Self-Management Goal Setting: Identifying the Practice Patterns of Community-Based Physical Therapists

Karen Peng, BSc, MScPT;^{*} Drew Bourret, BSc, MScPT;[†] Usman Khan, BSc, MScPT;[‡]
Henry Truong, BSc, MScPT;[§] Stephanie Nixon, BScPT, PhD;[¶] James Shaw, MPT, PhD;^{**††}
Sandra McKay, PhD^{‡‡}

ABSTRACT

Purpose: To describe the collaborative goal-setting practices of community-based physical therapists trained in a self-management (SM) approach who work with clients with chronic conditions and to describe clients' goal-achievement rates. **Methods:** A retrospective chart review was conducted for 296 randomly selected home-care clients from July 2009 through July 2010 using a chart-abstraction form created to capture demographic data and information related to goal setting and achievement. Data were analyzed using frequencies, percentages, and Pearson's chi-square tests. **Results:** There was no significant relationship between sex, age, or number of chronic conditions and setting SM or non-self-management (NSM) goals or the type of SM goal set. The majority of goals set were "action" as opposed to "verbal" goals. A high proportion (89–100%) of both SM and NSM goals were met. **Conclusions:** Clinicians should be aware that it is possible to set SM goals regardless of the client's sex, age, or number of chronic conditions. Other possible influences on goal setting, such as severity of chronic conditions and challenges of the health care system, should be further investigated.

Key Words: community health services; home care services; patient care planning; self care.

RÉSUMÉ

Objectif : Décrire les méthodes d'établissement d'objectifs en collaboration des physiothérapeutes communautaires qui ont reçu une formation en autogestion et qui travaillent avec des clients vivant avec un problème chronique et décrire les taux d'atteinte des objectifs chez les clients. **Méthodes :** On a procédé à un examen rétrospectif des dossiers de 296 clients de services de soins à domicile choisis au hasard entre juillet 2009 et juillet 2010 en utilisant un résumé de dossier créé pour saisir des données démographiques et des renseignements portant sur l'établissement et l'atteinte d'objectifs. On a analysé les données en utilisant les fréquences, les pourcentages et des tests chi-carré de Pearson. **Résultats :** Il n'y avait pas de lien significatif entre le sexe, l'âge ou le nombre de problèmes chroniques et l'établissement d'objectifs liés ou non à l'autogestion, ou les types d'objectifs liés à l'autogestion établis. La majorité des objectifs établis portaient sur « l'action » plutôt que sur le « verbe ». Un pourcentage élevé (89 à 100 %) des deux types d'objectifs a été atteint. **Conclusions :** Les cliniciens devraient savoir qu'il est possible d'établir des objectifs liés à l'autogestion sans égard au sexe, à l'âge ou au nombre de problèmes chroniques du client. Il convient d'étudier plus à fond d'autres facteurs qui peuvent avoir une influence sur l'établissement d'objectifs comme la gravité des problèmes chroniques et les défis posés au système de santé.

Chronic diseases continue to impose a major burden on the health of the global population, leading to significant morbidity and mortality and increasing costs to health systems around the world.¹ In Canada, self-reported prevalence rates of certain chronic diseases are as high as 18.4% for chronic back pain, 16.1% for arthritis, and 6.4% for diabetes.² Not only do chronic conditions strain public health care resources—direct health care costs associated with chronic disease amounted to

CAD\$68 billion across Canada in 2010³—but if left untreated, they tend to lead to additional health complications that further burden the health care system.⁴ Exacerbations of chronic conditions often require treatment in costly acute-care facilities, which are less likely to provide education and management focused on preventing future exacerbations; thus, effective health care for existing chronic diseases is best delivered through an

From the: ^{*}Faculty of Medicine; [¶]Department of Physical Therapy, University of Toronto; [‡]Bridgepoint Active Healthcare; ^{**}Toronto Rehabilitation Institute; ^{††}VHA Rehab Solutions; ^{‡‡}Research and Program Evaluation, VHA Home Healthcare, Toronto; [§]High Point Wellness Centre, Physiotherapy on Wheels, Mississauga, Ont.; [†]Mackie Physiotherapy, Saskatoon, Sask.

Correspondence to: James Shaw, VHA Rehab Solutions, 30 Soudan Ave., Ste 400, Toronto, ON M4S 1V6; james.shaw@uhn.ca.

Contributors: All authors designed the study; collected, analyzed, and interpreted the data; drafted or critically revised the article; and approved the final draft.

Competing Interests: Sandra McKay is Manager of Research & Evaluation at VHA Home HealthCare. James A. Shaw is an employee of VHA Rehab Solutions.

Acknowledgements: The authors would like to gratefully acknowledge Kathy Sidhu and Drs. Kelly O'Brien and Nancy Salbach for their insights and contributions that served to improve the quality and relevance of the study.

