self-management strategies related to diet and lifestyle were short term, repetitive and focused on specific behaviours (4).

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6 See Appendix C for a list of the attributes of successful self-management interventions and supporting system changes.
Limitations of self management

Recruitment rates across many of the studies varied, though participation of fifty percent or less of eligible patients were standard. Inevitably, studies attracted a more highly motivated patient, meaning that many eligible patients did not take advantage of self-management training or support. For some, barriers to participation were noted as timing and location of education sessions, (35) particularly areas that lacked affordable public transportation (36). Linguistic barriers for minority groups were considered an obstacle for GPs referring potential candidates for self-management education courses (36). Despite the challenges of recruiting, once patients chose to participate in these programmes, attendance rates were high.

Self-management training programmes, such as patient education, were often established outside of the traditional primary care delivery system (such as teaching sessions offered in community centres). However, there seemed to be poor integration with routine clinical care. A number of studies identified barriers to providers and practices incorporating a multifaceted chronic disease management programme including self-management support into their daily work. Time, or funding for that time, to plan and organise system changes in busy practices has been cited as limiting the capacity of primary care practices to adopt new models of care (37). Physician reluctance to participate in a new programme that may not be sustainable, or which duplicates ongoing regular care, as well as not having practice nurses trained to deliver self-management education were factors which hindered the integration of self-management and self-management support into routine primary care (36).

Discussion

The growing incidence of chronic disease requires changes in the primary care system to enable patients and their health care teams to support quality of life and minimize risk factors and disability from chronic disease. The literature highlights key characteristics of successful interventions which offer lessons for a regional strategy to promote patient self-management and self-management support for chronic disease care in the Champlain LHIN. We will discuss the range of interventions, individual versus group sessions, single disease versus generic approach and the importance of engaging and integrating the primary care community into a self-management strategy.

In seeking to reform chronic disease management in the Champlain LHIN, we can choose from a number of different intervention types which have been shown successful across a range of diseases and outcomes. Health care teams, patients and community groups may select programmes most suited to their needs and resource availability. A challenge to promoting self-management in our region is to offer skill development and self-management training in ways which maximise participation and are available when patients are ready to engage with them. Using multiple modalities might overcome access barriers, such as timing, location and even language. Traditional health educators, who are part of the health care teams, or peer supporters living and sharing the experience of chronic disease, are more successful than simply providing written information. However, all may serve to reach different patients, at different stages of readiness to
engage in learning self-management skills. It is important to keep a reasonable range of interventions, based on the best evidence available, and integrated with the primary care teams to limit administrative burdens and lack of familiarity from practitioners (38).

While self-management strategies developed as part of research studies have often focused on specific diseases, most patients with chronic diseases have multiple conditions with common underlying risk behaviours. Further, while some self-management skills necessary to manage chronic diseases are condition specific, training and support programmes can be adapted to a wide range of chronic diseases. Developing generic self-management training and support programmes which can be flexible and incorporate condition specific behaviour training and respond to the needs of their patients might expand the eligible candidates and promote integration into routine primary care in which many conditions often need to be managed at once.

In order to develop a successful self-management programme for the region, the practice community must be interested in adopting change and have the time to implement changes in practice. Sharing the evidence on potential benefits and offering education in self-management support is essential in preparing the practice community to implement change. Many health teams are already promoting aspects of self-management and these efforts should be encouraged. As self-management interventions were often not well integrated into routine primary care leading to less support from physicians, a priority must be to foster links and integration in the community between providers and other community groups and resources.

Self-management is based on offering patients training and support when they are ready to accept this. Traditional approaches to behaviour change in primary care have been based on assisting patients to move along stages of change from contemplating making a change to being prepared to act, to actually acting. Primary care providers will still have a key role in assisting patients to embark on the journey of self-management and to support them along the way. However, self-management training resources and support must be available for patients when they are ready and there to support them along the journey. Additionally, to secure buy-in for any chronic disease management reform will require a sustainable plan. Patients and providers must know that changes they make in the way they do things now will serve them for more than a six month study period. Thus, promoting self-management in chronic disease care in our region must be a long term commitment.

