Personal health is an aspect of everyday life that typifies both the commonplace and the stressful in the course of a lifetime. Many social-cognitive variables have been associated with indicators of behavioral health and with the adjustment and recovery of individuals facing health-related problems, and these characteristics are important factors in providing interventions (Auerbach, 1989). Therefore, it is important to consider the relations between social problem-solving abilities and indicators of behavioral health.

This chapter was supported by grants to the first author from the National Institute on Child Health and Human Development (1 R01 HD37661-01A3), from the National Institute on Disability and Rehabilitation Research, Office of Special Education and Rehabilitative Services, U.S. Department of Education (Grant nos. H133B90016 and H133A021927), and by Grant no. R49/CCR403641, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Injury Prevention and Control to the University of Alabama at Birmingham. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the funding agencies.
HOW AND WHY WOULD SOCIAL PROBLEM-SOLVING ABILITIES RELATE TO BEHAVIORAL HEALTH?

The prevailing model stipulates that social problem-solving abilities may be best conceptualized in terms of two major components: problem orientation and problem-solving skills (see chap. 1, this volume). This conceptual framework may be used to evaluate the extant research concerning social problem-solving abilities and behavioral health. In this chapter we first discuss the documented associations between problem-solving abilities and different dimensions of behavioral health (distress, health-related behaviors, health outcomes, etc.) and with social dynamics often implicated in personal health. We then discuss the available intervention research, conclude with a comment about the limitations of the research to date and the merits of our conceptualization, and consider avenues for expanding the research scope to appreciate the full breadth of social problem-solving abilities as they pertain to personal health.

SOCIAL PROBLEM-SOLVING ABILITIES AND DIMENSIONS OF BEHAVIORAL HEALTH

Social problem-solving abilities have been studied in individuals with a variety of health-related issues. In this section we discuss this research as it pertains to distress and adjustment associated with health conditions, perceptions of health and physical symptoms, ill health and secondary complications, health-promotive and health-compromising behaviors, interpersonal relations and social support, and family dynamics.

Distress and Emotional Adjustment Accompanying Health Conditions

Before 1991 there were few studies concerning the relationship of social problem solving to physical health, generally, and no published studies of social problem solving and adjustment among individuals with health-related problems, specifically. The first study to examine this issue found that individuals who had incurred a spinal cord injury (SCI) and who varied tremendously in the amount of time since the onset of the injury (1 to 490 months) were more likely to report greater depression and psychosocial disability if they had more negative appraisals of their problem-solving abilities (Elliott, Godshall, Herrick, Witty, & Spruell, 1991).

It is particularly informative to note that in this study (a) the relationship of social problem-solving abilities to both adjustment measures was not mediated by either the severity of the disability or the duration of the condition, (b) the degree of handicap associated with the injury was related
to social problem-solving abilities and beyond the variance attributable to the actual condition, and (c) elements of the problem orientation component were significantly associated with the self-report measures of adjustment. This provided the first evidence that social problem-solving abilities may operate in a theoretically consistent fashion among people with acute and chronic health problems and that the problem orientation component may influence the development of distress associated with health. Subsequent research has found that similar processes occur in the relationship of social problem-solving abilities to anxiety and depression among individuals recently diagnosed with cancer and among women recovering from breast cancer surgeries (Nezu, Nezu, Friedman, & Houts, 1999).

In the first study linking social problem solving with pain behavior, a low sense of control when solving problems was significantly predictive of premenstrual and menstrual pain complaints of undergraduate women, regardless of oral contraception usage (Elliott, 1992). Later research found social problem-solving abilities were predictive of psychosocial impairment and distress among patients entering a pain rehabilitation program (Witty, Heppner, Bernard, & Thoreson, 2001) and prospectively predictive of functional impairment among individuals with chronic pain who had returned to work (Shaw, Feuerstein, Haufler, Berkowitz, & Lopez, 2001).

The presumed mood-regulatory properties of the problem-orientation component were supported in a study of social problem solving, affectivity, and postpartum depression (Elliott, Shewchuk, Richardson, Pickelman, & Franklin, 1996). This scenario provided a conservative and rigorous test, given the expected high correlations between affectivity and depression and between peripartum and postpartum depression. The final model revealed that elements on the Problem-Solving Inventory (Heppner, 1988) representing positive and negative problem orientation—the problem-solving confidence and personal control factors, respectively—were significantly associated with trait positive and negative affect during the eighth month of pregnancy, and significant indirect paths were then associated with postpartum depression.