Physiotherapy Canada 2014; 66(2);160–168; doi:10.3138/ptc.2013-08

approach that focuses on preventing exacerbations and maintaining function across the continuum of care.^{5,6}

Although most structured interventions to enhance management of chronic diseases have been delivered in primary health care settings, other venues—such as community sites, schools, and home-care programs—have also been shown to be effective.^{5,7–9} The home-care setting can provide an ideal venue to support clients with chronic diseases in maintaining their quality of life with treatment that focuses on client-centred behaviour change to minimize the effects of chronic conditions.⁹ Physiotherapy services are an important aspect of management for several chronic conditions and have been shown to improve quality of life and prevent hospital admission when provided to people with chronic conditions living at home.¹⁰ Thus, home-based health care, education, and treatment, including that provided by physical therapists, can be effective in helping to manage the deleterious effects of chronic illness and reducing the burden on our health care system.

One education strategy that can be used in home-care settings is “self-management” (SM), which has been widely discussed and applied in the literature on chronic disease management. SM emphasizes empowering clients to participate in managing their treatment, symptoms, and the lifestyle changes that may occur as a result of chronic illness.^{11,12} In their seminal discussion of the development of SM, Lorig and Holman¹³ define SM as including three management domains responsible for a client’s well-being: medical, behavioural/role, and emotional management.^{12,13} They argue that proper management of these dimensions is essential to allow a client to maintain overall wellness while living with a chronic disease.¹³ While physical therapists may not have extensive training in each of these domains, their roles in promoting exercise, pain management, and healthy lifestyles can make significant contributions to the achievement of SM in people with many chronic conditions.¹⁴

One way to implement an SM approach with clients is through the collaborative goal-setting process, which can lead to concrete strategies for clients to develop SM skills.^{15,16} The home-care organization that was the focus of our study recognized the goal-setting process as an opportunity to implement SM techniques with clients, emphasizing the physical therapists’ role in providing “self-management support.” Adapting the chronic care model developed by Wagner and colleagues,^{17–19} the SM support approach focuses on collaboration between health care providers and clients to help clients achieve an educated and informed understanding of their own approaches to self-managing chronic conditions. The approach builds on collaborative goal setting between physical therapists and clients, oriented toward helping clients achieve progressive independence in managing their chronic conditions.

The guidelines and training provided to physical therapists at the study site outlined four distinct types of goals,

Box 1 Continuum of Self-Management Goal-Setting

Goal	Descriptor	Category	Dependence
SM1	Client is <i>aware</i> of	Verbal	↓
SM2	Client will <i>identify</i> strategies for		
SM3	Client will report <i>understanding</i> of		
SM4	Client will <i>demonstrate</i>	Action	Independence

reflecting the progression of clients’ SM skills toward independence in managing chronic conditions. Understood as representing a continuum as opposed to distinct phases of reaching independence in SM, these categories of collaborative goals were developed to reflect the particular knowledge and skills required for successful SM. At earlier stages in the continuum, collaborative goal setting focuses on the client and therapist jointly identifying “verbal” goals: (1) Client will *be aware of* (e.g., conditions, treatments); (2) Client will *identify strategies for* (e.g., further education, medication management); (3) Client will *report understanding of* (e.g., chronic care, follow-up appointments). At later stages, collaborative goal setting focuses on “action” goals: (4) Client will *demonstrate* (e.g., exercises, problem-solving). These goal statements are presented here in discrete categories, emphasizing verbal reports and particular actions that clients should be able to perform to move toward independent SM. Although the goal statements are recorded in a somewhat directive way (“the client *will* ...”), the SM support approach requires that goals be developed collaboratively through conversation between therapist and client. The process of moving from verbal goals to action goals reflects the development of independence in SM, depicted in Box 1.

To understand and classify SM goals, we established an operational definition of an SM goal by combining partial definitions found in the literature from the areas of SM involving psychosocial factors,¹² Lorig and colleagues’ management tasks,¹³ and the home-care organization’s framework for descriptive goal setting: *a goal that is articulated in language that reflects a client’s ability to manage their symptoms, treatment program, physical and psychosocial consequences, or lifestyle changes inherent in living an active and emotionally satisfying life with a chronic condition*. Thus, an SM goal must explicitly involve the client’s active participation in managing their chronic condition, which may include both cognitive participation (e.g., problem solving, time management) and physical participation (e.g., completing exercises). Goals that were explicitly related to physical therapy outcomes but could not be classified as SM goals were classified as non-self-management (NSM) goals. Goals that were not explicitly related to physical therapy outcomes were classified as “non-goals” (NG).

