

## Supporting Self-Management in General Practice: An Overview

Elizabeth Kendall<sup>1</sup>

Heidi Muenchberger<sup>1,3</sup>

Carolyn Ehrlich<sup>1,2</sup>

Kylie Armstrong<sup>1,2</sup>

1. Centre of National Research on Disability and Rehabilitation, Griffith Institute of Health & Medical Research, Griffith University, Meadowbrook Q 4131
2. General Practice Queensland
3. Queensland Health Southside District Place-Based Initiative

This paper was prepared as part of a primary health care research collaboration between Griffith University and General Practice Queensland. The work was made possible by funding from Queensland Health and the Motor Accident Insurance Commission. The valuable time and advice provided by Queensland Self-Management Alliance is recognised.

**Abstract:**

For the last decade, self-management has been touted as a panacea to the ills of the health system. It has been largely interpreted as education for people with chronic diseases to enable them to manage their own health care more effectively, maintain their health in optimal state and minimize the consequences of their condition. This interpretation of self-management has overlooked the broader context within which people manage their conditions and has failed to produce embedded practices within the system. This paper reviews the current state of knowledge about self-management and explores some theoretical positions that might contribute to the effective use of this construct in future.

Management literally means the process of managing (being in charge of, running, succeeding despite difficulties and regulating). By adding the prefix self-, the meaning becomes management of or directed towards oneself, by one's own efforts and action and relating to oneself (Concise Oxford English Dictionary, Eleventh Edition, 2006). The use of the term self-management has its early 19<sup>th</sup> Century origins in trade unions, Libertarian socialism and political philosophies that promote the rights of the workers to assume control of production and resources. Libertarian socialists focus on decentralised control through local non-bureaucratic citizen-based collectives. This model of self-management is based on a cooperative and participatory decision making framework in which workers themselves make choices collectively and power relations are equalised.

In psychology and education, the concept of self-management emerged in response to the need for improved methods of promoting clinical and behavioural change in the search for improved outcomes. In search of a more holistic approach to psychology led social-cognitive therapists, such as Ellis (1975), Bandura (1977), Rotter (1954) and others, began to investigate the notion of self-motivated behaviour. Thus, concepts such as self-monitoring and self-regulation increased in prevalence in place of the pre-existing focus on behavioural determinants. In the area of mental illness, researchers began investigating the role of these concepts, resulting in the emergence of "self-management" therapy (Langley, 1994). Early research in this area concluded that self management consisted of three components, namely, self-

monitoring, self-evaluation and self-reinforcement, that interacted to create personal self-management of one's behaviour (Kanfer, 1971).

In the health field, the 1970s was associated with a rapidly increasing focus on self-care and self-help (Kronenfeld, 1979). Although one form of self-help was self-organising advocacy groups designed to fight for the rights of marginalised people (e.g., the independent living movement), these concepts were most often implemented as groups of individuals who gathered for mutual aid in overcoming common health concerns. The 1980s saw an increase in technology that would enable people to monitor their own health conditions. By the 1990s, it was apparent from clinical trials that the process of self-monitoring and modification could significantly reduce symptoms (see Schilling et al., 2002). Consequently, self-management began its rise as an important mechanism for reducing the cost associated with chronic illness in society.

Although it has generally been assumed that self-management will lead to positive outcomes for people with chronic conditions, support for this proposition has been limited and varied. The greatest amount of evidence has focused on self-management education programs, which is only one aspect of self-management support. Even within self-management education programs, there is a range of models from individual coaching through to broad social marketing campaigns (Jordan & Osborne, 2007). Griffiths reviewed 36 studies of self-management education programs and identified 13 different components that could be contained in these programs (general

education/information, facilitated discussion, skills training, behaviour therapy, problem-solving, cognitive therapy, social support, relaxation, biofeedback techniques, relapse prevention skills, diet or exercise instruction and miscellaneous activities such as stress management). Thus, even self-management interventions differ substantially from each other.

Most studies have found that self-management education is generally more effective than health education alone (Bodenheimer, Lorig, Holman & Grumbach, 2002). However, systematic reviews have shown only small to moderate improvements in clinical outcomes for specific target populations following disease-specific self-management group training programs (Deakin, McShane, Cade & Williams, 2005). These health outcomes improved with greater levels of personal contact time and individualised instruction (Warsi, et al., 2003).

The efficacy of generic self-management education remains unclear (Shaw Hagger, Graham & Keleher, 2006). In this area, there is some evidence that peer leaders may be more likely to engender improvements in self-efficacy and social isolation (Griffiths, Foster, Ramsay, Eldridge & Taylor, 2007; Shaw et al., 2006), whereas education delivered by health professionals may be more likely to be associated with functional and clinical improvements (Newman, Steed & Mulligan, 2004). There is some inconsistent evidence that use of health services may be reduced following self-management education (Warsi, et al., 2003), but not when led by lay people (Griffiths et al, 2007). Although self-management education has not been found to be associated

with improvements in psychological indicators (Steed, Cooke & Newman, 2003), most qualitative research has demonstrated extremely positive client evaluations and self-reported improvements in quality of life (Shaw et al., 2006).

In a systematic review of cost-effectiveness studies, Gravelle, Richardson, Weatherly and Ritchie (2003) found that the provision of self-management support was either cost-saving or cost-effective (or both) in most (28/38) studies. Only two studies showed that self-management support was not cost-effective, and the remainder of studies (8/38) were inconclusive.

Despite the inconsistent evidence about self-management, the Royal Australian College of General Practitioners (2003) concluded that there was sufficient justification to support the promotion of self-management within general practice could significantly improve health outcomes for people with chronic conditions. Indeed, there is evidence that self-management is a critical component of a health system (Wagner, 2000) and that the absence of self-management behaviours is a significant predictor of hospitalisation (Muenchberger & Kendall, 2008).

