

Writing Patient-Centered Functional Goals

Motor learning research, health care policies, reimbursement practices, and the standards of accrediting bodies all support writing patient-centered functional goals of physical therapy. This article defines patient-centered functional goals within the context of the *Guide to Physical Therapist Practice* and provides a rationale for incorporating functional goals into physical therapy for patients in all areas of practice. The article also describes how physical therapists can collaborate with patients to identify functional goals that are meaningful to them and describes a 5-step process for writing functional goals that are measurable. [Randall KE, McEwen IR. Writing patient-centered functional goals. *Phys Ther.* 2000;80:1197–1203.]

Key Words: *Functional goals, Outcomes, Patient-centered services.*

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In 1982, O'Neill and Harris¹ published "Developing Goals and Objectives for Handicapped Children" in *Physical Therapy*. The purpose of this now-classic article was to help physical therapists implement Public Law 94-142, the Education for All Handicapped Children Act² (now the Individuals With Disabilities Education Act), which required teachers, physical therapists, and other school personnel to write measurable goals and objectives for children with disabilities receiving special education and related services. Since the article was published, measurable, functional goals have become advocated or required in many other areas of practice,³⁻⁹ and the definition of a functional goal has changed. O'Neill and Harris promoted functional goals, but their examples reflected the neuromaturational orientation of pediatric physical therapy at the time. Their goals focused on presumed components of functional skills, such as maintaining a prone-on-elbows position with the head in midline or righting the head when tipped laterally while sitting on a therapy ball.¹ Although therapists may need to address impairments during treatment, there is increasing agreement that the measured goals of therapy should relate to functional limitations and disabilities that are individually meaningful to patients.^{10,11}

This article updates O'Neill and Harris' article by describing a patient-centered approach to writing measurable functional goals that therapists can apply to patients receiving physical therapy in all areas of practice. We will define "functional goal" within the context of the *Guide to Physical Therapist Practice* (the *Guide*),³ present a rationale for incorporating functional goals into everyday practice, and provide suggestions for identifying and writing functional goals.

What Are Patient-Centered Functional Goals?

The *Guide to Physical Therapist Practice*³ provides a context for defining patient-centered functional goals. It promotes a patient-centered approach in which physical therapists "actively facilitate the participation

A patient-centered functional approach to goal writing can make physical therapy more effective and meaningful for patients.

of the patient/client, family, significant others, and caregivers in the plan of care."^{3(p3-1)} The *Guide* defines "function" as "those activities identified by an individual as essential to support physical, social, and psychological well-being and to create a personal sense of meaningful living."^{3(p ix)} The *Guide* identifies "goal" as a remediation of impairments and uses the term "outcomes" for "minimization of functional limitation, optimization of health status, prevention of disability, and optimization of patient/client satisfaction."^{3(p1-7)} We have combined the *Guide's* use of "goal" and "outcome" to define "functional goal" because we believe that remediation of impairments alone is not directly functional and may not necessarily lead to functional improvement¹² or may not be meaningful to the patient.¹¹ We define *functional goals* as the individually meaningful activities that a person cannot perform as a result of an injury, illness, or congenital or acquired condition, but wants to be able to accomplish as a result of physical therapy.

The *Guide* does not recommend use of a particular model of disablement/ablement, but it mentions the National Center for Medical Rehabilitation Research (NCMRR)¹³ as one of the models that provides a helpful framework for identifying the focus of physical therapy goals and intervention.^{3(p ix)} Other potential models include the International Classification of Impairments, Disabilities, and Handicaps (ICIDH-1 and ICIDH-2), the Nagi model of disability, and others.¹⁴ The NCMRR model has 5 dimensions: pathophysiology, impairment, functional limitation, disability, and societal limitation. Many patients' problems encompass more than one dimension of the model. For example, a person with a

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This article was adapted from presentations at the American Physical Therapy Association Annual Conference, Cincinnati, Ohio, June 12-16, 1993, and Physical Therapy '97: APTA Scientific Meeting and Exposition, San Diego, Calif, May 30-June 4, 1997.

Partial support for the article was provided by a grant (MCJ409503) from the Maternal and Child Health Bureau, Health Resources and Services Administration, US Department of Health and Human Services.

