Outcomes of Protocol-Based and Adaptation-Based Occupational Therapy Interventions for Low-Income Elderly Persons on a Transitional Unit

Jean Spencer, Gayle Hersch, Verna Eschenfelder, Jacqueline Fournet, Melanie Murray-Gerzik

Key Words: community • qualitative method

With trends in health care delivery toward shorter lengths of stay, hospitalized elderly persons are often discharged to skilled nursing units that provide transitional care services to prepare them for return to the community. Deconditioning, which has been defined as "the physiologic changes occurring with prolonged bed rest or inactivity" (Vorhies & Riley, 1993, p. 745), is a common problem of elderly persons on such units (Creditor, 1993; Hoenig & Rubenstein, 1991; Rader & Vaughen, 1994). Treatment for deconditioning is typically provided through a standardized, protocol-based...
approach (Mulrow et al., 1994; Wolf, Kutner, Green, & McNeely, 1993), and outcomes of this treatment are typically measured by increases in strength or endurance and by improvement in functional abilities measured by quantitative tools, such as the Functional Independence Measure (FIM<sup>TM</sup>) (Granger, Hamilton, Linacre, Heinemann, & Wright, 1993; Katz & Stroud, 1989; Myers, Holliday, Harvey, & Hutchinson, 1993). Such treatment approaches and outcome indicators are based on occupational performance components and basic activities of daily living (ADL) rather than on a holistic view of occupational performance areas and the performance contexts of clients' daily lives in the community (American Occupational Therapy Association [AOTA], 1994; Trombly, 1993). This project compared the goals and outcomes of a protocol-based intervention, which is typical in health care today, with an individualized adaptation-based intervention focused at the level of occupational performance areas and performance contexts, which was provided to selected elderly persons, in addition to the usual protocol-based treatment for deconditioning.

Continuity theory provides a theoretical framework for examining how adaptation to illness is shaped by clients' past experience and their meaningful occupations and relationships. Classic continuity theory is based on the premise that older adults attempt to preserve and maintain existing internal and external aspects of their lives by applying general adaptive principles and strategies (Achenbaum, 1987; Archley, 1989). In this view, disruptions caused by illness are considered "pathological" or "abnormal" aging. However, Becker (1993) argued that such life course disruptions are typical for older adults and, therefore, that continuity theory should be modified to include the constructive processes by which continuity is reestablished after onset of illness and disability. In her large-scale qualitative study of the process by which persons establish continuity after stroke, Becker spoke of continuity as a symbolic process that does not depend on exact duplication of a person's activity routines before onset of disability. Her research identified a crucial need to link subjective meanings about continuity with objective parameters of function because successful maintenance of a sense of continuity does not bear a simple and direct relationship to objectively measured functional ability.

The individualized adaptation-based intervention developed for this project was designed to help elderly persons establish goals and make plans for returning to the community after the life course disruption of hospitalization. Two central premises of the concept of adaptation guided the intervention (Spencer, Davidson, & White, 1996). One was the belief that occupational performance cannot be understood solely as a personal phenomenon but rather must be considered as an interactive process between persons and environments. This leads to a conceptualization of illness and disability as a disturbance in patterns of interaction between a person and his or her environmental contexts that initially can be prompted by a change in either entity (Schlossberg, 1982). Although occupational therapists often consider specific environments (e.g., home, workplace), they generally have not considered context at the scale of neighborhood or community, which has been shown to have a major impact on elderly persons' daily lives (Rowles, 1991). In this project, we incorporated geographical, social, and cultural contexts on a neighborhood and community scale using Kleinman's (1992) notion of local worlds as settings in which the person's usual round of occupations are regularly performed. Thus, interventions focused on not only whether the elderly persons could negotiate the physical spaces of their bathroom or kitchen and social relationships within their households, but also whether they could get to and interact successfully in various locations outside of home in which valued occupations occurred.

The second premise guiding the intervention was the notion of adaptation as a cumulative process that evolves over a person's lifetime. This leads to the recognition that elderly persons have a rich repertoire of adaptive strategies that are based on past experiences and to the thoughtful use of these experiences in guiding intervention designed to help them deal with new adaptive problems resulting from illness or disability. In occupational therapy, responses to adaptive challenges have most often been considered as short-term processes (King, 1978; Schkade & Schultz, 1992). However, the large amount of literature on sense of self (Ryff & Keyes, 1995; Ryff & Singer, 1996) and sense of coherence (Antonovsky, 1987) supports the expectation that a lifetime of past experience will shape future adaptation.