Unfortunately, there is little clarity about how self-management is conceptualised and how it can be supported effectively other than through education programs. A recent review of self-management interventions (Leeman, 2006) concluded that most interventions lacked external validity and feasibility in general practice. Only a minority of interventions were tested in a

real practice setting or delivered by general practitioners. The interventions tended to be extremely complex which, although important to successful outcomes, reduced the likelihood that they were implemented outside the demonstration project sites. Few interventions were designed to be delivered by general practitioners and only three interventions contained any attempt to influence GP behaviour. Leeman concluded that complex evidence-based self-management interventions needed to be simplified if they are to be feasible within the limited resources of a general practice setting.

The purpose of this paper is to explore the salient issues about self-management as it is understood in health practice, identify the current frameworks that describe how self-management is supported in practice and to explore approaches that will facilitate self-management in practice. The paper will first examine the ways in which self-management is understood by health professionals and consumers, how self-management is supported in the general practice environment and theoretical perspectives that could inform self-management support.

### *How is Self-Management Understood in Contemporary Health Settings?*

During the 1990s, the topic of self-management increased in popularity at such a rate that the conceptual literature could not keep pace. Although literature in this area is now abundant, it is based on inconsistent definitions and many unwritten assumptions. The term 'self-management' is used colloquially to mean many things. In her initial work in the health sector, Lorig

(1993) defined self-management as “learning and practicing the skills necessary to carry on an active and emotionally satisfying life in the face of a chronic condition” (p. 11). Lorig further emphasized that self-management was not an alternative to medical care. Rather, self-management was “aimed at helping the participant become an active, not adversarial, partner with health care providers”. She concluded that self-management occurs when people “make informed choices to adapt new perspectives and [adopt] generic skills that can be applied to new problems as they arise, to practice new health behaviours, and to maintain or regain emotional stability” Lorig et al., 1993).

According to Lorig, people who self-manage would know about their condition and various treatment options, have a plan for the treatment of their condition, engage in activities that protect and promote their own health, monitor and manage the signs and symptoms of their condition; and manage the impact of their condition on their physical, emotional and social well-being. Similarly, McGowan (2005) concluded that self-management related to the tasks that an individual must undertake to live well with one or more chronic conditions. These tasks include gaining confidence to deal with medical management, role management, and emotional management.

A recent concept analysis of self-management (Embrey, 2005) contributed to the understanding of self-management that dominates the health context. Embrey identified five essential components of self-management that appeared in the literature, including:

- Knowledge: The ability to acquire, understand and evaluate information necessary to manage one's health and to use that information in decision making.
- Goal Setting and Problem Solving: The ability to monitor the impact of illness on one's life, and plan, prioritise, problem-solve, set goals and make decisions in response to that impact.
- Mobilising Resources: The ability to identify and activate resources in a timely manner, and to recognise one's personal limitations or needs for support.
- Self-efficacy: Having confidence in one's ability to cope, manage and respond to disease and its impact and a belief in one's ability to adapt one's behaviour, lifestyle and cognitions in response to challenges.
- Collaboration: The ability to communicate with professionals, services and systems to make decisions collaboratively and negotiate to get one's needs met successfully.

These components highlighted the fact that self-management involves a complex and diverse set of skills and activities, combined with attitudinal variables, such as confidence, that enable individuals to apply their skills. The concept of self-management is clearly multi-faceted and requires further definition to facilitate its use in practice and policy. According to McGowan (2005), there is no "gold standard," universally accepted definition of self-management and it can even mean different things at different times to the same people, leading to a diverse array of practices all considered to be representative of self-management. He noted that several terms are used to refer to self-management, sometimes interchangeably, depending on the

context and focus of the discussion. For instance, terminology, such as self-care, self-help, self-regulation, empowerment and self-determination have been used interchangeably when referring to self-management, leading to conceptual confusion and lack of direction. Although these terms describe a similar phenomenon, they originate from vastly different social movements, underlying assumptions and implications. Of most concern is the fact that terms such as adherence and compliance have also been used in relation to self-management, indicating the extent to which the concept has been misunderstood.

When health care professionals use the term self-management, they are likely to be applying one of three major assumptions, each of which will alter their perception of how and why people should engage in self-management and how they should be supported to do so. For instance, within the health context, self-management is most often articulated as an important strategy for reducing costs through reduced risk behaviour, improved health and, thus, reduced use of costly health services. This assumption implies a level of personal responsibility for illness and a duty to self-manage for the greater social good. Those who do not self-manage in a way that is expected and accepted by the health system are likely to be viewed as deviant and problematic.

Another major assumption underlying self-management is the quality assumption, namely that the application of a predetermined set of self-management strategies will result in improved quality of life and greater

satisfaction with health services and outcomes. Underlying this assumption is the notion that health professionals are in a prime position to assume responsibility for the adoption of self-management strategies, given that they are trained experts in chronic disease management. This assumption is likely to cast the individual in a passive and dependent role. People who do not self-manage may be seen as being deficient and in need of education or training (Kendall & Rogers, 2007).

Finally, the term self-management may reflect a social justice assumption in that the concept of self-management can promote the valuing of individuals who have been marginalized by their illness. Self-management offers people greater power, liberation, equity, voice, engagement and positive identities. Early work in this area (Cockerham, Leuschen, Kunz & Spaeth, 1986) identified the fact that to label people as “health consumers” gave them more power than to label them as “patients”. The word consumer implied the freedom to choose one’s own healthcare and to be in a position to respond to market forces of supply and demand. The concept of a person as a consumer rather than a patient became established in the 1960s (particularly in the USA) and has strengthened over the last decades. Although strong debate rages about whether or not people with chronic disease can actually be consumers given our current funding models and limited choice of services, this movement has assumed a more equal status between doctors and people with chronic diseases, full participation in decision making, mutual expectations and capacity to choose one’s own direction.

