

# Occupational Therapy Interventions for Adults With Multiple Sclerosis

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## MeSH TERMS

- evidence-based practice
- multiple sclerosis
- occupational therapy
- patient care planning

This Evidence Connection describes a case report of a woman with an exacerbation of multiple sclerosis (MS), applying the evidence for intervention from the systematic reviews on MS that were conducted in conjunction with the American Occupational Therapy Association's (AOTA's) Evidence-Based Practice Project. The occupational therapy assessment and treatment processes for an inpatient rehabilitation setting are described. Evidence Connection articles provide a clinical application of systematic reviews developed in conjunction with the AOTA's Evidence-Based Practice Project.

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Management of chronic conditions is key to achieving the “Triple Aim” of health care: “(1) improving the individual experience of care, (2) improving the health of populations, and (3) reducing the per capita costs of care for populations” (Berwick, Nolan, & Whittington, 2008, p. 760). Occupational therapy practitioners have the education and knowledge to provide occupational therapy interventions to people with various diagnoses and chronic clinical conditions. Because of the increasing incidence and cost of chronic conditions, using evidence to support the role of occupational therapy practitioners as leaders of care management makes sense. These interventions enable clients to restore and maintain participation in a variety of occupations and can be incorporated into comprehensive care systems (Arbesman, Lieberman, & Metzler, 2014).

The chronic clinical condition discussed in this Evidence Connection article is adults with multiple sclerosis (MS). Findings from the systematic reviews on this topic were published in the January/February 2014 issue of the *American Journal of Occupational Therapy* (AJOT; Yu & Mathiowetz, 2014a, 2014b) and in the American Occupational Therapy Association's (AOTA's) *Occupational Therapy Practice Guidelines for Adults With Neurodegenerative Diseases* (Preissner, 2014). Each article in this series summarizes the evidence from the published reviews on a given topic and presents an application of the evidence to a related clinical case. Evidence Connection articles illustrate how the research evidence from the reviews can be used to inform and guide clinical decision making.

## Clinical Case

Susan, age 49, was diagnosed with MS 9 yr ago with no other noteworthy medical history. She was recently admitted to an inpatient rehabilitation unit after a 3-day acute hospitalization as a result of an exacerbation of her MS. Ana, an occupational therapist, was assigned to work with Susan. Ana reviewed Susan's electronic medical

record, which indicated that a few days before hospitalization, Susan had noticed that her left leg dragged a little. Susan woke up the next morning and was so off balance that she was unable to walk. Her husband took her to the emergency room, where she was diagnosed with an MS exacerbation and was admitted to the hospital. Susan stayed on an acute neurology unit for 3 days, where she received medical intervention and occupational and physical therapy evaluations. Both therapists recommended inpatient rehabilitation. The following sections describe the assessment and treatment process that Susan underwent while on the inpatient rehabilitation unit.

## Occupational Therapy Assessments and Findings

### Assessment 1: Morning

Ana met with Susan in the morning to begin the assessment process. She started the session with an informal interview followed by administration of the Canadian Occupational Performance Measure (COPM; Law et al., 2014) to determine Susan's occupational profile. Through the interview, Ana learned that Susan lives with her husband and 19-yr-old daughter in a single-story home. Susan is home alone during the day while her husband works and her daughter attends college. Susan is currently unemployed and on disability, having previously worked as a paralegal. Before this MS exacerbation, Susan was independent with self-care activities and shared household activities with her husband and daughter. However, she recently has been experiencing fatigue, which has limited her ability to engage in self-care, household activities, shopping, and other community activities.

Susan walked with a cane both in her home and in the community. She reported that she had been attending a yoga class, which she enjoyed for both its physical benefits and social aspects, but that she stopped attending about a month ago because of fatigue. She also reported a decline in memory, which affected her daily activities, and some difficulty managing her emotions. Susan's most immediate concerns were her current inability to take care of herself and be home alone during the day.

When Ana administered the COPM, Susan identified the following five occupations as the most important (in order of importance): toilet transfers, dressing, meal preparation, bathing, and returning to her yoga class. Ana used the results from the occupational profile for the morning assessment session to administer the self-care and bathroom transfer items of the FIM™ (Uniform Data System for Medical Rehabilitation, 1997). See Table 1 for COPM and FIM scores.

**Table 1. Assessment Scores Before and After Intervention**

Assessment	Evaluation	Discharge
FIM <sup>a</sup>		
Eating	4	7
Grooming	4	7
Bathing	3	4
UB dressing	4	5
LB dressing	2	5
Toileting	3	6
Toilet transfers	2	6
Tub transfers	2	4
COPM <sup>b</sup> , performance/satisfaction		
Toilet transfers	2/1	8/8
Dressing	3/2	7/8
Meal preparation	4/3	6/7
Bathing	5/3	6/6
Yoga	1/2	4/4

*Note.* COPM = Canadian Occupational Performance Measure; LB = lower body; UB = upper body.

<sup>a</sup>FIM scores: 1 = total assistance, 2 = maximal assistance, 3 = moderate assistance, 4 = minimal assistance, 5 = supervision, 6 = modified independence, 7 = complete independence. <sup>b</sup>COPM scores range from 1 (with great difficulty or not satisfied) to 10 (with no difficulties or completely satisfied).