As our review shows, there are many self-management approaches and many questions that remain. Therefore, part of a long-term sustainable plan to promote self-management must incorporate ongoing evaluation and improvement. Self-management initiatives, whether community based or practice based, must be evaluated. Practices must have time to review their efforts to support self-management, and develop delivery system changes to facilitate effective implementation. A continuous cycle, such as the Plan, Do, Study, Act cycle from the Chronic Care Model, builds in time to evaluate results and act on
This is essential to ensure resources are well used and the needs of patients and providers are met. Despite the extensive research on self-management interventions, which reveals some common traits of successful interventions, there is clearly no superior approach. Many questions remain concerning the best way to teach self-management skills and abilities, the intensity and duration of interventions, how best to offer practice support to self-management skills, and the long-term benefits of patient self-efficacy and self-management support.

This review has focused on self-management and self-management support. Although the interventions and studies did not always have statistically significant results, the underlying trend still supported improved overall health outcomes for the patient. Therefore, the approach remains promising. However, self-management is only one element of improved chronic disease care. Achieving better chronic disease management in primary care will require more than just efforts to promote and support patient self-management. Nonetheless, it is an important start.

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7 See Appendix A
Appendix A

Definition of self-management related concepts, care models and list of internet resources

I. Definitions

Self-efficacy:
It can be defined as the belief in one's capacity to succeed at tasks. General self-efficacy is belief in one's general capacity to handle tasks. Specific self-efficacy refers to beliefs about one's ability to perform specific tasks (e.g., driving, public speaking, studying, etc.).

Information on self-efficacy:
http://www.des.emory.edu/mfp/BanEncy.html  
http://www.des.emory.edu/mfp/self-efficacy.html  
http://web.fu-berlin.de/gesund/publicat/conner9.htm

Self-management:
Refers to the measures that a patient can take to manage and prevent the symptoms of his or her chronic disease in accordance with the participation of his or her health care team. Patient self-management necessarily requires the culmination of a certain set of skills and behaviors that create confidence in dealing with a range of emotional, physical and physiological symptoms of their chronic disease. Physician self-management support requires performing a certain set of tasks to guide the patient towards empowerment by encouraging and engaging the patient in their own management process.

Information on self management:
http://www.ontpsm.net/self_management.php  
http://familydoctor.org/online/famdocen/home/healthy/prevention/785.interview.html  
http://www.chcf.org/topics/chronicdisease/index.cfm?subtopic=CL613  
http://www.chcf.org/topics/chronicdisease/index.cfm?itemID=111783  
http://www.mentalhealth.org.uk/information/mental-health-a-z/self-management/  
http://www.ihi.org/IHI/Topics/PatientCenteredCare/SelfManagementSupport/  
http://clinical.diabetesjournals.org/cgi/reprint/26/1/22  
Peer-support:
Is a relationship in which people meet in order to provide or exchange support with others facing similar challenges and to learn from each other. It offers opportunities to learn new coping skills and a new means to approach or improve personal situations. It can be done in group or in a one-to-one basis, in person, by telephone or online.

Information on peer support:
http://www.mentors.ca/helping.html
http://peersupport.ukobservatory.com/psia/PDF/spotlight%20briefing%20november%204.pdf
http://diabetessupport.ns.ca/
http://www.execulink.com/~swaninfo/page0004.htm

II. Chronic Care and Self Management Models

The Chronic Care Model:
Arguably the most influential model of chronic disease management, this model was formulated by Wagner. Wagner’s Chronic Care Model (CCM) holds that chronic disease is best managed by productive interactions between patient and a physician health team, where chronic care is dealt with in reliable and evidence-based practices for self-management. The Chronic Care Model has six components, the first being Self-Management Support, which gives clinicians a viable way to deliver self-management support. Physicians can provide patients with the necessary tools and skills to change lifestyle behaviours and improve outcomes, moving beyond education to empowering patients to take control of their own disease and to affect positive changes in their day-to-day life. The Delivery System Design component seeks to change the way primary health care is organised, giving specific roles and tasks to deal with chronic care in a reliable fashion to facilitate patient empowerment and self-monitoring, regular updates and reliable tools for self-monitor. Decision Support promotes physician to physician support, especially between general practitioner and specialists, as well as the dissemination of evidence-based guidelines for the best way to deliver care. Clinical Information Systems suggests creating innovative ways for storing and accessing patient information (diagnosis, lab reports, monitoring frequency of visits and more) in a way that best suits the patient and clinician team. Community Resources and Policies build awareness about self-management programmes within the community, encouraging patients to seek support and create supportive partnerships within the community, specific to their disease. And the last component, Health Care Organization, calls for a fundamental health care system redesign, in which a reactive primary care transforms into one that focuses on preventative measures for patients with and without chronic disease.
Information on the Chronic Care Model:
http://www.improvingchroniccare.org/index.php?p=The_Chronic_Care_Model&s=2
http://www.health.gov.bc.ca/cdm/cdmnb/chronic_care_model.html
http://www.ihi.org/IHI/Topics/ChronicConditions/AllConditions/