## Self-management: A Client Perspective

Self-management has blossomed within a clinical and medical context, but is enacted within a complicated “life” context that is fully known only to the person with the chronic condition. Individuals with chronic diseases experience self-management within the context of a complex disease trajectory, a health care culture and a uniquely meaningful life (Thorne, Patterson & Russell, 2003). The complex interactions between a person’s psychosocial and environmental existence and the health system are likely to impact on the success of self-management actions. Equally, self-management actions are likely to impact on both these contexts.

Thus, people with chronic diseases play a central and inherent role in managing their own conditions. They inevitably make decisions about their health-related behaviours on a daily basis, irrespective of whether or not they are considered to be self-managing (Kendall & Rogers, 2007). Being diagnosed with a chronic illness involves a disruption to the normal life course, changes to self-perception, adaptation to a new social world, re-definition of one’s competence as a social actor and the protection of self-identity against the threat of stigma (Bury, 1982). Chronic illness affects peoples’ whole lives, their families, and who they are in society. When people are diagnosed with a long-term condition, they must make adjustments to their lives and negotiate a series of cyclical life-transitions as they incorporate illness into their identity (Kendall & Buys, 1999). Some of these adjustments will be about how they manage their medical condition, but others will be

about how they live their lives with their illness and how they carry on with the activities that are important to them. The process of making these adjustments could be referred to as “Self-Management”.

Adjusting following the development of a chronic condition can be a slow process of trial-and-error as people explore their options and make decisions that suit their individual lifestyles and desires. They may make these decisions many times as they face new challenges, become more experienced about their illness and learn what works best for them. The decisions people make about their condition must fit within their lives and their vision of the future.

For instance, Kralik, Koch, Price and Howard (2004) examined the expressions of people with arthritis as they discussed living with their condition. In this study, self-management emerged as a process of recognising boundaries, mobilising resources, managing the shift in identity and balancing demands. According to Kralik et al. (2004), people with chronic conditions attempted to:

- understand the boundaries and restrictions created by their condition;
- mobilise the necessary resources to support themselves;
- manage the change in their identity and other aspects of their lives;
- balance their needs, pace themselves and plan or prioritise in their daily life.

Kendall, Muenchberger and Kendall (2008) examined the journal entries of people with traumatic injury as they adjusted to an acquired disability. This

study revealed complex self-management strategies focused on learning the parameters of the 'new self', exploring new ways of being, using trial and error, cementing a new identity and developing a new frame of reference for the establishment of pride and value in society. In relation to people with chronic pain, Gustafsson, Ekholm and Ohman (2004) found that major strategies involved developing awareness, defining the boundaries created by the condition and adjusting one's self-image. However, the social context within which these strategies occurred was one of shame rather than respect, indicating the importance of the way the health system responds to peoples' self-management efforts. The purpose of these self-management strategies was the creation of a sense of order in the face of chronic illness rather than merely the need to take responsibility for one's health.

There is evidence that the decision to undertake self-management activity may not be straight forward for people with chronic conditions. In a study of everyday self-management, Thorne et al. (2003) found that decision-making reflected the outcome of a conscious decision to gain control over the disease. From this point, the process involved an ongoing fine-tuning of understanding about the meaning of self-management decisions. People described decisions about how to manage the effects of the disease within their social context and lifestyle, how to manage treatment and the health care system and how to retain a vision for the future.

Recent research conducted by Ehrlich (2008) found that the decision to take control of one's disease is not a simple one, but rather a complex interaction

between personal intelligence (i.e., self-generated knowledge and understanding) and external sources of information. Although the interactions are complex, there is an identifiable basic psychosocial process by which people use information to make decisions about their disease. However, this process is personal and not necessarily predictable to an external observer. Thus, individually structured and purposeful self-management decisions can appear to be unpredictable, irrational or irresponsible to health care professionals, leading them to the erroneous conclusion that people are not able to self-manage.

Collectively, this research has suggested that although there may be some common elements, self-management is manifested within the individually constructed life of every person. Given the likely differences across individuals, the nature of self-management is difficult to describe, predict or understand (Thorne, Patterson & Russell, 2003). The need to translate self-management into deliverable programs and techniques may be futile. Instead, it may be more pertinent for the health system to grapple with its underlying assumptions about self-management and how it can more effectively appreciate the consumers' perspective to provide adequate and appropriate self-management support.

### *Supporting Self-Management*

Despite the fact that self-management features as a priority in almost every call for primary care reform, the complexities involved in delivering the

necessary supports to promote self-management are poorly understood (Thorne, Patterson & Russell, 2003). Little is known about how to integrate self-management into the daily activity of the health system and the practices of health professionals.

To date, self-management support has been defined in a fairly narrow way, namely as the systematic provision of education and supportive interventions by health care staff to increase patients' skills and confidence in managing their health problems, including regular assessment of progress and problems, goal setting, and problem-solving support" (Adams, Greiner & Corrigan, 2004, p. 57).

Much of the available evidence in this area pertains to the delivery of educational courses, such as the chronic disease self-management course (Lorig et al., 1993) Indeed, the RACGP (2003) also conceptualised self-management interventions as consisting of education and information, motivational interviewing, peer support, structured programs led by health professionals or lay people, symptom diaries and community-based skills training. They noted that to assist people to self-manage, it was necessary to develop their skills, guide lifestyle and behaviour changes, develop knowledge about disease and symptom management and support the effective use of community resources.