This article was submitted June 14, 1999, and was accepted August 9, 2000.

hip fracture (pathophysiology) may have pain, edema, and loss of muscle force (impairments), cannot get out of bed or walk (functional limitations), and thus cannot manage personal hygiene, work, or participate in leisure activities (disabilities). Some authors^{11,15} have argued that therapists have traditionally developed treatment goals that focus on impairments, such as improving muscle force, range of motion, or balance. Most people who seek physical therapy services, however, usually are concerned about their functional limitations and disabilities.

Why Write Patient-Centered Functional Goals?

Perhaps the most important reason for writing patient-centered functional goals is that people are likely to make the greatest gains when therapy and the related goals focus on activities that are meaningful to them and that will make a difference in their lives.^{16–21} From an NCMRR perspective, the goals would focus on functional limitations or disabilities that the patient is experiencing. Therapists should be mindful to look at the patient as a complete individual, addressing activities in any of 3 areas: self-care, work, and leisure.^{3,22,23} Current theories in motor learning,^{24–26} health care policy,⁷ reimbursement practices,³ and the standards of accrediting bodies^{8,9} also support or require use of patient-centered functional goals.

Motor learning research supports a focus on functional limitation and disability-related goals. From a motor learning perspective, patients undergoing physical therapy are learners who must analyze tasks and develop effective, personally suited motor strategies for performing the tasks under varying environmental conditions.²⁴ Goals (and subsequent treatments) that address the environments in which patients want to engage as a result of therapy optimize the patients' potential to do these activities following discharge.^{24–27} A person in the hospital, for example, who lives in a rural mobile home might have the goal of walking over uneven grassy surfaces, up steps, and through narrow doors and hallways, rather than walking on a tiled hospital ward through wide doors. Some authors^{28,29} contend that therapists cannot apply motor learning principles without addressing the specific tasks that patients want to perform and the specific environments in which they perform them.

In recognition of the value of working toward achieving abilities that are meaningful to patients, health care policy, reimbursement practices, and the standards of accrediting bodies increasingly require the goals of physical therapy and other professional services to be patient-centered and functional. Definitions of health, for example, have moved from the traditional concept of the absence of disease or impairment to an emphasis on

function, in which "health" means the potential or capacity to achieve preferred goals or perform desired activities.^{3,30} Similarly, third-party payers now often want evidence of patients' functional improvements within reasonable time frames and within the context of patients' lifestyles,^{7,31} and the Joint Commission of Accreditation of Healthcare Organizations (JCAHO) and the Commission for Accreditation of Rehabilitation Facilities (CARF) require facilities to address the individualized functional needs of each person served.^{8,9} The most recent reauthorization of Public Law 94-142, Public Law 105-17, the Individuals With Disabilities Education Act amendments of 1997,³² continues to require measurable goals and objectives (or benchmarks) for students with disabilities, with input from parents and, when appropriate, from the students. Overall, writing patient-centered functional goals will help therapists to conform to health policy, to be reimbursed for interventions, to assist in meeting the expectations of the accreditation process and legislation, and ultimately to meet the unique needs of their patients.

How to Identify Patient-Centered Functional Goals

The process of identifying meaningful, achievable functional goals should be a collaborative one between the patient, possibly the patient's family or significant others, and the therapist.^{3,33} Often the best way to identify patient-centered functional goals is simply to ask the patient, "What are your goals for therapy?" In our experience, patients seldom focus on impairments and rarely say, "I'd like my range of motion to be within normal limits" or "I'd like to have 5/5 strength." They are likely to respond with a focus on functional limitation or disability: "I want to return to work," "I need to be able to take care of myself at home," "I want to play in the game on Saturday," or "I want to do what the other kids do at my school." These statements can become the starting point for writing measurable patient-centered functional goals.

To identify functional goals with patients, we have found the following steps to be useful: (1) determine the patient's desired outcome of therapy, (2) develop an understanding of the patient's self-care, work, and leisure activities and the environments in which these activities occur, and (3) establish goals with the patient that relate to the desired outcomes. If patients cannot express their needs, family members or significant others may do so for them.

To determine a patient's desired outcome of physical therapy, a therapist might ask: "What activities that you want to do does this problem keep you from doing?" Table 1 suggests other questions that could help to elicit information about the patient's desired outcome.³⁴ A

Table 1.

Questions to Determine the Desired Outcome(s) of Patients or Their Families^a

1. If you were to focus your energies on one thing for yourself, what would it be?
2. What activities do you need help to perform that you would rather do yourself?
3. What are your concerns about returning to work, home, school, or leisure activities?
4. How can I help you to be more independent?
5. Imagine it's 6 months down the road. What would you like to be different about your current situation? What would you like to be the same?

