

## Goal Priorities Identified through Client-Centred Measurement in Individuals with Chronic Stroke

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### Abstract

**Purpose**—The purpose of this study was to identify goal priorities in a sample of individuals with chronic stroke.

**Method**—In this descriptive study involving 19 community-dwelling individuals with stroke, participants were interviewed on the Canadian Occupational Performance Measure (COPM) to ascertain problem areas experienced after hospital discharge. Once problems were identified, they were classified under the three dimensions of the COPM: self-care, productivity, and leisure.

**Results**—The mean time since stroke was 6.8 ( $\pm 2.9$ ) years. Eighty-four problems were identified within the three dimensions of the COPM. The most frequently cited problems in each dimension were bathing (self-care) by 42% of participants, household maintenance (productivity) by 32% of participants, and walking outdoors (leisure) by 32% of participants. Overall, participants rated their performance of identified problems and satisfaction with their abilities as low and rated each dimension as equally important for problem priority.

**Conclusion**—Long after hospital discharge, individuals with chronic stroke were able to identify issues of concern that could benefit from involvement of rehabilitation professionals. Clinicians should be aware that issues of bathing, walking, household maintenance, and recreational activities are of particular importance to people with chronic stroke living in the community. A client-centred approach to problem generation (ie, use of the COPM) may assist in enhancing client involvement and motivation towards rehabilitation.

### Keywords

cerebrovascular accident; client-centred goals; client-centred measures; community; rehabilitation

### Introduction

There are 300,000 persons living with the effects of stroke in Canada, with 40,000 to 50,000 new cases each year.<sup>1</sup> Stroke can impact virtually all areas of function: gross motor and fine motor skills, ambulation, basic and instrumental activities of daily living (ADL), mood, speech, perception, and cognition. Stroke predominantly affects older adults, and, with the demographic of the older adult population increasing, the number of individuals living with stroke-related disability will rise.<sup>2</sup>

Residual impairment is common following a stroke, with up to 50% of individuals sustaining moderate to severe deficits affecting performance in ADL.<sup>1</sup> The fundamental goals of rehabilitation are to develop and maintain the ability to perform ADL and to promote quality of life. Because the majority of individuals who have a stroke will be discharged home,<sup>3,4</sup> rehabilitation professionals who work in the community should be aware of the issues that these individuals face and the importance that they place on these issues. By knowing what problem areas are important to individuals with stroke, clinicians may be better able to promote community independence through methods such as exercise, equipment prescription, and home safety assessments.

In the chronic stage of stroke, access to, provision of, and time allotted to rehabilitation therapy is decreased compared with when these individuals are in hospital or care facilities. Clinicians who work with clients in the community need to be both efficient and effective given the limited time available to achieve set goals. One way to identify the most relevant goals is for clients to identify their own goals, which also assists in engaging the client in the therapy process.<sup>5</sup> Such involvement may result in greater motivation by clients to achieve goals that are meaningful to them.<sup>5-9</sup>

To date, two studies have focused on the identification of client goals in individuals with chronic stroke.<sup>10,11</sup> Grant designed a qualitative study providing examples of narratives from interviews of 10 individuals and their caregivers.<sup>10</sup> This study reported a lack of social and emotional support in the community for both individuals with stroke and their caregivers. Using a semistructured interview format, Mumma collected and identified issues of concern to 60 individuals with chronic stroke and their caregivers.<sup>11</sup> Issues of client independence and caregiver support were the main findings of this study. Neither study attempted to quantify the goal priorities expressed by the individual. In addition, grouping categories were vague and general (eg, independence), leaving no concrete idea of specific areas of concern (eg, dressing, walking). Studies describing specific problem areas must be completed for individuals with chronic stroke so that clinicians can identify assessment and treatment avenues and clients can participate in meaningful activities.

Most instruments used to assess problem areas for individuals with disability include structured questions that do not allow for client-generated goals or problem areas, requiring that goals be generated by the therapist or health care team. To overcome this issue, the assessment process must be client centred. Fortunately, client-centred assessment and therapy have become more common in the past two decades.<sup>5</sup> Developed by a team of occupational therapists, the Canadian Occupational Performance Measure (COPM) is an individualized measure designed for use by occupational therapists to assist clients to (1) identify goals in the areas of self-care, productivity, and leisure; (2) prioritize goals in order of importance; (3) rate the performance of each identified goal; and (4) rate their satisfaction with their performance.<sup>12</sup> The purpose of this study was to identify the goals of individuals with chronic stroke using a client-centred assessment (COPM).