However, self-management support is much more complicated than simply providing skills and knowledge. It involves engaging in processes that foster

people's opportunities to apply problem-solving skills, experience self-efficacy and apply their knowledge in real-life situations (Coleman & Newton, 2005). In one of the few attempts to systematically explore self-management support, Spearing, Eakin and Wilson (2005) developed a process framework for professional practice. They noted that to support self-management, health professionals would need to engage in:

- Collaborative planning and goal setting
- Information provision and skill development
- Supports for behaviour change
- Planned follow-up and monitoring

#### *Self-Management Support in General Practice Environment*

To develop a meaningful and workable model of self-management support, the complex social and environmental context in which people with chronic diseases live and the intensely individual circumstances within which they make self-management decisions must be juxtaposed against the context within which health professionals who provide self-management support exist. In this regard, self-management can be supported in the general practice environment, but several pre-conditions must be met. For instance, Shetty and Brownson (2007) described eight characteristics of the primary care organisation that would be necessary to provide support for self-management. These characteristics included: a care team that works collaboratively; continuity of care across service providers; coordination of referrals; documentation of goals, plans and services; ongoing quality improvement;

patient input; staff training and education; and integration of self-management into the fabric of the practice.

At the level of the practice, Coleman and Newton (2005) suggested that systematic follow-up contact was essential, as was the allowance of sufficient time to address self-management tasks during consultations. They also suggested that the practice setting needed to allow space for group education programs and peer support groups. In a study of how to integrate self-management into the practice setting, Crespo and Shrewsbury (2007) identified 10 strategies. These strategies included committed senior leaders, more than one self-management champion, designated roles associated with self-management and inclusion of self-management as a regular agenda item for discussion, a local social marketing campaign and behaviour change tools/materials in the practice, training for staff members, modelling of self-management for clients, multiple methods and sites of client engagement and active prescription of self-management activities.

According to Sidani (2003), the development of a self-management orientation to healthcare is dependent on individual practitioners and their capacity to understand clients as unique individuals, with preferences, characteristics and circumstances that guide their choices about services, treatment and healthy lifestyles. It also depends on their capacity to respond flexibly to clients' needs and changing lifestyles and provide knowledge in an interactive way based on equal contributions of listening, understanding, and imparting information. Coleman and Newton (2005) also suggested that GPs

need to actively address health literacy issues and any medical obstacles to self-management, identify problems from the person's perspective, engage in goal-setting and planning for self-management, link patients to community resources to support self-management and provide self-management education. For general practitioners, a focus on supporting self-management will, therefore, mean a shift away from clinical outcomes towards a focus on the day-to-day problems of living with a chronic illness.

Person-centred practice has been found to be a consistent component of self-management support. This type of practice presents greater challenges for GPs than other health professionals given that their consultation lacks time in which to develop a relationship. According to a systematic review conducted by Mead and Bower (2000), person-centred practice consists of five dimensions. First, GPs must demonstrate openness to the "full range of difficulties patients bring to their doctors, not just their biomedical problems" (Stewart et al., 1995). Second, GPs must develop a full understanding of the person's personal experience and meaning that is attributed to illness. Third, there must be a willingness to share power and responsibility, building an egalitarian relationship that avoids paternalistic models of authority. Although it remains unclear to what extent the doctor-patient relationship can become "genuinely symmetrical" (Mead & Bower, 2000), there are practices that can facilitate mutual participation and trust. Fourth, the quality of the relationship (or therapeutic alliance) must be nurtured to create the type of emotional context within which motivation, understanding and confidence can be fostered. Finally, person-centred practice must take account of the GP as a

person, with subjective and personal responses that are likely to be provoked by particular patients, necessitating reflective self-awareness and a humanistic approach to interactions with people who have chronic conditions.

According to Clark, Gong and Kaciroti (2001), the ability to be self-regulating depends on the ability of the person with the condition to be observant and make judgements based on these observations rather than on personal habits, fear, tradition and so forth. As noted by Ehrlich (2008), however, external health information may be completely overlooked in preference for internal self-generated information about one's firmly ingrained belief systems. She described how behaviour change may not occur until after a significant crisis. Additionally, 'significant' and 'crisis' are likely to be subjectively interpreted by the individual based on their internal self-generated belief systems. Thus, rather than assuming the presence of decision-making that is considered "rational" by the health professional, it is important to understand the world of the individual. Self-regulation behaviour will, therefore, be influenced by the individual's goals, values, beliefs and worldviews, only some aspects of which will be accessible to the health professional. Attempts to make these hidden issues more transparent and to encourage observation and decision-making will assist in supporting consumers to self-regulate (Clark, Gong & Kaciroti, 2001).

*Techniques for General Practice*

Perhaps the most significant gap for general practice is the absence of a theory about self-management and why it is important. In this regard, self-determination theory provides a useful theoretical framework that can easily be applied to general practice. Self-determination theory (SDT) is a theory of self-motivated behaviour change that has been under development for more than 30 years (Vansteenkiste & Sheldon, 2006). The theory describes the fundamental causes, processes, and outcomes of human thriving and “optimal motivation”, but also outlines the general conditions that support these processes.

SDT is based on the assumption that people have an innate tendency toward growth, integration of the self, and the resolution of inconsistencies (Ryan & Deci, 2000). However, the theory acknowledges that behaviour is defined according to a continuum ranging from helplessness through heteronomy (i.e., externally regulated behaviour) to autonomy (i.e., self-regulation of behaviour due to intrinsic values). According to the SDT process of change model, external regulation may temporarily change behaviour, but only when external incentives or punishments are in operation. In contrast, integrated self-regulation is based on a conscious acceptance of the need for change and identification with the values and beliefs that underlie the change. Thus, this autonomous form of motivation represents a stable and self-endorsed basis for action (Markland et al., 2005). Clearly, this type of motivation is the goal of all health professionals who work in the area of chronic disease management.