While this structured approach to goal setting is designed to provide guidance for interventions related to promoting clients’ self-management of chronic conditions, research has not yet explored how physical therapists

implement it in home-care practice. The participating home-care organization first implemented this approach to goal setting in 2007, and all staff underwent training in applying this SM support process. All new physical therapists hired by the organization since 2007 have been trained in this collaborative goal-setting approach, and thus, would be expected to implement it in their practice.

Importantly, physical therapists' past clinical experience with particular client populations and their specific prior training have been shown to affect the goal-setting process.²⁰ Specifically, the duration and focus of past practice experience affects both skill in collaborating with clients during goal setting and understanding of client prognoses for particular conditions.²⁰ Furthermore, studies have shown that older adults, women, and those with fewer chronic conditions are more likely to engage in SM and self-care behaviour than younger adults, men, or those with more chronic conditions, respectively.^{21–24} Caseloads consisting of a large proportion of older adult clients with one or more chronic conditions are common in home-care physical therapy.²⁵ Physical therapists' experience with this population and increasing demands on their time and resources may lead them to target particular clients with certain demographic variables for more frequent or higher volumes of SM goals.²⁶ Examining the impact of factors known to influence clients' SM behaviour, such as sex, age, or number of chronic conditions, on SM goal setting by community-based physical therapists may provide insight into factors driving goal-setting practices, contributing to the identification of strategies to improve SM in home and community care.

The purpose of our study, therefore, was to determine whether clients' sex, age, or number of chronic conditions significantly influenced the SM goal-setting behaviour of community-based physical therapists. In a population of community physical therapists trained in an SM approach and working with clients who have chronic conditions, the study addressed the following objectives: (1) To determine whether there was a difference between the types of goals set (SM vs. non-self-management [NSM] vs. non-physical-therapy-oriented [NG] goals) based on sex, age, or number of chronic conditions; (2) to describe the types of SM goals according to the home-care organization's goal-setting guidelines and determine whether there was a difference according to sex, age, or number of chronic conditions; and (3) to describe the proportion of SM and NSM goals that were met based on sex, age, and number of chronic conditions.

METHODS

Setting

We conducted our study at the corporate office of a community-based non-profit health service agency in Toronto, Canada, that provides nursing, personal sup-

port, and rehabilitation services (occupational therapy, speech therapy, physical therapy) through more than 1 million client visits each year by more than 1,600 staff. Ethics approval for this study was obtained from the research ethics board at the University of Toronto and the home-care organization.

Study design

We conducted a quantitative, descriptive, longitudinal retrospective chart review with client records obtained from July 2009 to July 2010. A master client list was generated for all clients receiving care from the home-care organization located in Toronto during this time. From the master list, we selected between 18 and 23 charts per month, representing an even distribution across 13 months, to reach a target sample size of 296 charts (explained below), using the following protocol. We first divided the list of charts discharged by therapists in each month chronologically into four lists, each representing approximately 1 week. These lists were each assigned to one of the researchers, who then selected charts chronologically by discharge date, beginning at the top of their lists, achieving a sample of charts that was not systematically biased and was distributed evenly throughout each month of the study period. Charts were selected if, at the time of data collection, the client met the following inclusion criteria: received physical therapy services from physical therapists employed in the home-care organization between July 2009 and July 2010, was at least 18 years old, and had a chronic condition as defined by the Public Health Agency of Canada (PHAC; see Table 1).²⁷ Exclusion criteria consisted of illegible handwriting and missing or incomplete initial and discharge summary reports that did not contain all the relevant information for data abstraction.

Data collection

We created a data-abstraction form before beginning data extraction to ensure consistency among investigators. The form was pilot tested before data abstraction began. Using this form, we collected the following demographic and goal characteristics from the chart of each client who met the inclusion criteria:

- (1) Age
- (2) Sex
- (3) Type and number of chronic conditions as defined by PHAC²⁷ (see Box 2)
- (4) Total number of goals set
- (5) Identification of each goal as SM, NSM, or NG
- (6) Type of SM goal set, based on the continuum of independence:
 - (a) Self-management goal 1 (SM1): Client is aware ...
 - (b) Self-management goal 2 (SM2): Client will identify strategies for ...

Box 2 Chronic Diseases Included in Chart Review

Name of chronic disease*	Conditions included
Cardiovascular disease	Hypertension, stroke, myocardial infarction
Chronic respiratory disease	Asthma, chronic obstructive pulmonary disease
Cancer	Breast cancer, cervical cancer, colorectal cancer, lung cancer, melanoma, prostate cancer
Diabetes	Type 1 and type 2 diabetes mellitus
Arthritis	Rheumatoid arthritis and osteoarthritis
Neurological conditions	ALS, Alzheimer's disease and related dementia, brain tumours, cerebral palsy, dystonia, epilepsy, Huntington's disease, hydrocephalus, neurotrauma (including brain and spinal-cord injuries), multiple sclerosis, muscular dystrophy, Parkinson disease, spina bifida, Tourette syndrome

*As defined by the Public Health Agency of Canada.²⁷

ALS = amyotrophic lateral sclerosis.