## Method

### Participants

Participants were recruited from the community using advertisements in local newspapers and community centres. Nineteen participants volunteered for the study. Inclusion criteria were (1) at least 1 year post-stroke, (2) ability to communicate sufficiently to participate in an interview, and (3) living in the community. Exclusion criteria included (1) receptive aphasia or (2) severe expressive aphasia. To describe participant characteristics, gait speed and the functional status component of the American Heart Association Stroke Outcome Classification (AHASOC)<sup>13</sup> were used. The AHASOC is a scale designed to measure the residual disability of stroke in the areas of basic (BADL) and instrumental (IADL) activities of daily living. The scale consists of five levels (1–5), with a score of 1 indicating independence in both BADL and IADL and a score of 5 indicating complete dependence. The same therapist conducted each COPM interview. Ethics approval was obtained from both the hospital and the university ethics boards.

### Canadian Occupational Performance Measure (COPM)

The COPM is a client-centred measure designed to help individuals define activities that they would like to do, are expected to do, or cannot do. We administered the measure in accordance with the recommended guidelines outlined in the COPM manual.<sup>14</sup> Administered in a semistructured manner, the COPM asks clients to identify activities or tasks with which they have difficulty in the areas of self-care (eg, bathing, mobility), productivity (eg, cleaning, work), and leisure (eg, reading, sports). After the individual has identified tasks, they are asked to rate the importance of performing these tasks on a scale from 1 to 10 (with 10 being the most important). Up to five problems or tasks are typically chosen by the client as areas of priority for treatment. Clients are then asked to rate their self-perceived level of performance on a 10-point scale for each of the tasks. Then they rate their satisfaction on a 10-point scale for each identified task, resulting in two scores for each problem (ie, a performance score and a satisfaction score for each task or problem). There are verbal indicators at the extreme ends of each scale, for example, not at all satisfied (1) and completely satisfied (10). A score of 1 would mean that the individual was having great difficulty with performance or was not satisfied with his or her performance, and a score of 10 would mean either no difficulty with performance or complete satisfaction with his or her performance. To attain the total score for each scale (performance and satisfaction), the scores identified for each problem or task are added and then divided by the number of problems or tasks.

The COPM has been widely used as a measure of occupational performance (self-care, productivity, and leisure)<sup>5,12,15,16</sup> and has demonstrated good test–retest reliability.<sup>14,15,17</sup> Boschand McColl and colleagues established construct validity,<sup>18,19</sup> Ripat and colleagues established concurrent validity,<sup>20</sup> and several authors concluded that the COPM had satisfactory criterion validity.<sup>18,19,21</sup> In addition, face validity<sup>18</sup> and discriminant validity<sup>22</sup> have been established.

## Procedure

The COPM is divided into three dimensions: self-care, productivity, and leisure.<sup>14</sup> Examples can be given for each of the categories to help the client identify appropriate activities and goals. Once all of the participants in our study had completed their interviews, the information was classified under the three dimensions. The same two therapists classified the activities, and any disagreement was discussed until consensus was achieved.

## Data Analysis

Demographic data (age, side of paresis, time since stroke, and gender) were collected from the participants during the interviews. Descriptive statistics in the form of means, standard deviations, frequency counts, and percentages were used to summarize the data.

## Results

The mean age of the participants was 65.1 ( $\pm$  8.2) years, with a mean time since stroke of 6.8 ( $\pm$  2.9) years (Table 1). All participants lived at home. There was a wide range of gait speeds from as slow as 0.3 m/s to speeds similar to values of healthy older adults (1.2 m/s), as well as a range of AHASOC levels.

Fifteen participants (79%) reported problems in self-care, 16 participants (84%) in leisure, and 12 participants (63%) in productivity. Bathing was the most frequently reported problem in self-care, with eight participants (42%) citing this as an issue. Six participants (32%) identified household maintenance as the most frequent problem in the area of productivity. Walking outdoors was cited by six participants (32%) as the most frequent problem in the area of leisure. (See Table 2 for details regarding problem identification.)