Indeed, research has confirmed a place for SDT in the health system in that internalised motivation, when well supported by others, is associated with higher levels of treatment attendance, less drop-out, less relapse, and enhanced well-being (Vansteenkiste & Sheldon, 2006). Williams, McGregor, Zeldman, Freedman, and Deci (2004) showed that autonomous motivation for adaptive self-management behaviors (diet, exercise, and medication compliance) predicted greater glycemic control among people with diabetes. According to some researchers, the principles of self-determination theory, when combined with scientifically supported treatments (Joiner et al., 2003), should maximise the ability of people with chronic conditions to achieve substantial and lasting health outcomes.

In SDT, motivation is thought to be associated with the person's experience of autonomy, competence and connectedness during health encounters. The need for competence is based on the repeated finding that people actively seek to adapt to complex demands. Without opportunity to master the environment, motivation is likely to wane and effort will be reduced. The need for autonomy reflects the fact that people benefit from choice and agency. Autonomy differs from competence in that one can be competent, but still not feel responsible for behavioural decisions. Without autonomy, the positive effect of enjoyment and engagement will be lost and motivation will suffer. This domain of the theory has been associated with the quality of motivation. The need for connectedness is the final component of the theory and is based on the fact that people will naturally seek intimate relationships, a sense of belongingness and social support. If supportive, respectful and caring

relationships are present; motivation will be nurtured and encouraged. These three needs interact to produce the optimal environment for motivation.

Importantly, SDT provides clear guidance about how to support people to thrive and, therefore, provides a potential framework for self-management support. Specifically, the mechanisms by which competence, autonomy and connectedness can be facilitated are by the provision of structure, autonomy-supportive environments and involvement (Deci & Ryan, 1991). For instance, competence will be facilitated through structure, such as clear expectations, achievable goals, and tangible feedback. In conjunction with structure, however, autonomy support is provided by maximising opportunities to exercise choice. Researchers have suggested that this involves (a) developing a personally meaningful rationale for engaging in a behaviour; (b) minimising reliance on external controls; (c) providing opportunities for participation; and (d) acknowledging negative feelings associated with engaging in difficult tasks (Markland et al., 2005). According to Deci and Ryan (1991), autonomy-supportive environments will acknowledge the perspective of the person, provide as much choice as possible, understand and respond to the context and providing a meaningful rationale when choice is not possible. Connectedness is facilitated through involvement, or a sense that someone is genuinely invested in one's well-being, understands their situation and is able to be relied on.

In summary, in an autonomy-supporting context, choice is provided, pressure to engage in behaviour change is minimised, and individuals are encouraged

to initiate actions themselves. To facilitate competence, the link between the behaviour and valued outcomes is made apparent, expectations are clear, and positive feedback is provided. The entire interaction occurs within a warm environment which capitalises on the personal relationship between the professional and the person with the condition.

A useful method of promoting autonomy and self-determination is motivational interviewing (Vansteenkiste & Sheldon, 2006), a strategy derived from the counselling literature and is aimed at supporting people to explore their own experiences and make decisions about how they will proceed. Motivational interviewing has been proposed as the most suitable method of facilitating competence, autonomy and connectedness. This technique focuses on mutual goal setting and agreement, open-ended questions that allow clients to express their concerns freely, reflective listening to ensure understanding and summarising to clarify conclusions. The most critical aspect of motivational interviewing is the need for neutrality and suspension of any stereotypes or assumptions. However, motivational interviewing in its entirety is time-consuming and may not be possible within the short general practice consultation. Although the technique does provide some simple strategies that could facilitate self-management, self-management support strategies must be workable in the practice context.

In attempting to simplify self-management support in the practice setting, Coleman and Newton (2005) designed a cycle of steps to create an interactive feedback loop between clients and GPs. These steps involve the

collaborative selection of a self-management strategy or desired behaviour change, the provision of information about the topic, the exploration of barriers to that outcome, the setting of goals and action plans, determination of confidence level and the provision of support for the plan to be implemented. Coleman and Newton also discussed the importance of a consistent rating system to allow people to engage in monitoring their condition and symptoms. They described a system of green, yellow and red zones of management to enable people to make sense of when they should contact a health professional for input.

### *Self-Management or Context Management?*

Some researchers have defined self-management support from a broader perspective than the individual and their health system. For instance, Coleman and Newton (2005) described self-management support as a process of making multi-level changes in all aspects of the environment to facilitate self-management. Thus, self-management support is more complicated than simply providing a supportive interaction, skills, knowledge, resources and confidence to people with chronic conditions. Similar critique was applied to the self-care/self-help movement in the 1970s in that it remained an individualistic movement with little structural analysis of the problem (Kronenfeld, 1979). There were few attempts to assess the realistic possibilities for self-care across social strata of society and a lack of appreciation of the broad influences on health. Further, the movement was

criticised for its inability to reach the entire population. Similar mistakes have been made in relation to self-management.

In acknowledging this broader view of self-management, Spearing et al. (2005) included system enablers in their framework of self-management supports. Specifically, they noted that self-management is more easily promoted in the presence of:

1. Integration across services and sectors
2. Supportive policies
3. Individualised, disease-specific, culturally competent and interdisciplinary services
4. Capacity building around healthy lifestyles

This “ecological” approach to self-management acknowledges the fact that people are rarely the sole contributors to their own behaviour and that environmental constraints impact significantly on self-management (Fisher, Brownson, O’Toole, Shetty, Anwuri & Glasgow, 2005). Indeed, most evaluations of self-management programs find only short-term outcomes, followed by return to normal levels within six months (Kendall et al., 2004; 2006), providing support for the suggestion that self-management education alone is insufficient to bring about long-term change and that it may be equally dependent on the context of the environment. In one study, Kendall et al. (2004) found that people who had received self-management training were able to recite self-management behaviours and even identify where their own behaviour was not successful, but still failed to adopt self-management

behaviours. Qualitative data suggested that their relationship with their GP was a critical factor in determining whether or not they enacted and maintained self-management activities following the training.