- (c) Self-management goal 3 (SM3): Client will report understanding of ...
- (d) Self-management goal 4 (SM4): Client will demonstrate ...
- (7) The total number of SM goals, NSM goals, and NG and whether or not the SM and NSM goals were achieved (if this was not clear, the goal was placed in the "not met" category). As NG were not considered physical therapy goals, their achievement was not abstracted.

Keywords from the home-care organization's goal-setting guideline, or synonyms of these, were used to help identify SM, NSM, and NG goals and to categorize each SM goal on the continuum of independence. To ensure confidentiality, a unique identification number was assigned to each included chart, and no other identifying information was collected for the study. Four members of the research team extracted the data. We used Fleiss's kappa to measure interrater reliability because it is suitable to evaluate nominal variables ("aware" goal vs. "understand" goal, SM goal vs. NSM goal) by more than two raters.²⁸ In our study, interrater reliability was high ($\kappa > 0.97$) for all nominal variables. Once data abstraction was complete, we inputted the data and coded them using MS Excel 2007 (Microsoft Corp., Redmond, WA) and the Statistical Package for the Social Sciences, version 18.0 (SPSS Inc., Chicago, IL). Finally, two investigators rechecked the 296 charts to ensure correct data input.

Data analysis

We calculated descriptive statistics (mean values, frequencies, and percentages) for each variable, which were used to provide information on the types of goals set (SM vs. NSM), where on the continuum of independence goals were set, and whether or not goals were achieved. To determine the potential influence of sex, age, or number of chronic conditions on the types of goals set and their location on the continuum of independence, we per-

formed Pearson's chi-square tests using Excel. The chi-square test is not optimal when cell values are < 5 . Because of the distribution of the data, we collapsed the three "verbal" stages from the continuum of independence (SM1, "aware"; SM2, "identify"; SM3, "describe") for comparison to the "action" stage (SM4, "demonstrate") to ensure cell values ≥ 5 . Similarly, data for two or more chronic conditions were collapsed together and compared with data for one chronic condition.

RESULTS

According to client discharge reports, 10,867 adult clients received physical therapy services between July 2009 and July 2010. We reviewed a total of 583 charts to reach a sample size of 296. In accordance with Hulley, to achieve a CI of 95% and a margin of error of 5.5%, our sample size was determined to consist of 296 charts for review.²⁹

Client characteristics

Charts for 112 male and 184 female clients were included in our study. Clients' median age was 78, corresponding to the 50th percentile; their age range was 24–97 years. The majority (237/296) were ≥ 65 years old. Clients had a mean of 1.64 (SD 0.77) chronic conditions.

Goal setting

The total numbers of SM, NSM, and NG goals set were 439, 218, and 104 respectively. The percentages of SM, NSM, and NG goals were similar for male and female clients; the highest proportion of goals set were SM goals (172 [58.9%] for men, 267 [56.9%] for women). The percentages were also similar for clients < 65 years old (91, 58.3%) and ≥ 65 years old (348, 57.5%), as well as for those with one (225, 57.3%), two (134, 54.0%), three (73, 67.0%), or four (7, 63.6%) chronic conditions.

When we compared the influence of sex, age, and number of chronic conditions on whether SM goals or NSM goals were set, we found that neither age ($p = 0.23$), sex ($p = 0.19$), nor number of chronic conditions ($p = 0.14$) was statistically significant at the $p > 0.05$ level (see Figure 1).

Figure 1 Proportion of self-management goals vs. non-self-management goals set for clients based on sex, age, and number of chronic conditions (CC), $p = 0.23, 0.19, 0.14$, respectively. (Non-physical therapy-related goals are not represented in these figures).

Continuum of independence

The total numbers of SM1, SM2, SM3, and SM4 goals were 115, 38, 15, and 271, respectively. The percentage of each type of SM goal set did not differ based on sex (male vs. female) or age (<65 vs. ≥65 years old). In each case, the greatest proportion of goals set was of the “action” type (SM4): 61.0% (105) for male clients and 62.2% (166) for female clients; 60.4% (55) for clients <65 years old and 62.1% (216) for those ≥65 years old. Findings were similar when the percentages of each type of SM goal set were compared by number of chronic conditions: across all categories, the highest proportion of goals set was SM4 and the lowest percentages were SM2 and SM3. For clients with one, two, three, and four chronic conditions, the percentages of “action” (SM4) goals set were 59.6% (134), 65.7% (88), 57.5% (42) and 100.0% (7) respectively. Our analysis found no significant influence of sex ($p = 0.81$), age ($p = 0.77$), or number of chronic conditions ($p = 0.34$) on the type of SM goals (verbal vs. action) assigned to each client (see Figure 2).