Most outcome research conceptualizes outcomes as short-term changes in status attained from the point of admission to a particular facility to the time just before discharge (Agency for Health Care Policy and Research, 1990; Rehman, 1988; Wennberg, 1990). One difficulty posed by this short-term view is that persons may not perform at the same level in clinic and home settings because of differences in the two environments (Haworth & Hollings, 1979; Park, Fisher, & Velozo, 1994; Spector, 1990). A second difficulty is the assumption that persons will immediately apply their clinic experience at home without difficulty. However, evidence indicates that the transition from hospital to home evolves as clients adapt recommendations made by health care providers to the realities of their daily life (Becker, 1993; Bull, 1992; Hasselkus, 1988). A related difficulty with short-term conceptualization of outcomes measured by functional assessments alone is that they do not capture the individual's ability to maintain or improve functional abilities over time.
not consider the daily life circumstances and meaning of occupations and relationships to elderly persons, factors that may account for observed differences between capacity and performance. Qualitative research on illness experience has emphasized how persons are able to incorporate loss of functional abilities and changes in life activities into a coherent life narrative or biography and, thus, to continue an active and meaningful life (Bury, 1982; Corbin & Strauss, 1987; Kaufman, 1988; Robinson, 1990). Common to this literature is an emphasis on what is meaningful to a person as a key factor that motivates and organizes adaptation to illness and disability.

In examining the complexity of how outcomes of protocol-based and adaptation-based interventions were conceptualized and measured, we recognized that different participants in the health care process were likely to have different views. Thus, the project was designed to compare outcomes from the contrasting “insider’s perspectives” of elderly persons, key family members, and occupational therapists. Cultural differences in perspectives between clients and health care practitioners have been examined by authors such as Kleinman (1988), who made a distinction between illness as experienced by a person and his or her family members in their daily lives, and disease, which he defined as “what practitioners have been trained to see through the theoretical lenses of their particular form of practice” (p. 5). Awareness of such differences in perspectives is leading to changing views of compliance in health care toward a collaborative approach that values the priorities of clients as well as those of service providers (Chubon, 1988; Conrad, 1985; Gerber & Nehemkis, 1986; Roberston, 1992).

In this article, we report some of the findings of the overall project and describe (a) evolving adaptation trajectories of elderly persons treated on a transitional unit for deconditioning after hospitalization and tracked after their return to daily life in the community; (b) the individualized adaptation-based intervention provided to selected elderly persons on this unit in addition to a protocol-based intervention for deconditioning; (c) goals and outcomes of the two interventions; and (d) similarities and differences in perceptions of outcomes by the elderly persons, family members, and occupational therapists.

Method

Design

This project used a longitudinal qualitative design to track a small number of elderly persons during their stay on a transitional unit and after their return to the community. This is in contrast to most outcome research that examines a limited number of researcher-selected outcome variables for a large group at a single point in time. This design was chosen instead of an experimental design comparing two groups of clients receiving one intervention each for several reasons. First, an ethical concern existed about withholding treatment for deconditioning from elderly persons who would normally receive this treatment. Second, delivery of occupational therapy services naturally includes a combination of forms of intervention so that separation into distinct components for experimental purposes would be an artificial circumstance that does not reflect “real-world” practice. The goal was not to establish definitive cause-and-effect relationships between particular treatments and specific outcomes but to examine how goals and outcomes of different forms of intervention were perceived by various participants in the process. We believe that elderly persons were able to distinguish and report on the two forms of intervention because they were provided by different persons and in different locations on the transitional unit.

Participants

A purposive sampling strategy was used to identify elderly persons with deconditioning who were admitted to a transitional unit after hospitalization and who were diverse in terms of living arrangement before hospitalization, gender, and ethnicity. Additional selection criteria included cognitive ability to participate in qualitative interviews as assessed by program staff and willingness of a family member to participate in a follow-up interview. The 24-bed transitional unit used for this project is part of a multiservice geriatric program operated by a county hospital district that serves a population of low-income elderly persons living in a large, ethnically diverse city. Typical length of stay on the unit is 3 weeks.

Eight elderly persons who had multiple chronic physical conditions were selected of whom 5 also had psychiatric conditions and 4 had possible dementia. Reasons for hospitalization included acute problems such as falls (4 participants, including 2 with hip fractures) and exacerbations of chronic problems, including 1 participant with chronic obstructive pulmonary disease who developed pneumonia, 1 with cardiac problems who had a pacemaker implanted, 1 with diabetes whose gangrenous leg was amputated, and 1 who had a stroke and whose family members had her hospitalized because of confusion and hallucinations (see Table 1).