Overall, participants reported that they were not able to perform identified problem activities well and were not satisfied with their performance, that is, the mean scores were less than 4 of a maximum of 10 (see Table 1). There were no significant differences among participants' mean ratings of problem importance for each of the three domains: self-care (8.5), productivity (8.3), and leisure (8.7).

## Discussion

Goals are central to rehabilitation. There is now greater awareness for clients to be active participants in goal generation and the rehabilitation process. Our study found that clients in the chronic stage of stroke recovery identified problems that could potentially be supported through therapeutic services. The main areas of concern were in ADL, ambulation, and involvement in recreation activities. The low scores on the COPM demonstrated that not only do people with stroke continue to have problems in self-care, productivity, and leisure but that they are also dissatisfied with their performance in day-to-day tasks (see Table 1). Participants reported that all domains were equally important to them. Knowing this information reinforces the need for therapists to continue to focus on a wide variety of problems when working with individuals with stroke who live in the community.

Half of the participants identified problems of self-care, specifically personal care. The ability to independently care for one's self is cited by individuals with stroke as an important theme.<sup>10,11,23</sup> In our study, bathing and dressing were identified as key areas of concern. Although the skills to dress and bathe one's self are usually practiced in hospital, it appears that residual limitations exist for individuals once they are discharged into the community.

A number of factors could contribute to these limitations, including environmental changes, declines in physical or mental status, and changes in aid or support from family or home-care workers. In fact, Wade and colleagues reported deterioration in mobility over a 3-month period in individuals with chronic stroke.<sup>24</sup> Whether this is because of environmental change or a decline in physical or mental condition is not known. However, it is clear that community therapists can continue to play an important role in assessing and implementing appropriate interventions in these areas to ensure that clients are maintaining appropriate levels of independence. For example, identification of difficulties with self-care tasks could lead to a referral to an occupational therapist, who could then make suggestions to improve independence in self-care activities.

Issues of household management were identified by one-third of the participants, and recreational activities were cited as areas of difficulty by well over half of the participants. Tasks such as cooking, cleaning, and laundry are often difficult to address in an inpatient rehabilitation setting. For example, individuals in the acute stage of stroke recovery<sup>23</sup> have reported these issues to be of lower priority than individuals in the chronic stage.<sup>10,11</sup> The issue of independence in IADL has also been cited in previous studies as a problem area for individuals with chronic stroke.<sup>10,11</sup> Performance in recreational activities is often neglected in the acute and rehabilitation stage of stroke recovery because issues of mobility and ADL take precedence. It is often believed that issues in the completion of household management and leisure tasks will be more thoroughly addressed once clients are discharged to their community environment.

Both Mumma and Bohannon and colleagues found mobility problems to be the primary area of concern for individuals with stroke.<sup>11,23</sup> In our study, walking was cited in the dimensions of self-care and leisure as an issue in functional mobility and an issue in active recreation. This finding suggests that ambulation is not only an important part of day-to-day living but also of the ability to participate fully in all aspects of the physical environment. As in the other studies cited,<sup>11,23</sup> ambulation was a key priority for the individuals with stroke in our study and should, therefore, be a focal point of stroke rehabilitation.

Awareness of specific activities that are important to the individual will assist the clinician in focussing treatment on areas of meaning for the client.<sup>25</sup> Rehabilitation professionals play a pivotal role in helping individuals with stroke cope effectively and efficiently with stroke-related residual impairments when discharged into a community setting. Providing rehabilitation support for stroke survivors, even 12 months following discharge, may be instrumental for successful community transition, as evidenced by the remaining therapy issues identified in this study. Community therapists must ascertain client goals for treatment intervention to be able to cultivate partnerships in goal achievement and promote function and independence for individuals with stroke.