^aAdapted from Winton and Bailey.³⁴

patient may express more than one desired outcome of treatment. In such cases, we contend it is important for the therapist to have the patient rank which outcomes are most important. The Canadian Occupational Performance Measure (COPM) was designed for use by occupational therapists, but it can be useful for physical therapists to help patients to identify and rank goals of intervention.^{30,35} The COPM provides a standardized format for assisting patients to identify goals that are most important to them in the areas of self-care, productivity (work, household management, play/school), and leisure. Following intervention, the tool is again used to rate patients' perceived change in their performance and change in satisfaction with performance.

Sometimes a physical therapist may think that a patient's desired outcome is unreasonable or not achievable. A person with a complete transection of the cervical spinal cord, for example, might say, "I want to walk again." Although walking is not currently achievable, the therapist and patient could identify functional components that are achievable, such as working on transfers and other forms of mobility. For goals to be truly patient-centered, they should be relevant to the patient's desired outcomes, not to what the therapist thinks is "best" for the patient.⁶

To effectively prepare patients to participate in the self-care, work, and leisure activities that are important to them, it is important that therapists address the environments in which the patients perform the activities.^{5,22,23,36} Therapists can elicit information about essential activities (such as by asking about a patient's "typical day") and environmental conditions during the patient interview. By doing so, they can assure themselves that the goals are meaningful to patients in their actual surroundings. Table 2 lists some other questions that therapists can ask patients to better understand the environments in which activities important to them occur.

Table 2.

Interview Questions to Identify Environments in Which Activities Important to the Patient Occur^a

1. Tell me about yourself.
2. Tell me about your home life. What activities do you do at home? Describe your home environment.
3. Is there anyone who can help you with the activities that you want to do?
4. Tell me about what you do at work. How do you get to work? What activities do you have to do there? Describe your work area.
5. What do you like to do in your spare time? Describe the physical activities and the environments related to your hobbies or recreation.
6. Describe a "typical day" for you.

^aAdapted from Winton and Bailey.³⁴

Writing Patient-Centered Functional Goals

After the therapist and the patient have decided on general outcomes of physical therapy, measurable goals leading to achievement of the outcomes should be identified. Physical therapy goals need to be measurable and functional and have a temporal component.^{3,4} O'Neill and Harris¹ proposed writing goals that contain the following elements:

Who
Will do what
Under what conditions
How well
By when

We will expand on these elements to assist therapists in using them to write goals that are patient-centered and functional.

Who

Functional goals focus on the individual receiving physical therapy care; therefore, "who" is always the patient.¹ Although family members and significant others may be involved in goal setting and with the patient's care, goals may involve them, but they are not the focus of the goal. A parent of a child with a developmental disability, for example, may need to help a child to transfer; however, we contend that the goal should focus on the child transferring with assistance from the parent, not on the parent transferring the child. This applies to all patients receiving therapy, even if they require assistance from someone to complete the activity.

What

The "what" of the goal is the activity that the patient will perform. Activities contained in goals relate to the desired outcomes of therapy, and they should be observable and repeatable and have a definite beginning and end.¹ "Type on a keyboard," "retrieve files from overhead cabinets," and "use the telephone," for example, are all activities, addressed in separate goals, that might

make up a secretary's desired general outcome of "return to work." Each goal focuses on an activity or activities with similar functional requirements. A general outcome of "clean the house," for example, has many components, such as doing laundry, sweeping floors, and dusting. Because each activity has dissimilar functional requirements, each activity would be a separate goal.

We have found that a useful rule of thumb when writing goals is the "third word" approach. The third word of the goal is the "what," which is the activity the patient will perform. "Leslie will bathe" is one example. We recommend avoiding the phrase "will be able to," such as "Mrs Howard will be able to walk 10 feet to the bathroom." Because goal achievement usually means that the patient performs the activity consistently, being able to do it, but perhaps not doing it, is inadequate, in our view, for measuring achievement of the goal. The distinction can be particularly important with some children and others who have motivational barriers to performing an activity.