Interventions

The occupational therapy protocol-based intervention was provided to all elderly persons on the unit with deconditioning, including the study participants, by geriatric program staff occupational therapists or occupational therapy assistants. Goals and treatments, as determined by chart review and therapist interviews, emphasized exercise to improve strength and endurance and performance of basic tasks.
worked collaboratively with participants to help them state desired outcomes as distinct long-term goals and then to identify shorter-term goals or steps that would contribute to attaining the long-term goal. The CCE is still being evaluated and is not yet ready for dissemination (Eschenfelder, 1993). The Community Adaptive Planning Assessment (CAPA) provided a structure for collaborative discussion of how goals would be influenced by the social and geographical or spatial context of each participant's local world in the community. The CAPA also organized a process of joint problem solving by therapist and participant to identify alternative solutions to adaptive problems and make plans for how goals could be implemented. Additional information on the CAPA is available in Spencer and Davidson (1998). Flexibility in providing the innovative adaptation-based intervention was possible because of grant support that allowed the project therapist to provide what she believed the participants needed rather than being limited to what is commonly reimbursed.

**Data Collection**

After obtaining informed consent to participate in the study from the participants and their family members, we reviewed the participants' charts to document personal and social information, medical history, goals for the stay on the unit, and assessments completed by geriatric program staff. Data on goals from the protocol-based intervention were obtained through chart review. Using a semistructured therapist interview guide developed for this project, we gathered information from the geriatric program staff occupational therapy practitioners on how occupational therapy goals were established and the extent to which participants met the goals during their stay. FIM scores, which document progress in meeting protocol-based goals, were also obtained through chart review.

### Table 1

**Participant Demographics**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Living Arrangement Before Hospitalization</th>
<th>Age</th>
<th>Ethnicity</th>
<th>Reason for Hospitalization</th>
<th>Physical</th>
<th>Psychiatric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Jarvis</td>
<td>Personal care home</td>
<td>69</td>
<td>Caucasian</td>
<td>Hallucinations</td>
<td>Htn; diabetes-II; left hemiplegia s/p CVA; deconditioning</td>
<td>Adjustment disorder with depression</td>
</tr>
<tr>
<td>Ms. Randall</td>
<td>Personal care home</td>
<td>69</td>
<td>Caucasian</td>
<td>Pneumonia</td>
<td>Pneumonia; COPD; htn; deconditioning</td>
<td>Bipolar disorder</td>
</tr>
<tr>
<td>Mr. Marson</td>
<td>Own home with provider</td>
<td>85</td>
<td>Caucasian</td>
<td>Malnutrition and fall</td>
<td>PVD; malnutrition; deconditioning</td>
<td>Probable dementia; bipolar disorder</td>
</tr>
<tr>
<td>Ms. Smith</td>
<td>Own home with provider</td>
<td>87</td>
<td>Caucasian</td>
<td>Pacemaker</td>
<td>Htn; diabetes; CVD; atrial fibrillation; s/p pacemaker; hypothyroidism; deconditioning</td>
<td>—</td>
</tr>
<tr>
<td>Ms. Jones</td>
<td>Home with family (husband)</td>
<td>78</td>
<td>Caucasian</td>
<td>Hip fracture</td>
<td>Hip fracture and ORIF; UTT; decubiti; multiple infections; history of dizziness and falls; deconditioning</td>
<td>Rule out dementia; depression</td>
</tr>
<tr>
<td>Mr. Williams</td>
<td>Home with family (sister)</td>
<td>62</td>
<td>African-American</td>
<td>Amputation</td>
<td>Above-knee amputation; COPD; PVD; htn; deconditioning</td>
<td>—</td>
</tr>
<tr>
<td>Ms. Garcia</td>
<td>Home alone (senior apartment)</td>
<td>81</td>
<td>Hispanic</td>
<td>Hip fracture</td>
<td>Hip fracture and ORIF; htn; COPD; deconditioning</td>
<td>Early dementia</td>
</tr>
<tr>
<td>Ms. Jackson</td>
<td>Home alone (apartment)</td>
<td>77</td>
<td>Caucasian</td>
<td>Fall and strain</td>
<td>Degenerative joint disease; history of falls and ataxia; deconditioning</td>
<td>Probable personality disorder</td>
</tr>
</tbody>
</table>

Note. COPD = chronic obstructive pulmonary disease; CVA = cerebrovascular accident; CVD = cardiovascular disease; htn = hypertension; ORIF = open reduction internal fixation; PVD = peripheral vascular disease; s/p = status post; UTT = urinary tract infection.
Using the CCE and CAPA, the project therapist documented goals from the adaptation-based intervention. Collaborative discussions were tape recorded and transcribed for analysis. When the participant's voice was not understandable on tape, field notes were written.