To acknowledge the critical role of the environment, Clark, Gong and Kaciroti (2001) described a model of self-regulation based on circles of influence, showing that the ability of the person to self-regulate their condition depended on multiple contextual factors, including family involvement, clinical expertise, work/school supports, community action, environmental controls and conducive policies. Fisher et al. (2005) also proposed an ecological model of self-management that moves beyond the individual level to incorporate the interpersonal, systemic and community levels. These models concur with the conclusions made by Kendall and her colleagues that self-management may need to be reconceptualised as social self-management (Kendall et al., 2004) or collective management in the case of Indigenous communities (Barnett & Kendall, 2008). These models all acknowledge that an individualistic approach to self-management is insufficient to bring about sustainable change. They place the individual within their context and demonstrate how self-management cannot exist without social processes and community resources. Further, they support the need for broader self-management supports (i.e., collaborative planning and goal setting, development of applied skills, follow-up and support in the person's own setting, continuity of care across settings and access to sufficient community resources and supportive environments).

The ecological approach to health has been translated into a well-known framework which may provide a useful mechanism for promoting self-management, namely the World Health Organisation International Classification of Functioning, Disability, and Health (WHO, 2001). This framework is being utilised across the world to facilitate a consistent approach to health and functioning. The ICF provides a structure by which to present information and a coding system that ensures attention is given to contextual factors. The ICF is divided into two parts, 1) functioning and disability and 2) context. Functioning and disability is classified according to two dimensions, namely body functions and structures, and activities and participation. Context is classified according to two dimensions, namely environmental factors and personal factors. Codes and scores, ranging from positive to negative, can be assigned to enable a full evaluation of the person and their context. Using the ICF as a guide, Steiner et al. (2002) have developed a Clinical Problem-Solving Form that enables practitioners and their clients to apply the ICF in problem-identification, goal-setting and understanding capacity of individuals to self-manage. With space for responses from both the person and the practitioner across the ICF dimensions, the tool is used in an interactive way to facilitate open communication and shared understanding. This type of assessment and communication is likely to facilitate a supportive context for autonomy, structure for a sense of competence, a connection between practitioner and client and attention to context. Thus, this tool is likely to support self-management, but is brief, easy to use and meaningful to both parties.

Ecological approaches to health emphasise the importance of designing interventions that impact at multiple levels to create a synergistic effect (Glasgow & Emmons, 2007). In conceptualising this type of intervention, Glasgow and Emmons (2007) presented an integrated model of self-management based on systems thinking. The integrated model of self-management acknowledges the complexity of behaviour, the context within which it occurs and the interactions that are likely to happen across components. In the model, the individual interacts with the socio-environmental context and the healthcare system. These components are connected through community linkages, information transfer, advocacy and resources. Each component must be supportive of self-management, but must also be supported to promote self-management.

### *Conclusions for a way forward*

The adoption of an integrated approach to self-management relies on a system-wide shift in the delivery of healthcare. In reviewing the need for similar shifts in other areas, Kendall, Muenchberger and Clapton (2007) described the process of a paradigm shift. At multiple times in the history of science, knowledge has accumulated to expose a gap between data and theory and cast doubt on the suitability of prevailing framework. Attempts to address this gap have lead to a revolution in scientific thinking or what has become known as a paradigm shift (Kuhn, 1962). A paradigm shift is a transformation of the way in which the world is understood and acted upon. Key attributes of the previous approach become liabilities and innovation

becomes essential (Clarke & Clegg, 2000). Unlike the physical sciences, shifts in the social sciences are more often precipitated by a clash of values than a clash between evidence and theories (Liu & Liu, 1997). There is some evidence that self-management might be reaching a “tipping point” (Gladwell, 1999) in that sufficient evidence is accumulating, values are clashing and the imperative to make shifts is growing. However, to support this shift, a systematic approach is necessary. To date, the process of change has relied on the education of people with chronic conditions, but little attention has been given to a comprehensive multi-level approach to change.

Following their evaluation of the UK Expert Patient program, Kennedy, Rogers and Bower (2007) proposed the WISE model of self-management. This “Whole systems Informing Self-management Engagement” approach dictates the need to focus on multiple levels of change simultaneously. At the level of the individual, there are many opportunities for supporting self-management through information, education, skills and so forth. However, change must also occur at the level of the professional through improved responses to clients and at the system level through improved access to services (i.e., sufficient, appropriate, accessible, responsive and flexible services).

The WISE framework can be linked to another prominent framework, namely the RE-AIM framework, which was developed in the USA as a basis from which to evaluate the effectiveness of chronic illness management interventions. The RE-AIM dimensions (Reach, Efficacy, Adoption, Implementation and Maintenance) have been used to rate the impact of

programs and can, therefore, provide a basis for the development of strategies at each level of the WISE model. These two models provide a matrix of activity that can guide the paradigm shift. To integrate self-management into health systems, the matrix suggests that it will be necessary to ensure adequate performance at each of the levels (individual, professional and systemic) in each of the following areas:

- Reach – can people, professionals and systems access self-management (information/resources, education and training) in appropriate ways across contexts and populations?
- Efficacy – is self-management having the expected impact on outcomes and is the impact of the expected quality?
- Adoption – are people, professionals and systems adopting self-management and working collaboratively to promote self-management?
- Implementation – is self-management being implemented as it was intended and in appropriate ways across contexts?
- Maintenance – is self-management being sustained over time and integrated across stakeholders?

Without change of this systemic nature, we will continue operating at a level that “blames the victim” (Kronenfeld, 1979) without reflecting on the broader structural features of the system that act in opposition to self-management.