Under What Conditions

The next component of a goal is the conditions under which the patient's achievement of the goal is measured.¹ The conditions often address the aspects of a goal that are unique to the patient. Conditions might include such environmental variables as "across uneven grassy surfaces" or "down 5 steps" or patient variables such as "with touch-down weight bearing" or "using a power wheelchair." Conditions incorporate specific elements of a measure into the goal. This may include measures of distance, time to perform an activity, or other elements needed for performance of the activity.⁴ In our view, therapists should be careful to choose relevant measures for goals. Including a specific goniometric measurement such as "45 degrees of shoulder external rotation" is not necessarily required to accomplish an activity such as combing one's hair.

How Well

"How well" describes the amount of assistance required, if any, from other people for the patient to perform the activity, or details the number of successful attempts required before considering the patient to have achieved the goal. Terms such as "minimal assistance," "moderate assistance," or "maximal assistance" lack standard definitions so do not adequately describe the amount or type of assistance required.¹ Descriptions such as "with assistance at the trunk to maintain balance" or "with verbal cues every 30 to 45 seconds" provide details necessary to reliably measure goal achievement. Although such descriptions may add a few more words to the goal, we believe the use of descriptive terms makes it possible for therapists to communicate more accurately and to determine whether patients have achieved their goals. "How well" also may relate to a specific number of

successful attempts of the activity out of a specific number of trials. This element provides a set criterion for consistency in performing the activity before considering a goal to have been achieved (eg, "dress within 7 minutes while standing next to a chair and using it to preserve balance, if necessary").

By When

"By when" is the target date for the patient to achieve the goal. The therapist usually determines this time frame, basing it on evidence such as knowledge of approximate tissue healing times, available research, personal experience, and the past progress of the individual. The dates for achievement of goals may change as therapy proceeds.

Examples of Goals for Three Types of Patients

Determining and writing goals is easier to do for some patients than for others. In our experience, therapists often find writing patient-centered functional goals difficult for patients with wounds and for patients with severe disabilities who can do little for themselves. Writing a series of goals for a patient across settings can be a new concept. The following examples illustrate some ways to develop goals for these types of patients.

Writing Goals for One Patient Across Settings

Patients may or may not achieve their overall desired outcome in one physical therapy setting. They may, for example, move from acute care, to subacute care, and then possibly to extended care, all while working toward the same desired outcome. The therapeutic goals, just like the practice setting in which the patient is receiving treatment, exist along a continuum. The patient's current level of function is the starting point of the continuum, and the patient's desired outcome is the end point. We believe it is likely that patients will prioritize the ability to care for themselves over the ability to work, which will probably take precedence over the ability to participate in a leisure activity.

The following examples of goals are for one person, Mr Johnson, who has a stable fracture of the right femoral neck, and whose desired outcome is "I want to go home and take care of myself, and I want to garden."

One potential acute care goal:

Mr Johnson will walk 4.6 m (15 ft) from his bed to the bathroom with a standard walker, bearing weight as tolerated on his right leg, with standby assistance of one for potential loss of balance by [date].

One potential goal for extended care or rehabilitation settings:

Mr Johnson will dress in 10 minutes, using a stable chair to sit on or for standing support as needed by [date].

One potential goal for home health:

Mr Johnson will retrieve his mail, walking 61 m (200 ft) with a straight cane down 5 steps on his front porch, crossing the lawn to his mailbox, and going back to the house by [date].

One potential goal for the outpatient setting:

Mr Johnson will weed his flower beds, moving from kneeling to standing as needed, for 30 minutes at a time by [date].

Therapists usually write more than one goal, depending on the number and complexity of the patient's overall desired outcomes. Ultimately, the "so what?" question is a good way to test each goal: "So what difference does performing this activity mean to the person?" For Mr Johnson, caring for himself and gardening are important and meaningful to him, so working toward these activities should enhance his participation in the intervention.^{18,30}

Writing Goals for Patients With Wounds

Many of the goals that therapists write for patients with wounds focus on the wound, not on the individual with the wound. For instance, "decrease wound size by 50%" and "prevent infection" are common pathophysiology-oriented goals. Decreasing wound size and preventing infection obviously are important; however, in our opinion, they do not address the larger picture of the individual and the functional limitations or disabilities that the wound causes. The question "What activities that you want to do is your wound keeping you from doing?" probably will generate a number of activities that patients are unable to do because of the wound. These activities could include self-care, such as bathing or showering, or work or leisure activities. They may be as basic as "I can't lie on my back and watch TV."