Goal achievement

Of all goals set (both SM and NSM), 622 were met and 35 were not met. Across all categories in the sample (age, sex, and number of chronic conditions), a high proportion (89%–100%) of both SM and NSM goals were met (see Table 1). Statistical analysis to determine the influence of sex, age, or number of chronic conditions on whether or not SM and NSM goals were met was not feasible because such a large percentage of goals were achieved.

DISCUSSION

To our knowledge, this is the first study to investigate the implementation of SM collaborative goal setting by physical therapists trained in an SM approach in collaboration with community-dwelling clients. A review of 296 charts of clients with chronic conditions showed marked consistency in the types of collaborative goals set by physical therapists and clients across client and demographic variables; we found no significant influence of sex, age, or number of chronic conditions on whether SM versus NSM goals were set by the therapist and client or on the type of SM goal (verbal vs. action) set. This finding suggests that a variety of other factors may need to be considered to provide further insight into the collaborative goal-setting practices of clients and physical therapists. Potential factors influencing SM goal setting and implications for future research are discussed below. In addition, the physical therapists in our sample set more collaborative SM goals than NSM goals: approximately 67% of goals set reflected an SM approach to practice (i.e., were written in a way that explicitly documents the client's active participation in self-care).

Factors that may affect setting self-management goals

We found that decisions about whether to encourage SM goals and which type of SM goals (verbal vs. action) to set in collaboration with clients with chronic conditions did not depend directly on sex, age, or number of chronic conditions, which raises the question of what additional factors might influence the SM goal-setting process. Gitterman and Miller³⁰ discussed how a health

Figure 2 Proportion of verbal-SM goals (V-SM) vs. action-SM goals (A-SM) set for clients based on sex, age, and number of chronic conditions (CC), $p = 0.81$, 0.78 and 0.34 respectively. According to the continuum of independence, the verbal self-management goals include SM1 (“aware”), SM2 (“identify”), and SM3 (“describe”). The action goal is SM4 (“demonstrate”).

Table 1 Proportion of Self-Management (SM) Goals and Non-self-management (NSM) Goals Clients Met vs. Not Met Based on Sex, Age, and Number of Chronic Conditions

Variable	SM goal, % (no.)		NSM goal, % (no.)	
	Met	Not met	Met	Not met
Sex				
M ($n = 112$)	95.9 (165)	4.1 (7)	92.0 (69)	8.0 (6)
F ($n = 184$)	94.4 (252)	5.6 (15)	95.1 (136)	4.9 (7)
Age, y				
<65 ($n = 59$)	89.0 (81)	11 (10)	97.2 (35)	2.8 (1)
≥65 old ($n = 257$)	96.6 (336)	3.4 (12)	93.4 (170)	6.6 (12)
No. of chronic conditions				
1 ($n = 157$)	95.1 (214)	4.9 (11)	94.4 (118)	5.6 (7)
2 ($n = 95$)	93.3 (125)	6.7 (9)	95.2 (60)	4.8 (3)
3 ($n = 39$)	97.3 (71)	2.7 (2)	100 (27)	0 (0)
4 ($n = 5$)	100 (7)	0 (0)	0 (0)	100 (3)
Total no. of goals ($n = 657$)	417	22	205	13

SM = self-management; NSM = non-self-management

service organization’s culture and mandate can profoundly influence service providers’ orientation to client care.³⁰ Using social work as a case study, they described how organization-wide improvement initiatives such as service volume goals influenced the types of clients that health care providers took on and the type of care they provided. Similarly, efforts by the home-care agency where our study took place to implement a common goal-setting framework will have influenced physical therapists’ orientation toward SM goal setting and likely increased SM

goal-setting in their practice, regardless of client characteristics. Our finding that the majority of goals set did in fact fall into the SM framework is evidence that the organization’s goal-setting implementation initiatives were successful.

While organization-level factors influence physical therapists’ goal-setting and decision-making behaviours, clinical autonomy and training also affect the goal-setting process. Wainright and colleagues²⁰ study, which explored the factors influencing the goal setting and decision

making of novice and expert physical therapists in clinical practice, found that factors such as clinical experience, previous mentorship, and research literature influenced physical therapists' decision making. While academic and professional training were found to influence novice clinicians more than expert clinicians, the orientations to clinical care adopted during physical therapy education influenced all physical therapists' approaches to decision making. Thus, emphasis on particular theoretical orientations throughout clinical education, such as the recent emphasis placed on the International Classification of Functioning, Disability, and Health (ICF) model, will influence the type of goal setting applied by physical therapists. For example, physical therapists and clients may set collaborative goals in relation to the categories of the ICF, encouraging collaborative goal setting to focus on impairments (e.g., limited range of motion), activities (e.g., walking up stairs), and/or participation in social life (e.g., playing a round of golf) to organize selected interventions favoured by the client. While the physical therapists in our study applied collaborative SM goal setting with the majority of their clients, the goals set were likely also influenced by particular orientations to clinical care adopted during their past training and clinical experiences. These theoretical or clinical orientations—for example, toward SM goal setting and/or ICF classification—would then affect physical therapists' decisions about which type of goal setting to encourage, regardless of specific client characteristics.