After discharge, information on the participants' daily lives and perceived outcomes of both interventions was gathered through interviews with the participants, using a community outcome interview (COI) guide, and their family members, using a family outcome interview (FOI) guide. Both semistructured interview guides were developed for this project. Systematic use of a planned follow-up schedule with contacts at 1, 3, and 12 weeks after discharge was not feasible for some participants who had moved or changed telephone numbers or who inconsistently returned to the outpatient clinic. Interviews were conducted through home visits or by telephone whenever participants could be located, which was usually between 4 and 8 weeks after discharge and again at 12 weeks when feasible.

Data Analysis

Data were recorded on an outcome tracking chart for each participant (see Table 2). Outcomes were coded into the following categories: goal met as planned, goal partially met, new solution for reaching goal, goal modified, and goal unmet. Information on goals and outcomes of the two interventions was then consolidated for all 8 participants.

Interview transcripts included one or more CCE and CAPA interviews with each participant, COIs, FOIs, and therapist interviews. Initial coding of the transcripts for emerging themes was done through group meetings of the principal and co-principal investigators and project therapist, who jointly coded data on 1 participant. Research assistants then completed the coding process for the other participants. After initial detailed microcoding, larger coding categories were derived for each participant and then compared across all 8 to identify similarities and differences.

To increase trustworthiness (Krefting, 1991), the analysis was reviewed by three peer reviewers during Months 9 and 11 of the project. The peer reviewers had experience in qualitative research and had contrasting perspectives on adaptive issues for elderly persons and persons with disabilities living in the community. They examined raw data and the coding process on a sampling basis and provided advice on data collection methods, critical review of the analysis process, and examination of alternative ways in which emerging project findings might be interpreted. In addition, at Month 6 a meeting of clinical and administrative personnel of the geriatric program and peer reviewers was convened to review emerging findings.

Results and Discussion

Evolving Adaptation Trajectories

Examining the participants' circumstances before the life course disruption that led to their hospitalization and tracking their adaptive processes after discharge from the transitional unit revealed contrasting adaptation trajectories (see Table 3). The participants had been chosen to represent a diversity of living arrangements before hospitalization, with 2 each living in group personal care homes, at

Table 2
Outcome Analysis of Protocol-Based and Adaptation-Based Interventions for Mr. Williams Who Had an Above-Knee Amputation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Protocol-Based Intervention</th>
<th>Adaptation-Based Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIM® score (admittance, discharge)</td>
<td>7,7</td>
<td>—</td>
</tr>
<tr>
<td>Feeding</td>
<td>5,6</td>
<td>—</td>
</tr>
<tr>
<td>Bathing/showering</td>
<td>7,7</td>
<td>—</td>
</tr>
<tr>
<td>Hygiene</td>
<td>5/6, 6</td>
<td>—</td>
</tr>
<tr>
<td>Upper-extremity dressing</td>
<td>5/6, 6</td>
<td>—</td>
</tr>
<tr>
<td>Lower-extremity dressing</td>
<td>5/6, 6</td>
<td>—</td>
</tr>
<tr>
<td>Toileting</td>
<td>7,7</td>
<td>—</td>
</tr>
<tr>
<td>Home management</td>
<td>4,—</td>
<td>—</td>
</tr>
<tr>
<td>Bed mobility</td>
<td>7,7</td>
<td>—</td>
</tr>
<tr>
<td>Transferring</td>
<td>1. Transfer for self-care with moderate independence</td>
<td>1. Ambulate to front porch to see friends</td>
</tr>
<tr>
<td></td>
<td>2. Tolerate 10 hr out of bed</td>
<td>2. Go to clubs to listen to music</td>
</tr>
<tr>
<td></td>
<td>3. Upper-extremity strength maximum resistance for 60 min</td>
<td>3. Fix a lunch sandwich independently when sister is gone</td>
</tr>
<tr>
<td></td>
<td>4. Independent use of equipment resources for home safety</td>
<td></td>
</tr>
<tr>
<td>Goals</td>
<td>Goals 1, 2, and 4 met</td>
<td>Goal 3 unmet</td>
</tr>
<tr>
<td></td>
<td>Goal 3 unmet</td>
<td>Goal 1 met and exceeded</td>
</tr>
<tr>
<td></td>
<td>Goal 4 met</td>
<td>Goal 1 met</td>
</tr>
<tr>
<td>Status of goals at discharge</td>
<td></td>
<td>Goal 2 met</td>
</tr>
<tr>
<td>Community placement</td>
<td>Home with sister</td>
<td>Goal 3 partially met</td>
</tr>
<tr>
<td>Community outcome</td>
<td>Independent in transfers with adaptive equipment for self-care</td>
<td>Home with sister</td>
</tr>
<tr>
<td></td>
<td>Goal 1: Uses wheelchair; mobility improving</td>
<td>Goal 1: Uses wheelchair; mobility improving</td>
</tr>
<tr>
<td></td>
<td>Goal 2: Rides with friends who take wheelchair</td>
<td>Goal 2: Rides with friends who take wheelchair</td>
</tr>
<tr>
<td></td>
<td>Goal 3: Sister cooks; Mr. Williams prepares leftovers</td>
<td>Goal 3: Sister cooks; Mr. Williams prepares leftovers</td>
</tr>
<tr>
<td>Outcome coding</td>
<td>Goal 1 met and exceeded</td>
<td>Goal 1 met</td>
</tr>
<tr>
<td></td>
<td>Goal 2 met</td>
<td>Goal 2 met</td>
</tr>
<tr>
<td></td>
<td>Goal 3 partially met</td>
<td>Goal 2 met</td>
</tr>
</tbody>
</table>