Our study was composed of 19 individuals, mainly men, living in an urban setting. The results of this study may be difficult to generalize to persons residing in other demographic areas. A larger sample size, and a sample composed of more women, may have produced different priorities. Our sample was younger than typical individuals with stroke, which is approximately 74 years of age.<sup>26</sup> Our younger mean age could be due to our high number of males, in that females tend to sustain strokes at a later age (70 years vs 65 years of age).<sup>2</sup> All of our participants lived at home, making generalizability to individuals in an institution difficult. However, the majority of individuals with stroke living in the community do reside in their homes.<sup>4,26</sup>

An additional limitation of this article is illustrated in a recent article by Cup and colleagues, which questioned the reliability of the COPM in generating a consistent item pool.<sup>22</sup> We do not feel that this is a major issue in our study, given that our sample consisted of who were all greater than 1-year post-stroke, representing more stability in their stage of recovery than the subjects in the study by Cup and colleagues.<sup>22</sup>

### Clinical Implications

Our study is unique in that it identified general themes but also specific problem areas cited by individuals with chronic stroke. The results of our study indicate that individuals with chronic stroke continue to have problems several years after stroke onset. Issues of dressing, bathing, and walking were frequently cited and are problems amenable to treatment. Some of these issues may have been addressed and solved on discharge home. However, a decline in physical or mental status or a change in environment or caregiver support could lead to difficulties. For example, a problem in dressing may be due to a decrease in strength. A treatment plan to address this issue could be implemented, or additional home support might be required. Difficulties in walking may stem from a decline in physical status (eg, balance or strength). An exercise program and an evaluation of mobility aids and a home safety assessment could be completed to address this issue.

Clinicians working in the community should not limit their questions concerning ambulation to indoor activities but should broaden their scope to address issues of recreation as well. Individuals with chronic stroke place high value on their ability to engage in leisure activities, such as reading, participating in sports, and being able to go on social outings. Clinicians should not overlook the importance of these activities as a potential treatment focus. Therapists working in the community may need to establish follow-up protocols for reassessment to prevent problems from accumulating and interfering with community living. Clinicians working in the community may want to take the opportunity to perform a client-centred assessment, such as the COPM, to ascertain problems that are meaningful and relevant for the client.

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**Table 1**

## Participant Characteristics (N = 19)

| Variable   | n    | Mean (SD)/(Minimum–Maximum) |
|--|------|-----------------------------|
| Gender (M/F)   | 14/6 |                             |
| Age, yr  |      | 65.1 (8.2)/(55–84)          |
| Time since stroke, yr                                    |      | 6.8(2.9)/(3–13)             |
| Affected side (R/L)                                      | 10/9 |                             |
| Dominance (R/L)  | 18/1 |                             |
| American Heart Association Stroke Outcome Classification |      | 2.5 (0.61)/(2–4)            |
| Gait Speed   |      | 0.66 (0.21)/(0.27–1.14)     |
| COPM Performance Scale                                   |      | 3.5 (1.5)/(1–7.5)           |
| COPM Satisfaction Scale                                  |      | 3.7 (1.9)/(1–8)             |

COPM = Canadian Occupational Performance Measure.

**Table 2**

## Problems Identified in the COPM Categories

| Category            | Number (%) of Participants |
|---------------------|----------------------------|
| <b>Self-care</b>    | 15 (79)                    |
| Bathing             | 8 (42)                     |
| Dressing            | 5 (26)                     |
| Walking             | 4 (21)                     |
| Hygiene             | 3 (16)                     |
| Driving             | 3 (16)                     |
| Transportation      | 3 (16)                     |
| Transfers           | 2 (11)                     |
| Stairs              | 2 (11)                     |
| Eating              | 1 (5)                      |
| Grooming            | 1 (5)                      |
| <b>Productivity</b> | 12 (63)                    |
| Maintenance         | 6 (32)                     |
| Cooking             | 5 (26)                     |
| Cleaning            | 2 (11)                     |
| Laundry             | 2 (11)                     |
| Paid work           | 2 (11)                     |
| Volunteer           | 2 (11)                     |
| <b>Leisure</b>      | 16 (84)                    |
| Walking (outside)   | 6 (32)                     |
| Sports              | 5 (26)                     |
| Reading             | 4 (21)                     |
| Gardening           | 3 (16)                     |
| Social outings      | 3 (16)                     |
| Hobbies             | 2 (11)                     |
| Travelling          | 2 (11)                     |
| Telephone           | 1 (5)                      |