An additional and crucial factor influencing physical therapists' decisions about what type of goal setting to emphasize with clients is the interactive process between clinician and client.^{31,32} While demographic characteristics and number of chronic conditions will affect each client's inclination toward self-care behaviour,^{33–35} every client has a unique history and perspective that should influence clinical goal setting for their care.¹⁵ Client characteristics not represented by a simple diagnostic label will thus also have an impact on the goal-setting process. For example, a physical therapist may not set SM goals with clients who have cognitive deficits due to their reduced capability to understand or manage their own chronic condition. Furthermore, the level of SM independence chosen (i.e., verbal vs. action goal) also depends on the severity of the client's condition; for example, with a client whose temporarily exacerbated osteoarthritis has increased pain and limited function, a physical therapist may suggest a verbal-SM goal (e.g., "identify strategies to decrease pain") during this stage of the condition, as opposed to an action-SM goal (e.g., "demonstrate exercises in the home exercise program"). Thus, the specific goal-setting strategy employed by a community physical therapist in collaboration with his or her clients will depend on the nature and severity of each client's chronic conditions as well as his or her personal characteristics, such as motivation or disease severity.

High goal-achievement rate and home-care challenges

Our study found a high rate of goal achievement, ranging from 89% to 100% (see Table 1). Considering the incremental nature of SM goal setting, which focuses on promoting clients' progressive empowerment to manage their own chronic conditions, this high rate of goal achievement may be expected. However, we should also consider the possibility that the limited resources available in home care compel physical therapists to set goals that are achievable within the allotted number and frequency of visits. Although community physical therapists may want optimal care for their clients, the collaborative goals they set may be influenced by the strained resources that currently characterize the home-care environment, in part due to an aging population and client base, the increased incidence of chronic conditions, and the fact that fewer individuals are working as home-care therapists.³⁶

Furthermore, Ontario Community Care Access Centers mandate that contracted home-care organizations obtain a goal-achievement level of 90% or higher, depending on the geographic region. Levack and colleagues³⁷ showed that physical therapists do in fact alter their goal-setting practices to focus on goals they perceive to be aligned with their professional responsibilities and perceived system pressures.³⁷ Because physical therapists have incentives to perform at a high level and improve their job performance, they may feel pressure to fit their collaborative goal-setting practice in line with this mandated policy of optimal performance. While such pressure may not improve the client-centredness and collaboration that characterizes the SM support approach, it may nonetheless encourage physical therapists to orient their goal-setting practices to fit within the language of the SM support model.

Limitations

One limitation of our study is that we do not know the total number of physical therapists involved with clients, the therapists' level of experience, or how long each therapist had been working for the home-care organization at the time of the study. Further, the duration of time since initial training for SM goal setting for each therapist was not known. While these factors all have the potential to influence our findings, because we randomly selected client charts from different geographic communities across 13 months, it is likely that a diverse sample of therapists was involved in this study.

A second limitation is that our study relied on the accuracy of information documented by health care practitioners working in a busy acute-care environment before clients were referred to the home-care organization. It is possible that certain pieces of pertinent information, such as additional chronic conditions that may not have been considered relevant to the primary health issue at the time, were discussed with the client but not captured in

the initial report. In addition, we do not know the severity of the clients' chronic condition(s), which may have affected the goal setting indicated by the physical therapist in the initial and discharge summary reports. Although current literature was used in developing our definition of SM, and PHAC's model of chronic conditions was used for our inclusion criteria, these definitions may not be fully representative of the literature, and other aspects of SM and conditions deemed chronic by other organizations may not have been represented in our study.

CONCLUSION

Our findings indicate that neither the application of an SM goal nor the level of independence of this goal on a continuum was influenced by the client's sex, age, or number of chronic conditions; the choice of which type of goal to set with a client with a chronic condition was found to be more complex than initially expected. The physical therapist's goal-setting decisions are a function of many factors and take into consideration a client's functional capabilities, which may warrant one specific type of goal over another. Further research might examine what specific types and severity of chronic conditions demand SM over NSM goals and where on the continuum these SM goals should fall. We also found a high rate of goal achievement, which may reflect current home-care dilemmas: physical therapists may feel pressure to set easily obtainable goals because of current challenges in the health care system. Additional inquiry into how the pressures of contemporary health care systems influence community physical therapists' goal-setting practices is warranted.