### Assessment 2: Afternoon

Ana used the afternoon session with Susan to finish the evaluation, specifically to evaluate performance skills and client factors. She administered the Assessment of Motor and Process Skills (AMPS; Fisher & Jones, 2012) to assess performance skills. Susan chose two tasks that were meaningful and relevant to her: making a grilled cheese sandwich and washing dishes. The results of the AMPS indicated that Susan was unsafe performing these tasks and required frequent physical assistance. She had difficulty stabilizing her body; reaching for, grasping, lifting, and transporting task objects; and maintaining endurance during both tasks. Because fatigue was a major client factor that limited Susan's occupational performance, Ana administered the Fatigue Severity Scale (Krupp, LaRocca, Muir-Nash, & Steinberg, 1989), a nine-item questionnaire. Susan received a score of 6.8, which indicated that she experienced substantial fatigue.

Using Susan's interests and goals, the assessment results, and the discharge plan for returning home and being alone during the day, Ana wrote treatment goals that focused on maximizing independence and safety for self-care skills, bathroom transfers, and simple meal preparation and supporting Susan's desire to return to her yoga class. Ana reviewed the evidence from the January/February 2014 issue of *AJOT* (Yu & Mathiowetz, 2014a, 2014b) and AOTA's *Occupational Therapy Practice Guidelines for Adults With Neurodegenerative Diseases* (Preissner, 2014) and incorporated it into the occupational therapy interventions described next.

## Occupational Therapy Intervention

Ana provided two daily sessions of occupational therapy during Susan's 8-day rehabilitation stay. These sessions included instruction in modified approaches to self-care to promote independence and safety, instruction and guided practice in the use of adaptive equipment (e.g., sock aid) and durable medical equipment (e.g., grab bars around the toilet), education about the energy conservation strategies included in the *Managing Fatigue* program (Packer, Brink, & Sauriol, 1995), memory training to support activities of daily living and instrumental activities of daily living, education about strategies for emotional regulation, and the creation of a physical activity home exercise program in collaboration with Susan's physical therapist.

### Sample Intervention 1

Susan identified toilet transfers, dressing, and bathing as occupations that were most important to her and reported that fatigue limited her ability to participate in many activities. Therefore, Ana conducted daily morning self-care sessions with Susan, with a focus on promoting Susan's performance and satisfaction with these tasks while also teaching fatigue management strategies from Packer et al.'s (1995) *Managing Fatigue* program. This program includes 14 fatigue management strategies, of which Ana used the following to help Susan achieve her goals:

- *Change the position of body to do an activity.* Ana taught Susan to sit while dressing and to use a tub transfer bench to conserve energy.
- *Simplify activities so they require less energy.* Ana taught Susan to set her clothes out the night before so that morning dressing would require less energy.
- *Use adaptive equipment, gadgets, or energy-saving devices.* Ana instructed Susan in the use of a sock aid, reacher, raised toilet seat, and tub transfer bench to conserve energy.
- *Rest before becoming fatigued.* With MS fatigue, it is more effective to rest before an activity to "bank" energy than to become overly fatigued and then try to recover. Therefore, Ana ordered an early breakfast tray everyday so that Susan could eat her breakfast, rest, and have enough energy for her morning self-care routine therapy session.

### Sample Intervention 2

To address Susan's memory changes, Ana trained Susan in the use of the Story Memory Technique (SMT; Chiaravalloti, DeLuca, Moore, & Ricker, 2005). SMT involves the use of visualization (i.e., imagery) and context (e.g., a story) to enhance memory in everyday life.

For example, Ana taught Susan to create a story about five items that she wanted to ask her family to bring to her in the rehabilitation unit.

### Sample Intervention 3

To address Susan's goal of returning to her yoga class, Ana asked Susan to describe the various poses typically performed during the class, which Ana then analyzed and modified given Susan's current level of function. Susan then practiced each pose, and they adjusted each as needed. Together, Ana and Susan created a home program of progressive modified poses for Susan to practice at home. In addition, Ana provided recommendations in the use of fatigue management techniques that could enhance Susan's ability to fully participate again in her yoga class.

### Sample Intervention 4

During the assessment process, Susan indicated that she had difficulty with the emotional aspects of living with MS. She therefore participated in "Mood Masters," a group on the rehabilitation unit that is led by an occupational therapist. This group focuses on helping patients with emotional regulation through group discussion, goal setting, and short practice assignments. Desired outcomes of the group include improved mood, reduced levels of depression, reduced stress, and greater self-efficacy for managing emotions. During one of the group sessions, Susan disclosed to the other group members that she sometimes feels depressed and mourns the life that she had before her MS diagnosis. She received support from the other group members and suggestions about how to manage her emotions, such as talking with other people with MS or writing a gratitude journal.

## Conclusion

Through the use of evidence-based, occupation-focused, and client-centered occupational therapy interventions, Susan met her goals by the end of her 8-day inpatient rehabilitation stay. Her reported levels of performance and satisfaction on the COPM improved several points for each of the occupations that she identified as most important. Her FIM scores for the self-care items and bathroom transfers improved between 1 and 4 points each (see Table 1). Susan also achieved her overall goal of being able to be home alone while her husband worked and her daughter was at school.

Ana's discharge recommendations included outpatient occupational therapy to continue to maximize Susan's participation in valued occupations. She also referred Susan to a 6-wk, group-based *Managing Fatigue*

program (Packer et al., 1995) offered by the local chapter of the local MS organization. ▲

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