**Flinders Model:**
The Flinders Model is an approach to chronic disease self-management that has five key components: Productive client and physician interactions, collaboratively identifying problems, behavioural interventions, and client motivation. Six common principles permeate the Flinders program: Having knowledge of one’s condition; following a treatment plan developed with clinician; sharing decision making; monitoring and managing signs and symptoms; managing physical; emotional and social life; and adopting a healthy lifestyle. The Flinders model has various assessment tools, such as the Partners in Health Scale, the Cue and Response Interview and the Problems and Goals Assessment Tool. These tools help to identify issues, format an appropriate care plan, monitor and review patient’s progress. The model, underpinned by cognitive behavioural therapy (CBT) principles, offers a generic approach to chronic condition self-management that can be applied to a wide range of health conditions. It provides a structured, patient centered framework for collaborative problem definition, goal setting, care planning and review between an individual and the health professional.
It is a one-on-one model, with interventions/actions in the care plan, tailored to the identified needs and priorities of the individual.

**Information on the Flinders Model:**
http://www.optimizinghealth.org/index.php/site/content/download/115/443/file/Flinders%20model.pdf

**Stanford Model:**
The programme is delivered to participants over a series of workshops where techniques are taught to deal with various facets of chronic disease, such as exercise, medication use, improving communication with family and friends, nutrition, anxiety, as well as ways to evaluate doctor recommended treatments. The techniques apply broadly to all chronic disease and are taught by instructors with different chronic diseases. Master training sessions are offered to people within the community that want to be leaders in the field of self-management. The classes are highly interactive and the support offered is just as important as the content taught.

**Information on the Stanford Model:**
http://patienteducation.stanford.edu/programs/

**Expert Patient Program:**
The Expert Patient Programme (EEP) is the approach to chronic disease self-management (CDSM) in the UK (adapted from the Stanford model). It operates under the premise that “my patient understands their disease better than I do”. Key principles of the EEP are that patients are a valuable resource, as they are experts in their own diseases; that expert patients are developed by being engaged in health services and their health; that the government has a responsibility to implement and promote an appropriate CDSM programme and best practices; that self-management must be integrated with education and social services sectors and, lastly, that continual feedback, evaluation and assessment must be built into any effective CDSM programme. The programme focuses on building partnerships between patient and physician by encouraging patient confidence, resourcefulness, self-efficacy and empowerment. The EPP understand that, while patients seek help from physicians, the bulk of chronic disease self-management happens in the home.

**Information on the Expert Patient Program:**
http://www.expertpatients.co.uk/public/default.aspx
### Table #1. Description of Types of Self-Management Interventions and Strategies