KEY MESSAGES

What is already known on this topic

Cost-effective approaches to managing chronic diseases play a crucial role by decreasing the burden of chronic illness on an already strained health care system. Self-management (SM) has been reported extensively in the literature as one strategy for managing chronic conditions, but little is known about the types of SM treatment goals that are identified by physical therapists working in a community setting and whether these goals promote a client's ability to independently manage their chronic conditions.

What this study adds

This retrospective chart review showed that community physical therapists' goal setting is not associated with clients' sex, age, or number of chronic conditions and that the majority of goals set were achieved, regardless of whether they were SM or non-SM goals. These insights into current goal-setting practices among community physical therapists lead to recommendations to explore a broader range of potential influences on SM goal setting.

REFERENCES

1. World Health Organization. World health statistics 2012. Geneva: World Health Organization; 2011.
2. Public Health Agency of Canada. Chronic disease infobase [Internet]. Ottawa: The Agency; 2010 [cited 2013 Aug 21]. Available from: <http://66.240.150.17/cubes/intro-e.html>.
3. Public Health Agency of Canada. Backgrounder: United Nations NCD Summit 2011 [Internet]. Ottawa: The Agency; 2011 [cited 2013 Aug 21]. Available from: http://www.phac-aspc.gc.ca/media/nr-rp/2011/2011_0919-bg-di-eng.php.
4. Ministry of Health and Long Term Care. Preventing and managing chronic disease [Internet]. Toronto: The Ministry; 2006 [cited 2010 September 25]. Available from: <http://www.health.gov.on.ca/en/pro/programs/cdpm>.
5. Clark NM. Management of chronic disease by patients. *Annu Rev Public Health*. 2003;24(1):289–313. <http://dx.doi.org/10.1146/annurev.publhealth.24.100901.141021>. Medline:12415147
6. Gibson PG, Powell H, Coughlan J, et al. Self-management education and regular practitioner review for adults with asthma. *Cochrane Database Syst Rev*. 2003;1(1):CD001117. Medline:12535399
7. Norris SL, Nichols PJ, Caspersen CJ, et al. Increasing diabetes self-management education in community settings. A systematic review. *Am J Prev Med*. 2002;22(4 Suppl):39–66. [http://dx.doi.org/10.1016/S0749-3797\(02\)00424-5](http://dx.doi.org/10.1016/S0749-3797(02)00424-5). Medline:11985934
8. Evans D, Clark NM, Feldman CH, et al. A school health education program for children with asthma aged 8–11 years. *Health Educ Q*. 1987;14(3):267–79. <http://dx.doi.org/10.1177/109019818701400302>. Medline:3654234
9. Tsasis P. Chronic disease management and the home-care alternative in Ontario, Canada. *Health Serv Manage Res*. 2009;22(3):136–9. <http://dx.doi.org/10.1258/hsmr.2009.009002>. Medline:19633182
10. Wijkstra PJ, Van Altena R, Kraan J, et al. Quality of life in patients with chronic obstructive pulmonary disease improves after rehabilitation at home. *Eur Respir J*. 1994;7(2):269–73. <http://dx.doi.org/10.1183/09031936.94.07020269>. Medline:8162979
11. Barlow J, Wright C, Sheasby J, et al. Self-management approaches for people with chronic conditions: a review. *Patient Educ Couns*. 2002;48(2):177–87. [http://dx.doi.org/10.1016/S0738-3991\(02\)00032-0](http://dx.doi.org/10.1016/S0738-3991(02)00032-0). Medline:12401421
12. Coleman MT, Newton KS. Supporting self-management in patients with chronic illness. *Am Fam Physician*. 2005;72(8):1503–10. Medline:16273817
13. Lorig KR, Holman H. Self-management education: history, definition, outcomes, and mechanisms. *Ann Behav Med*. 2003;26(1):1–7. http://dx.doi.org/10.1207/S15324796ABM2601_01. Medline:12867348
14. Ontario Physiotherapy Leadership Consortium. Physiotherapists in health promotion: Finding a forum. *Physiother Can*. 2007;63(4):391–2.
15. Bainbridge L, Harris S. Informed shared decision making: A model for physical therapy education and practice? *Physiother Can*. 2006;58(1):74–81. <http://dx.doi.org/10.3138/ptc.58.1.74>.
16. Cott C, Finch E. Goal-setting in physical therapy practice. *Physiother Can*. 1991;43(1):19–22. Medline:10109906
17. Wagner EH, Austin BT, Davis C, et al. Improving chronic illness care: translating evidence into action. *Health Aff (Millwood)*. 2001;20(6):64–78. <http://dx.doi.org/10.1377/hlthaff.20.6.64>. Medline:11816692
18. Wagner EH, Austin BT, Von Korff M. Organizing care for patients with chronic illness. *Milbank Q*. 1996;74(4):511–44. <http://dx.doi.org/10.2307/3350391>. Medline:8941260
19. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness: the chronic care model, Part 2. *JAMA*. 2002;288(15):1909–14. <http://dx.doi.org/10.1001/jama.288.15.1909>. Medline:12377092
20. Wainwright SF, Shepard KF, Harman LB, et al. Factors that influence the clinical decision making of novice and experienced physical therapists. *Phys Ther*. 2011;91(1):87–101. <http://dx.doi.org/10.2522/ptj.20100161>. Medline:21127167