Patient-centered goals for patients with wounds should focus on activities that are important to the patient, while considering the wound and methods to promote wound healing. A possible goal that illustrates this point is "Leslie will take a shower after applying a waterproof covering over the wound by [date]." This goal not only addresses a functional activity important to Leslie, but also incorporates covering the wound to prevent infection. Additional goals may focus on other functional activities important to the individual, such as enhancing mobility, which may ultimately lead to preventing future wounds. When treating patients with wounds, therapists still need to measure and document wound size and other aspects of impairments and pathophysiologies, but we believe that goals should focus on the functional limitations and disabilities caused by the wounds.

Writing Goals for People With Severe Disabilities

Physical therapists, family members, and other team members sometimes have difficulty identifying functional goals for people with severe disabilities. A teenager with severe spastic quadriplegia and profound mental retardation, for example, may seem to have little potential for achieving functional skills. Sometimes therapists and other team members resort to writing such goals as "Tom will tolerate standing in a prone stander for 30 minutes per day by [date]" because they cannot think of anything active that the person will do. One useful principle for writing active functional goals for people with the most severe disabilities is the principle of partial participation.³⁷ Even though a person with a severe disability may not be able to complete the activity, doing part of the activity might be possible. Tom's mother, for example, may be having an increasingly difficult time transferring Tom as he has grown and now needs help to transfer him. She would like for him to help more and to be able to transfer him by herself. The physical therapist may think that Tom could learn to bear more of his weight during a pivot transfer; if so, a potential goal for Tom might be "Tom will move from his wheelchair to his bed, supporting enough of his weight during a standing pivot transfer so that his mother can transfer him by herself by [date]." Achievement of this goal could improve the quality of Tom's life, because he will have more options if he can transfer with the assistance of only one person. The goal also is important to his mother, even though she still needs to assist Tom.

Implications of This Approach and Conclusion

Physical therapists who incorporate a patient-centered approach to writing functional goals may see a change in how they interact with their patients and the decisions they make regarding patient care. Therapists may spend more time getting to know their patients and the self-care, work, or leisure activities that are important to them. As they work to achieve the established goals, they may develop intervention strategies that emphasize functional limitations and disabilities,^{16,18,38} which will better prepare patients to return to meaningful activities and related environments.^{5,15}

By adopting a patient-centered and functional approach to goal writing, and applying it to all patients, therapists will be consistent with current trends in health care, accreditation, and rehabilitation theories. We also believe this approach to writing patient-centered functional goals will make therapy more effective and meaningful for patients, and perhaps for the therapist as well.