## References

- Adams, K., Greiner, A.C., & Corrigan, J.M. (2004). Executive Summary for Crossing the Quality Chasm: Next Steps Toward a New Health Care System. Paper presented at the 1st Annual Crossing the Quality Chasm Summit: A Focus on Communities, January 6-7<sup>th</sup>. Retrieved June 21<sup>st</sup> 2008 from [http://www.providersedge.com/ehdocs/ehr\\_articles/1st\\_Annual\\_Crossing\\_the\\_Quality\\_Chasm\\_Summit-Exec\\_Report.pdf](http://www.providersedge.com/ehdocs/ehr_articles/1st_Annual_Crossing_the_Quality_Chasm_Summit-Exec_Report.pdf)
- Bandura, A. (1977). Self-efficacy: Towards a unifying theory of behavioral change. *Psychological Review*, 84, 191-215
- Bodenheimer, T., Lorig, K., Holman, H. & Grumbach, K. (2002). Patient Self-management of Chronic Disease in Primary Care. *JAMA* 288,2469-2475
- Bury, M. (1982). Chronic illness as biographical disruption. *Sociology of Health and Illness*, 4, 167 – 82
- Clarke, T. & Clegg, S. (2000). Management paradigms for the new millennium. *International Journal of Management Reviews* 2(1), 45–64.
- Clark, N., Gong, M. & Kaciroti, N. (2001). A model of self regulation for control of chronic disease. *Health Education and Behaviour*, 28 (6), 769-782.
- Cockerham, W. C., Kunz, G., Leuschen, G., & Spaeth, J. L. (1986). Symptoms, social stratification and self-responsibility for health in the United States and West Germany. *Social Science and Medicine*, 22, 1263-1271.
- Coleman, M. & Newton, K. (2005). Supporting self-management in patients with chronic illness. *American Family Physician*, 72 (8), 1503-1510.
- Concise Oxford English Dictionary. (2006). Oxford: Oxford University Press.
- Crespo, R. & Shrewsbury, M. (2007). Integrating self-,management into primary care. *The Diabetes Educator*, 33, 126-131.
- Deakin T, McShane CE, Cade JE, & Williams, R. (2005) Group based training for self-management strategies in people with type 2 diabetes mellitus. *Cochrane Database of Systematic Reviews* 2005, Issue 2. Art. No.: CD003417. DOI: 10.1002/14651858.CD003417.pub2.

- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska symposium on motivation: Vol. 38, Perspectives on motivation* (pp. 237-288). Lincoln: University of Nebraska Press.
- Ehrlich, C. (2008). Information use by people with chronic obstructive pulmonary disease: the personal intelligence information use cycle. Griffith University. [Unpublished thesis].
- Ellis, A. (1975). *A new guide to rational living*. Englewood Cliffs, NJ: Prentice-Hall.
- Embrey, N. (2006). A Concept Analysis of Self-Management in Long-Term Conditions. *British Journal of Neuroscience Nursing*, 2, 507-513.
- Fisher, E.B., Brownson, C.A., O'Toole, M.L., Shetty, G., Anwuri, V.V., & Gladwell, M. (1999). The science of the sleeper: how the information age could blow away the block-buster. *The New Yorker*, pp.48-55.
- Glasgow, R.E. (2005). Ecologic approaches to self management: the case of diabetes. *American Journal of Public Health* 95, 1523–1535.
- Glasgow, R. & Emmons, K. (2007). How Can We Increase Translation of Research into Practice? Types of Evidence Needed. *Annual Review of Public Health*, 28, 413-433
- Gravelle H, Richardson, G, Weatherly, H, & Ritchie, G. (2003). An assessment of the quality of economic evaluations of self management. Report to the Department of Health. Available at: [www.york.ac.uk/inst/che](http://www.york.ac.uk/inst/che).
- Griffiths, C. et al., (2007). How effective are expert patient education programmes for chronic disease. *BMJ*, 334, 1254-1256.
- Gustafsson, M., Ekholm, J. & Ohman, A. (2004). From shame to respect: musculoskeletal pain patients' experience of a rehabilitation programme, a qualitative study. *Journal of Rehabilitation Medicine*, [36](#) (3), 97-103.
- Jordan, J. & Osborne, R. (2007). Chronic disease self-management education programs: Challenges ahead. *MJA*, 186, 84-87.
- Kanfer, F.H. (1971). The maintenance of behavior by self-generated stimuli and reinforcement. In A. Jacobs and C.B. Sachs, (Eds.), *The psychology of private events*, Academic Press, New York.