Note. FIM = Functional Independence Measure, a service mark of the Uniform Data System for Medical Rehabilitation, a division of UB Foundation Activities, Inc.
home with a support service provider, with family members, and alone in their own homes. After their transitional unit stay, 4 returned to their same living setting, and 4 moved to new settings. Of the 8 participants, 3 required more support services after discharge.

Of the 4 participants who moved to new settings, 2 went to nursing homes. For Mr. Marson, the move was viewed as a positive change because it provided a safe living environment where support services were constantly available and because it offered opportunities for socialization. As his niece stated:

"Prior to the accident, he was very stubborn about being independent, but after his fall, he wanted help... he said he had been very lonely... surprise to me... he had apparently been very lonely, and this [move to the nursing home] has given him a chance to be with people." (FOI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)

The other participant, Ms. Jarvis, considered her move negatively as the result of "betrayal" by her family members who let her house trailer be repossessed and who sold her belongings without her consent: "I want my trailer... he had apparently been very lonely... and this [move to the nursing home] has given him a chance to be with people." (COI)
her history of minimal social interaction. During the intervention on the transitional unit, Ms. Jackson was able to name only one friend and stated that she had not spoken to her only daughter for some time. It was the project therapist's impression that Ms. Jackson might be reluctant to share information about her current life because of fear that she would no longer be allowed to live alone.

One of the major findings of the study is the frequency of relocation in the adaptation trajectories. Thus, in addition to the life course disruption caused by illness and hospitalization as studied by Becker (1993), half of these participants experienced the disruption of moving to a new setting. Previous research on relocation of elderly persons has generally examined this transition among healthy persons with middle-class backgrounds (Ryff & Essex, 1992; Schultz & Brenner, 1977; Smider, Essex, & Ryff, 1996; Speare & Meyer, 1988). Qualitative interviews from this study provided important information on the goals and adaptive strategies used by low-income elderly persons as they transitioned from a health care environment to a new living setting and sought to establish daily life in that setting.

Analysis of the adaptation trajectories revealed that three outcomes were commonly agreed-on indicators of successful adaptation after hospitalization as defined by the participants and their family members: (a) ability to have basic support needs met, (b) ability to renew or establish new social relationships, and (c) ability to engage in valued activities. It is noteworthy that the 4 participants who relocated to new settings were more successful in attaining these outcomes than the 2 who returned to living alone in their previous homes and who both refused recommendations for more home support services. Thus, although loss of home can be a painful experience for elderly persons, the move from home can free them from constant concern about basic support needs and, thus, allow time and attention to relationships and activities that many persons consider important components of quality of life (Fuhrer, 1994). When and how to help elderly persons make decisions about relocation is an important issue that merits further study.

Another important finding from the analysis of adaptation trajectories is the evolution of the adaptive process. The participants all experienced a health crisis and resulting hospital stay, a temporary move to the transitional unit for 3 weeks, and return to the community. These are all major transitions requiring adaptive energy and resources. The ability to devote attention to dealing with multiple transitions varied over time as the participants' physical, cognitive, and emotional status changed. These changes were reflected in differences in how the participants were able to engage in goal setting and problem solving during the adaptation-based intervention. In addition to the goals and adaptive strategies planned during their transitional unit stay, some participants' history of adaptive experience was a rich source of solutions to problems that were not anticipated on the transitional unit. Ms. Jarvis used past adaptive strategies to get herself established in the nursing home:

That lady [new roommate] and I didn't get along when I first got in that room, and she kept insulting me and wanting me out.... I've done more [Bible] reading since I've been here because of that.... And Proverbs is a good one.... I've done it before, and it's good instructions.... She finally come around.... Now we see eye to eye on how we lived way back. (COI)

In reflecting on the adaptive process, it is important to note that although there appear to be negative effects of multiple life changes, it is also possible that earlier transitions may serve as learning experiences or desensitization experiences for elderly persons that prepare them in positive ways for later transitions.