21. Prohaska TR, Leventhal EA, Leventhal H, et al. Health practices and illness cognition in young, middle aged, and elderly adults. *J Gerontol*. 1985;40(5):569–78. <http://dx.doi.org/10.1093/geronj/40.5.569>. Medline:4031405
22. Spitzer A, Bar-Tal Y, Ziv L. The moderating effect of age on self-care. *West J Nurs Res*. 1996;18(2):136–48. <http://dx.doi.org/10.1177/019394599601800203>. Medline:8638420
23. Courtenay WH. Engendering health: a social constructionist examination of men's health beliefs and behaviors. *Psychol Men Masc*. 2000;1(1):4–15. <http://dx.doi.org/10.1037/1524-9220.1.1.4>.
24. Addis ME, Mahalik JR. Men, masculinity, and the contexts of help seeking. *Am Psychol*. 2003;58(1):5–14. <http://dx.doi.org/10.1037/0003-066X.58.1.5>. Medline:12674814
25. Fletcher PC, Hirdes JP. Risk factors for falling among community-based seniors using home care services. *J Gerontol A Biol Sci Med Sci*. 2002;57(8):M504–10. <http://dx.doi.org/10.1093/gerona/57.8.M504>. Medline:12145363
26. Baker SM, Marshak HH, Rice GT, et al. Patient participation in physical therapy goal setting. *Phys Ther*. 2001;81(5):1118–26. Medline:11319937
27. Public Health Agency of Canada. Chronic diseases [Internet]. Ottawa: The Agency; 2010 [cited 2010 Sep 25]. Available from: <http://www.phac-aspc.gc.ca/cd-mc/index-eng.php>
28. Reeves MJ, Mullard AJ, Wehner S. Inter-rater reliability of data elements from a prototype of the Paul Coverdell National Acute Stroke Registry. *BMC Neurol*. 2008;8(1):19–24. <http://dx.doi.org/10.1186/1471-2377-8-19>. Medline:18547421
29. Hulley SB. Designing clinical research. 3rd ed. Philadelphia: Lippincott Williams & Wilkins; 2007.
30. Gitterman A, Miller I. The influence of the organization on clinical practice. *Clin Soc Work J*. 1989;17(2):151–65.
31. Parry RH. Communication during goal-setting in physiotherapy treatment sessions. *Clin Rehabil*. 2004;18(6):668–82. <http://dx.doi.org/10.1191/0269215504cr745oa>. Medline:15473119
32. Schoeb V. “The goal is to be more flexible”—detailed analysis of goal setting in physiotherapy using a conversation analytic approach. *Man Ther*. 2009;14(6):665–70. <http://dx.doi.org/10.1016/j.math.2009.02.004>. Medline:19427808
33. Heo S, Moser DK, Lennie TA, et al. Gender differences in and factors related to self-care behaviors: a cross-sectional, correlational study of patients with heart failure. *Int J Nurs Stud*. 2008;45(12):1807–15. <http://dx.doi.org/10.1016/j.ijnurstu.2008.05.008>. Medline:18674762
34. Klainin P, Ounnapirok L. A meta-analysis of self-care behavior research on elders in Thailand: an update. *Nurs Sci Q*. 2010;23(2):156–63. <http://dx.doi.org/10.1177/0894318410362788>. Medline:20167710
35. Horsburgh ME. Self-care of well adult Canadians and adult Canadians with end stage renal disease. *Int J Nurs Stud*. 1999;36(6):443–53. [http://dx.doi.org/10.1016/S0020-7489\(99\)00049-8](http://dx.doi.org/10.1016/S0020-7489(99)00049-8). Medline:10576115
36. Canadian Home Care Association. ALC Challenges [Internet]. Toronto: The Association; 2010 [cited 2011 Jul 3]. Available from: <http://www.cdnhomocare.ca/content.php?doc=260>.
37. Levack WM, Dean SG, Siegert RJ, et al. Navigating patient-centered goal setting in inpatient stroke rehabilitation: how clinicians control the process to meet perceived professional responsibilities. *Patient Educ Couns*. 2011;85(2):206–13. <http://dx.doi.org/10.1016/j.pec.2011.01.011>. Medline:21306859