<table>
<thead>
<tr>
<th>Intervention Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>Patient-mediated interventions</td>
<td>Attempts to secure evidence-based practice or policy indirectly via working with clients</td>
</tr>
<tr>
<td>Distribution of educational materials</td>
<td>Provision to patients of information on causes, effects, management, resources, etc. related to a disease or group of diseases. It is frequently offered in written format (pamphlet, brochure, booklet, training course binder) but electronic formats are being introduced recently (CDs with documents, interactive programmes, or web-based information sites).</td>
</tr>
<tr>
<td>Patient Education sessions</td>
<td>They are individual or group meetings between one or more care providers and one or more patients. Typically, in an individual session a physician, nurse, or qualified educator meets with a patient to review the patient’s knowledge of the condition, provide information on the disease and its management, set care goals and a plan describing what will be done to reach them. They may be a one-time event or involve periodic meetings over several months. Other session topics include review of patient barriers to change behaviour, feedback to the patient, and goal modification. Group sessions tend to be part of workshop or training course with a mix of lectures and exercises, including interactions among participants.</td>
</tr>
<tr>
<td>Motivational counselling (MC)</td>
<td>A provider trained in MC meets with a client to examine the patient’s views, barriers and advantages related to managing their condition. Through dialog the provider allows the patient to explore and reflect on behaviours that could be changed to favour self-management and conducive to self-efficacy. It is expected that through the process the patient realizes about consequences of maintaining the same behaviour and advantages of changing it.</td>
</tr>
<tr>
<td>Brief interventions</td>
<td>It is a technique used by primary care providers to counsel patients in the context of several standard office visits to help them modify behaviour. The provider talks for a few minutes to the patient, identifying a problem and showing concern. The provider and patient identify a goal for improvement, as well as situations where change may be difficult and ways to cope with it; the provider hands out educational materials, and a follow-up appointment is scheduled.</td>
</tr>
<tr>
<td>Community Programmes</td>
<td>These are interactive group-based education programmes</td>
</tr>
<tr>
<td>Intervention Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(workshops) sponsored by</td>
<td>(community centers/health centers, local hospitals, senior centers) and delivered by health educators on techniques to manage living with a chronic conditions and techniques to manage their conditions (medications, deal with depression, control pain, start exercise plan, relaxation, communicate with providers, etc.). It may include also home care agencies serving individuals in their residence to manage their care and advice on self management.</td>
</tr>
<tr>
<td>Provider interventions</td>
<td>Attempt to secure evidence-based practice or policy directly working with providers</td>
</tr>
<tr>
<td>Education sessions</td>
<td>Providers attend meetings with experts to review or update their knowledge on evidence based guidelines on chronic conditions. Printed materials are distributed and consideration is given to strategies that help to incorporate practices into daily routines.</td>
</tr>
<tr>
<td>Audit and feedback</td>
<td>Data on care delivered to chronically ill patient is collected from their charts and compared to care recommend as per guidelines. Providers receive an assessment on how closely interventions are being followed, to explore goals for improvement and to offer a means to reach set goals.</td>
</tr>
<tr>
<td>Reminders</td>
<td>The practice can put in place paper-based or electronic systems to remind providers and practice staff of patients’ care visits or procedures shortly before they are due.</td>
</tr>
<tr>
<td>Multidisciplinary teamwork</td>
<td>Care to patients is coordinated among several providers with different skills in order to address the various clinical and care demands related to chronic conditions.</td>
</tr>
</tbody>
</table>
## Appendix C

### Table #2. List of Attributes of Effective Self-Management Interventions and System Support

<table>
<thead>
<tr>
<th>Intervention component or attribute.</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ <strong>Patient education sessions</strong></td>
</tr>
<tr>
<td>▪ Individual session</td>
</tr>
<tr>
<td>▪ One time</td>
</tr>
<tr>
<td>▪ Periodic</td>
</tr>
<tr>
<td>▪ Group session</td>
</tr>
<tr>
<td>▪ Self-management course</td>
</tr>
<tr>
<td>▪ Short term (4-6 sessions)</td>
</tr>
<tr>
<td>▪ Long term (6-12 months)</td>
</tr>
<tr>
<td>▪ <strong>Educational material</strong></td>
</tr>
<tr>
<td>▪ Printed</td>
</tr>
<tr>
<td>▪ Audiovisual</td>
</tr>
<tr>
<td>▪ Electronic (CDs, Internet)</td>
</tr>
<tr>
<td>▪ <strong>Motivational Counselling</strong></td>
</tr>
<tr>
<td>▪ <strong>Use of certified educators (on specific condition)</strong></td>
</tr>
<tr>
<td>▪ For advice to providers and patients</td>
</tr>
<tr>
<td>▪ <strong>Follow-up calls</strong></td>
</tr>
<tr>
<td>▪ <strong>Nurse case management</strong></td>
</tr>
<tr>
<td>▪ <strong>Patient empowerment</strong></td>
</tr>
<tr>
<td>▪ <strong>Collaborative goal setting, problem solving</strong></td>
</tr>
<tr>
<td>▪ <strong>Community programmes</strong></td>
</tr>
<tr>
<td>▪ <strong>Brief session</strong></td>
</tr>
<tr>
<td>▪ <strong>Education sessions for providers</strong></td>
</tr>
<tr>
<td>▪ <strong>Provider audit and feedback</strong></td>
</tr>
<tr>
<td>▪ <strong>Reminder systems</strong></td>
</tr>
<tr>
<td>▪ <strong>Multidisciplinary teamwork</strong></td>
</tr>
</tbody>
</table>
Reference List