Use of the Adaptation-Based Intervention

The 8 participants differed significantly in the extent to which they were able to participate in the goal-setting, problem-solving, and planning process involved in the adaptation-based intervention. This varied participation seemed to be related in part to their levels of illness, pain, and decreased energy while on the unit, which in some cases limited interactions to a few minutes at a time. When the project therapist commented to Ms. Randall during a follow-up interview that she seemed much more energetic and active than she was in the hospital, Ms. Randall replied, "I had pneumonia...you expect that when you have pneumonia" (COI). Another factor that appeared to influence participation in goal setting and problem solving was that many participants had difficulty with dealing with past, present, and future sense of time. This may have been due in part to cognitive problems (4 had possible dementia) or other psychosocial problems (2 had depression, 2 had bipolar disorder, 1 had adjustment disorder with depression). Difficulty in dealing with past, present, and future time frames may also have been due to cultural differences in how time is perceived and managed, in contrast to the clock-oriented and calendar-oriented perspective that is common among health care providers and that is embedded in the operation of clinical settings and in documentation systems.

In spite of these issues, most participants were able, with ongoing facilitative interaction by the project therapist, to think about their future life in the community, identify goals they hoped to reach, and reflect at a later point on the extent to which these goals had been achieved or modified. Triangulation of written documentation from the CCE and CAPA with interview transcripts and field notes indicates that these tools provide an efficient way to
document goals and plans, which are the result of qualitative aspects of practice, in a format that can be used to assess outcomes in the community after discharge.

Thus, this study adds to a small but growing body of research that supports the usefulness of individualized consultative occupational therapy intervention that focuses on activities that elderly clients value in daily community life (Corcoran & Gitlin, 1992; Gitlin, Corcoran, & Leinmiller-Eckhardt, 1995). This form of practice emphasizes a broad view of occupational performance areas and performance contexts as articulated in the third edition of the Uniform Terminology for Occupational Therapy (AOTA, 1994) in addition to performance components and basic ADL, which are the focus of most standardized protocol-based intervention formats. Providing intervention to an elderly population with multiple health problems, including psychiatric conditions, draws on therapist knowledge and skills from both physical and psychosocial practice. This form of practice also calls on clinical reasoning ability of therapists to think holistically from the perspective of clients and to integrate this perspective with insights that the therapist can provide on the basis of his or her own knowledge of disability, its consequences, and ways of dealing with various adaptive problems (Gitlin et al., 1995).

Working collaboratively with elderly clients to identify goals and plans requires that therapists recognize that the concepts and language of setting goals and establishing calendar-oriented time frames may be culturally unfamiliar to many elderly persons who generally do not think about their lives in this kind of format (Hall, 1983; Levine, 1997; Zerubavel, 1981). Recent research indicates that therapeutic goal setting is strongly influenced by both cultural and personal meanings attached to this process, which may be quite different for clients and therapists (Kielhofner & Barrett, 1998). It is important to discover how elderly clients think and feel about their lives and to discover their hopes for the future before unthinkingly translating these into our own culturally familiar forms (Spencer, Davidson, & White, 1997).

Outcomes of Protocol-Based and Adaptation-Based Interventions

Findings that compared goals and outcomes of protocol-based and adaptation-based interventions demonstrated outcomes different in focus and in ways in which they evolved. The protocol-based approach followed an established clinical pathway that emphasized basic ADL and occupational performance components. In contrast, the adaptation-based approach was client centered and looked at the daily occupations the participants valued. For example, for Mr. Marson, who was hospitalized because of malnutrition and a resulting fall that caused various injuries, the protocol-based goals centered on self-care activities of bathing, hygiene, dressing, and mobility and on strength and endurance to tolerate out-of-bed activities 8 hr daily while on the transitional unit. The adaptation-based intervention emphasized goals related to activities and context after discharge, such as socialization with peers, playing dominos, and attending church services in the long-term-care facility. It would seem that the intent of the goals and subsequent outcomes of the protocol-based intervention were linked to minimizing disability and reducing ADL performance to basic skills, whereas the adaptation-based intervention attempted to link goals to participants' prior lifestyles and past roles and activities. Goals and outcomes focused on performance areas that were meaningful to the participants and were reflected in incremental changes that can be accomplished in the context where the participant resides.