- Kendall, E., & Buys, N.J. (1999). The psychosocial consequences of motor vehicle accidents. *Journal of Personal and Interpersonal Loss*, 4, 47-66.
- Kendall, E., & Rogers, A. (2007). Extinguishing the social?: State sponsored self-care policy and the Chronic Disease Management Programme. *Disability & Society*, 22(2), 129-143.
- Kendall, E., Hunter, B., Foster, M., Chaboyer, W. & Gee, T. (2004). The Sharing Healthcare Initiative: A better approach to managing chronic conditions. PWC & DoHA.
- Kendall, E. & Rogers, A. (2007). Extinguishing the social?: State sponsored self-care policy and the Chronic Disease Management Programme. *Disability and Society*, 22, 129-143.
- Kendall, E., Catalano, T., Kuipers, P., Posner, N., Buys, N. & Charker, J. (2007). Adjustment following stroke: The role of self-management education. *Social Science and Medicine*, 64, 735-746.
- Kendall, E., Muenchberger, H., & Clapton, J. (2007). Trends in Rehabilitation: Reviving the humanitarian core of rehabilitation. *Disability and Rehabilitation*, 29(10), 817-823.
- Kennedy, A., Rogers, A. & Bower, P. (2007). Support for self care for patients with chronic disease. *BMJ*, 335, 968-970. doi: 10.1136/bmj.39372.540903.94.
- Kralik, D., Koch, T., Price, K., & Howard, N. (2004). Chronic illness self-management: taking action to create order. *Journal of Clinical Nursing* 13 (2), 259–267 doi:10.1046/j.1365-2702.2003.00826.x
- Kronenfeld, J. (1979). Self care as a panacea for the ills of the health care system: an assessment. *Social Science and Medicine*, 13A, 263-267.
- Kuhn, T. (1962). *The structure of scientific revolutions*. London: The University of Chicago Press.
- Langley, M.H. (1994). *Self-Management Therapy for Borderline Personality Disorder*. Springer Press.
- Leeman, J. (2006). Interventions to improve diabetes self-management. *The Diabetes Educator*, 32(4), 571-583.DOI: 10.1177/0145721706290833.
- Liu, J. & Liu, S. (1997). Modernism, postmodernism, and neo-confucian thinking: A critical history of paradigm shifts and values in academic psychology. *New Ideas in Psychology*, 15(2), 159-178.

- Lorig K. (1993). Self-management of chronic illness: a model for the future. *Generations* 17, 11-14.
- Lorig, K.R, Mazonson, P.D, & Holman, H.R. (1993). Evidence suggesting that health education for self-management in patients with chronic arthritis has sustained health benefits while reducing health care costs. *Arthritis and Rheumatism*, 36(4): 439-446.
- Markland, D., Ryan, R., Tobin, V. & Rollnick , S. (2005). Motivational interviewing and self-determination theory. *Journal of Social and Clinical Psychology*, 24(6), 811-831.
- McGowan, P. (2005). Self-management: a background paper. Center on Aging, University of Victoria.
- Mead, N. & Bower, P. (2000). Patient-centredness: a conceptual framework and review of the empirical literature. *Social Science and Medicine*, 51, 1087-1110.
- Norris, S. Self-management education for adults with type 2 diabetes: A systematic review. Cochrane Database of Systematic Reviews 2007.
- Rotter, J. B. (1954). *Social learning and clinical psychology*. Englewood Cliffs, N. J.: Prentice-Hall.
- Royal Australian College of General Practitioners (RACGP). (2003). Chronic condition self management Guidelines: Summary for Nurses and Allied Health Professionals. Retrieved 24<sup>th</sup> June, 2008 from <http://www.racgp.org.au/guidelines/sharinghealthcare>.
- Ryan, R. & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55(1), 68-78.
- Schilling, L.S., Grey, M. & Knafl, K. (2002). The concept of self-management of Type 1 diabetes in children and adolescents: An evolutionary concept analysis. *Journal of Advanced Nursing Science* 37, 87–99
- Sidani, S. (2003). Self-Care. In, P. Sharpe, D. Doran & J. Almost (eds.), *Nursing Sensitive Outcomes: State of the Science*, (pp. 65-115). Sudbury, Mass: Jones & Bartlett Publishers.
- Shaw, J., Hagger, V., Graham, M. & Keleher, H. (2006). Systematic Review of Chronic Disease Self Management Programs: a health promotion and

- determinants approach. DHS Public Health Research Final Report. International Diabetes Institute. Melbourne.
- Sheldon, K., Williams, G. & Joiner, T. (2003). *Self-determination Theory in the Clinic: Motivating Physical and Mental Health*. New Haven, USA: Yale University Press.
- Shetty, G. & Brownson, C. (2007). Characteristics of organizational resources and supports for self-management in primary care. *The Diabetes Educator*, 33 (S6), 185S-192S.
- Spearing, N., Eakin, E. & Wilson, A. (2005) Self-Management Support Framework. Centre for Primary Health Care, Brisbane: UQ.
- Steiner, W., Ryser, L., Huber, E., Uebelhart, D., Aeschlimann, A. & Stucki, G. (2002). Use of the ICF Model as a Clinical Problem-Solving Tool in Physical Therapy and Rehabilitation Medicine. *Physical Therapy*, 82(11), 1098-1107.
- Steed, L. et al., (2003). A systematic review of psychosocial outcomes following self-management interventions in diabetes mellitus. *Patient Education and Counselling*, 51, 5-15.
- Stewart, M., Brown, J., Western, W., McWinney, I., McWilliam, C. & Freeman, T. (1995). *Patient-centred medicine: transforming the clinical method*. California: Sage Publications & Thousand Oaks.
- Thorne, S., Patterson, B. & Russell, C. (2003). The structure of everyday self-care decision making in chronic illness. *Qualitative Health Research*, Vol. 13, No. 10, 1337-1352 (2003) DOI: 10.1177/1049732303258039.
- Vansteenkiste, M. & Sheldon, K. (2006). There's nothing more practical than a good theory: Integrating motivational interviewing and self-determination. *British Journal of Clinical Psychology*, 45(1), 63-82.
- Wagner, E. (2000). The role of patient care teams in chronic disease management. *BMJ*, 320(7234), 569-572.
- Warsi, A. et al., (2003). Arthritis self-management education programs: A meta-analysis. *Arthritis & Rheumatism*, 48, 2207-2213.
- Williams, G., McGregor, H., Zeldman, A., Freedman, Z., & Deci, E. (2004). Testing a self-determination theory process model for promoting glycemic control through diabetes self management. *Health Psychology*, 23(1), 58-66.

World Health Organisation (WHO). (2001). ICF as the new member in the WHO family of International classifications. WHO Classification Assessment Surveys and Terminology Group. Retrieved 24<sup>th</sup> June, 2008 [www.who.int/classification/icf](http://www.who.int/classification/icf)