References

1 O'Neill DL, Harris SR. Developing goals and objectives for handicapped children. *Phys Ther.* 1982;62:295-298.

- 2 Education for All Handicapped Children Act, 20 USC §1401 (1975).
- 3 *Guide to Physical Therapist Practice*. Rev ed. Alexandria, Va: American Physical Therapy Association; 1999.
- 4 Echternach JL, Rothstein JM. Hypothesis-oriented algorithms. *Phys Ther*. 1989;69:559–564.
- 5 Brown L, Branston MB, Hamre-Nietupski S, et al. A strategy for developing chronological-age-appropriate and functional curricular content for severely handicapped adolescents and young adults. *Journal of Special Education*. 1979;13(1):81–90.
- 6 Payton OD, Nelson CE, Ozer MN. *Patient Participation in Program Planning: A Manual for Therapists*. Philadelphia, Pa: FA Davis Co; 1990.
- 7 Dobrzykowski EA. The methodology of outcomes measurement. *Journal of Rehabilitation Outcomes Measures*. 1997;1:8–17.
- 8 *The 1999 Comprehensive Accreditation Manual for Hospitals: The Official Handbook*. Oakbrook Terrace, Ill: Joint Commission on Accreditation of Healthcare Organizations; 1999.
- 9 *1998 Medical Rehabilitation Standards Manual*. Tucson, Ariz: Commission on Accreditation of Rehabilitation Facilities; 1998.
- 10 Jette DU, Downing J. Health status of individuals entering a cardiac rehabilitation program as measured by the Medical Outcomes Study 36-Item Short-Form Survey (SF-36). *Phys Ther*. 1994;74:521–527.
- 11 Rothstein JM. Disability and our identity [editor's note]. *Phys Ther*. 1994;74:375–378.
- 12 Craik RL. Disability following hip fracture. *Phys Ther*. 1994;74:387–398.
- 13 *Research Plan for the National Center for Medical Rehabilitation Research*. Bethesda, Md: National Institutes of Health, National Center for Medical Rehabilitation Research; 1993. Publication no. 93-3509.
- 14 *International Classification of Diseases*. 9th rev ed. Clinical Modification. New York, NY: World Health Organization; 1997.
- 15 Kielhofner G. Functional assessment: toward a dialectical view of person-environment relations. *Am J Occup Ther*. 1993;47:248–251.
- 16 Dunn W, Brown C, McGuigan A. The ecology of human performance: a framework for considering the effect of context. *Am J Occup Ther*. 1994;48:595–607.
- 17 Kresevic DM, Counsell SR, Covinsky K, et al. A patient-centered model of acute care for elders. *Nurs Clin North Am*. 1998;33:515–527.
- 18 Lewthwaite R. Motivational considerations in physical activity involvement. *Phys Ther*. 1990;70:808–819.
- 19 Neistadt ME. Methods of assessing clients' priorities: a survey of adult physical dysfunction settings. *Am J Occup Ther*. 1995;49:428–436.
- 20 Armitage SK, Kavanagh KM. Consumer-oriented outcomes in discharge planning: a pilot study. *J Clin Nurs*. 1998;7:67–74.
- 21 Marvel MK, Epstein RM, Flowers K, Beckman HB. Soliciting the patient's agenda: have we improved? *JAMA*. 1999;281:283–287.
- 22 Schkade JK, Schultz S. Occupational adaptation: toward a holistic approach for contemporary practice, part 1. *Am J Occup Ther*. 1992;46:829–837.
- 23 Schultz S, Schkade, JK. Occupational adaptation: toward a holistic approach for contemporary practice, part 2. *Am J Occup Ther*. 1992;46:917–925.
- 24 Schmidt RA. Motor learning principles for physical therapy. In: Lister MJ, ed. *Contemporary Management of Motor Control Problems: Proceedings of the II STEP Conference*. Alexandria, Va: Foundation for Physical Therapy; 1991:49–62.
- 25 Schmidt RA. *Motor Control and Learning*. 2nd ed. Champaign, Ill: Human Kinetics; 1988.
- 26 Winstein CJ. Designing practice for motor learning: clinical implications. In: Lister MJ, ed. *Contemporary Management of Motor Control Problems: Proceedings of the II STEP Conference*. Alexandria, Va: Foundation for Physical Therapy; 1991:65–76.
- 27 Marland G. Partnership encourages patients to comply with treatment. *Nurs Times*. 1998;94(27):58–59.
- 28 Gage M, Cook JV, Fryday-Field K. Understanding the transition to community living after discharge from an acute care hospital: an exploratory study. *Am J Occup Ther*. 1997;51:96–103.
- 29 Shumway-Cook A, Woollacott MH. *Motor Control Theory and Practical Applications*. Baltimore, Md: Williams & Wilkins; 1995.
- 30 Pollock N. Client-centered assessment. *Am J Occup Ther*. 1993;47:298–301.
- 31 Weber DC, Fleming KC, Evans JM. Rehabilitation of geriatric patients. *Mayo Clin Proc*. 1995;70:1198–1204.
- 32 Individuals With Disabilities Education Act Amendments, 20 USC §1400 (1997).
- 33 Guyatt GH, Mitchell A, Molloy DW, et al. Measuring patient and relative satisfaction with level or aggressiveness of care and involvement in care decisions in the context of life threatening illness. *J Clin Epidemiol*. 1995;48:1215–1224.
- 34 Winton PJ, Bailey DB. Communicating with families: examining practices and facilitating change. In: Simeonsson JP, Simeonsson RJ, eds. *Children With Special Needs: Family, Culture, and Society*. Orlando, Fla: Harcourt Brace Jovanovich; 1993:chap 12.
- 35 Christiansen C. Continuing challenges of functional assessment in rehabilitation: recommended changes. *Am J Occup Ther*. 1993;47:258–259.
- 36 Covinsky KE, Palmer RM, Kresevic DM, et al. Improving functional outcomes in older patients: lessons from an acute care for elders unit. *Jt Comm J Qual Improv*. 1998;24(2):63–76.
- 37 Ferguson DL, Baumgart D. Partial participation revisited. *Journal of the Association for Persons With Severe Handicaps*. 1991;16:218–227.
- 38 Herring SA. Rehabilitation of muscle injuries. *Med Sci Sports Exerc*. 1990;22:453–456.