The transitional unit evaluated attainment of protocol-based goals by comparing scores on the FIM from admission to discharge. The entire FIM was usually not completed, but those items consistently measured included feeding, bathing/showering, hygiene, upper-extremity and lower-extremity dressing, and toileting, yielding a total possible score of 42 (six items with 7 possible points each). The level of performance reflected in the initial FIM scores does not appear to be a good predictor of participants' ability to reach functional goals. Thus, participants with low functional levels as measured by the FIM were often as successful in reaching their functional goals as those whose FIM scores indicated high initial functional ability. For example, Ms. Jones's initial FIM scores were 17 at admission and 42 at discharge (a 31% performance rate), yet she met all five of her protocol-based goals while on the unit. In contrast, two participants with high FIM scores were inconsistent in the extent to which they met goals. Ms. Randall scored 41 at admission and 42 at discharge (a 97% performance rate) and achieved three of three goals, whereas Mr. Williams scored 39 at admission and 42 at discharge (a 92% performance rate) and met three of four goals. Thus, it appears that therapists are able to interpret initial FIM scores and make judgments about what functional changes might realistically be attained by elderly clients, taking into account factors that may influence goal attainment, such as the diagnosis; length of stay; motivation and cognitive level; and, ultimately, the meaning that goals have for the client.

Goals and outcomes of the adaptation-based intervention emphasized return to activities and relationships in the community that are reflected in the adaptation trajectories. Participants spoke about the importance of continuity in activities, such as going out to listen to music, teaching a granddaughter to sew, and the reconnection with friends and family through such activities. The adaptation-based intervention identified strategies for how these could be managed in specific community contexts, such as nightclubs and restaurants with limited wheelchair accessibility.

On the basis of the outcome data from both interventions, some notable observations can be made by analyzing
the number of goals that were met, partially met, modified, met using new solutions, or unmet. Sixty-seven percent of the participants' goals set in the protocol-based intervention were met by the time of discharge, according to clinical records. After discharge, these same goals, according to participant and family member reports, jumped to 91% met to some extent. Of this 91%, 39% were met as originally set, 26% were partially met, 22% were modified, and 4% were met using new solutions. The significant improvement seemed to result from the participants' ability to adapt to the community surroundings, some familiar, others new. Adjustment came, perhaps, as daily tasks took on more meaning within the context of their community environs. Similarly, by the time of community follow-up, all goals set during the adaptation-based intervention were met in some fashion, with 63% met as originally established, 5% partially met, 26% modified, and 5% met using new solutions. It appears that those outcome behaviors important to community living were sustained and incorporated into daily life within the participants' home context and local world. Outcome categories that reflect changes in the ways in which goals were conceptualized or attained (partially met, modified, met using new solutions) indicate that an important process of adapting goals and plans to the realities of community life continues after discharge, a finding that is consistent with previous research (Bull, 1992; Hasselkus, 1988).

Contrasting Perspectives on Outcomes

Along with some commonalities, important differences in how outcomes are viewed by participants, family members, and therapists were identified in findings derived from the CCE, CAPA, COIs, FOIs, and therapist interviews. Participants identified outcomes related to maintaining continuity in valued occupations and relationships. Family members seemed concerned more with the participants' general quality of life, but they also were interested in functional capabilities that would affect caregiving requirements, such as meal preparation and bathing. Therapists focused on occupational performance components and basic ADL.

The five family members who were available for interviews were a husband, daughter-in-law, daughter, sister, and niece. Three family members described their relationship with the participants in positive terms, whereas two identified it as burdensome. Family member perspectives focused mainly on the issue of good quality care, including safety and security. For example, Mr. Marson's niece stated, "I thank God he has taken to the nursing home so well. . . . that's not really something we have time to do." Whether set collaboratively with clients, the goals had three major emphases—strength, endurance, and self-care with some instrumental ADL—probably because of both the relative ease of measuring such outcomes quantitatively and the current health care reality that quantifiable outcomes are valued by facility managers, other professionals, and reimbursement sources. However, in two instances, goals derived from the protocol-based approach and the adaptation-based approach were the same. Both Ms. Jones and Mr. Williams wanted to return home and in fact did, Ms. Jones to her husband and Mr. Williams to his sister. In these two circumstances, the goals of the participants, family members, and therapists were identical, and the therapists' goals of increased strength and endurance and training in self-care activities provided the means for returning home. However, in other cases, the therapists' stated goals seemed to differ in relevance to the participants' daily home activities.

It would appear that in many instances, differences in perspectives of outcomes vary among the participants, family members, and therapists during hospitalization on a transitional unit. Some outcomes converged as well as diverged from admission to discharge and at home 3 months postdischarge. Factors contributing to these differences might include the therapist's need to follow regulatory and reimbursement policies as mandated by the hospital, the extent to which goals are relevant to the participant's daily life activities, and the family member's need to ensure quality care no matter the postdischarge setting.

As noted by various authors, the practice of outcomes research by occupational therapists is essential if our profession is to stay current with the dramatic changes occurring in health care delivery (Ellenberg, 1996; Rogers & Holm, 1994). Standardized assessments and protocol-based treatment have been the norm for the past several years. However, the result has been less flexible service delivery to the client and perhaps compromised quality of life after discharge to the community. According to
Batterham, Dunt, and Disler (1996), standardized measures are based on a predictive approach of service accountability that "presumes a linear, continuous relationship between the capacities of the individual and [his or her] quality of life" (p. 1221). However, these authors assert that indicators of functional progress, such as those identified in the FIM, do not take into consideration psychological, cognitive, and environmental processes that affect the rehabilitation continuum of care from admission to discharge and follow-up into the community. Batterham et al. proposed a system of multiple indicators that would be able to project important long-term outcomes. Developing measures that will detect functional progress as well as encompass what is meaningful to the client and relevant family caregivers is a challenging task confronting occupational therapists. As noted by Lipoma (1996), "Meaningfulness of functional performance is determined by the individual client... By taking into account the individual character of a client's life, we have the greatest likelihood of improving his or her quality of life" (p. 2).

Implications for Occupational Therapy

This project has a number of implications for occupational therapy. At a theoretical level, it emphasizes the importance of viewing adaptation as an interactive process between persons and environments that evolves over long periods (Frank, 1996; Spencer et al., 1996) in addition to considering responses to specific short-term adaptive challenges that have generally received more attention (King, 1997). This longer-term view reflects a life course perspective in which continuity in many areas of life and a coherent sense of self are maintained, despite the fact that dealing with disruptions is an expected part of growing older (Archley, 1989; Becker, 1993; Kaufman, 1988; Ryff & Essex, 1992). Among elderly persons with a variety of chronic physical and psychosocial diseases, disruptions caused by acute medical problems and the need for hospitalization present recurrent challenges rather than single episodes to which elderly persons adapt with a repertoire of learned strategies.

In identifying future research needs and opportunities, this project revealed the importance of relocation as a major adaptive challenge faced by many elderly persons who use past experience to help reestablish their daily lives in new social and geographic settings. During the relocation, relationships between personal and environmental factors in adaptation may be thought about more explicitly than they are during routine daily life. Relocation thus offers a valuable opportunity to study adaptive processes as they evolve. Additional research directions emerging from this project include identifying positive and negative effects of multiple transitions for elderly persons, identifying personal and environmental factors that influence successful adaptation to relocation, and examining positive and negative effects of loss of home to elderly persons.

Findings of this project also emphasize the importance of innovative approaches to conceptualization and documentation of outcomes over time that incorporate perspectives of various participants in the health care process, including clients, family members, service providers, and reimbursement sources (Batterham et al., 1996). The combination of qualitative and quantitative methodology used in this project made it possible to capture the complexity of ways in which outcomes of intervention were perceived by various "insiders," including elderly persons, family members, and clinical personnel. Differences among these perspectives caution us to question simplified schemes of outcome measurement that are based only on those variables that can most easily be quantified (Whiteneck, 1994).

At a pragmatic level, this study demonstrated that there are practical ways to document the qualitative aspects of practice through tools such as the CCE and CAPA. In addition to organizing a systematic clinical reasoning process for use in consultation-based service delivery, such tools provide a structure for assessing intervention outcomes through analysis of goal attainment. This form of practice prompts us to weigh the relative merits of hands-on versus consultation modes of service delivery and perhaps shift the balance toward greater emphasis on consultation, as has occurred in school-based practice. Trombly (1993) asserted that there are a number of advantages to an integrated top-down approach that begins with occupational performance in real-world contexts and connects performance components to their use in the client's meaningful daily activities. These advantages include clearer understanding of the usefulness of therapy by clients, family members, other professionals, and reimbursement sources and more active engagement of clients in the work of therapy.

To provide individualized services that help elderly clients adapt to transitions from health care settings to their own local worlds of community life, occupational therapists need to advocate for changes in the design of services and reimbursement mechanisms. These changes include a service delivery time frame that matches clients' natural adaptive processes and flexibility to follow clients from one setting to another. Such services should also recognize that family members and other caregivers often play a crucial part in successful adaptation to life course disruptions, acknowledge that their perceptions of goals and potential outcomes are an important component of a holistic approach, and offer the flexibility to incorporate caregivers as recipients of intervention. Baumbach and Law (1997) asserted that we need to reframe how we think about occupational therapy to focus on occupational performance in the community, a process that in their view "requires client-centered and family-centered practice and
services that span from the agency or institution to the community” (p. 277).

Acknowledgments

We thank the personnel from the geriatric program where the project was conducted for their assistance, the participants and their family members for their willingness to participate in the project at a difficult time in their lives, and the peer reviewers for contributing their time and expertise and providing valuable comments on an initial draft of this article. Financial support for this project was provided by the American Occupational Therapy Foundation.

References


Roberts, J. C., & Holm, M. B. (1994). Nationally Speaking—Accepting the challenge of outcome research: Examining the effective—