**Perceptions of Health and Physical Symptoms**

Social problem-solving ability operates as a metacognitive construct, influencing the way an individual perceives, processes, and uses information relevant to the self (Heppner & Krauskopf, 1987). Social–cognitive processes also operate in the ways people make inferences about their physiological status and sensations (Pennebaker, 1982), and some people tend to be aware of and pessimistically interpret physical sensations as symptomatic of illness whereas others are more circumscribed and benign in their interpretations (Pennebaker, 1982). Elliott and Marmarosh (1994) found ineffective
problem solvers reported significantly more physical symptoms in the three week before assessment, at the time of assessment, and three months later than effective problem solvers. Ineffective problem solvers also reported a lower sense of personal control over their health and believed their health was influenced by chance, in comparison with the effective problem solvers.

Ill Health and Secondary Complications

In times of stress, individuals with ineffective problem-solving abilities often rely on emotion-focused and avoidant coping (MacNair & Elliott, 1992). Cross-sectional research has revealed that the problem-orientation component is instrumental in the problems people under duress experience with decreased vitality and impaired social functioning because of poor health (Elliott & Shewchuk, 2003; Grant, Elliott, Giger, & Bartolucci, 2001). Prospective research using trajectory modeling techniques has further revealed that a negative problem orientation is predictive of increasing levels of ill health over the course of a year (Elliott, Shewchuk, & Richards, 2001).

Individuals who live with chronic disease (e.g., diabetes) and physical disability (e.g., spinal cord injury) are responsible daily for maintaining personal health by observing regimens for self-care, therapy, diet, monitoring symptoms, and integrity of bodily functions (e.g., skin inspections); failure to adhere to these regimens can result in complications that can lead to expensive episodes of care (e.g., emergency room visits, inpatient hospitalizations) and intensive interventions (e.g., amputations, skin-flap surgeries). Secondary complications are mediated largely by behavioral and social mechanisms that either prevent or facilitate the development of these conditions.

An initial foray into this area found people with SCI who were diagnosed with at least one pressure sore one year after completing a measure of problem-solving abilities were characterized in part by avoidant tendencies (with 84.91% accuracy; Herrick, Elliott, & Crow, 1994). Individuals in this sample varied considerably in the amount of time they had lived with SCI. Recent work suggests that all elements of social problem solving—as measured by the Social Problem-Solving Inventory—Revised (SPSI–R; D'Zurilla, Nezu, & Maydeau-Olivares, 2002)—contribute to the prediction of pressure sore occurrence in the first three years of SCI (Elliott & Bush, 2003).

Available data suggest this may be a complex—if not convoluted—issue, not easily explained by our existing models. For example, in a study of treatment outcomes among people with dual-disorder diagnoses (e.g., substance abuse and personality disorders), a higher positive orientation was significantly predictive of fewer positive alcohol and illicit drug screens.
during inpatient treatment (with 70% accuracy; Herrick & Elliott, 2001). This finding implied that individuals with a positive orientation were motivated to observe treatment expectations for therapeutic behavior. However, the treatment program also stipulated that graduates of the program would keep their first scheduled outpatient visit following their discharge into the community. A predictive model found that individuals with a lower positive orientation were more likely to keep this scheduled appointment and those with a higher positive orientation were more likely to miss it (with 64.15% accuracy). These paradoxical results essentially highlight a fundamental shortcoming in these correlational analyses: We ultimately do not know what was important and of value to these participants, and we do not know what problems were of immediate concern. Once discharged into the community, did those with a positive orientation feel little need to keep this appointment? Did they have other problems of greater importance? Did they attend to a personal problem higher on their priority list—in other words, had they relapsed? When we do not know the actual problems people experience and the subjective valence of these problems, we are at a loss to understand the full impact and influence of social problem-solving abilities in everyday life.

Health-Promotive and Health-Compromising Behaviors

College students classified as ineffective problem solvers have reported more alcohol use than effective problem solvers (Heppner, Hibbel, Neal, Weinstein, & Rabinowitz, 1982; Williams & Kleinfelter, 1989). These differences have not been found among clinical samples, however (Larson & Heppner, 1989), and there is some evidence that gender differences might be related to the reporting of substance use and problem-solving abilities (Elliott, Johnson, & Jackson, 1997). Cross-sectional data relying on self-report measures of health behaviors suggest that avoidant tendencies are associated with a greater likelihood to take risks when operating an automobile among undergraduates, and a positive problem orientation is associated with accident-prevention behaviors among undergraduates and people with acquired disabilities (Dreer, Elliott, & Tucker, in press; Elliott et al., 1997).

In the only prospective study to date on this topic, logged diaries of alcohol ingestion were used to assess undergraduate drinking behavior. Greater avoidant tendencies were predictive of greater alcohol intake over a two-week period (Godshall & Elliott, 1997). Moreover, this study also examined logged accounts of exercise and sedentary behavior (defined as hours watching television). Although no significant associations were found with exercise, avoidant tendencies were associated with more sedentary behavior. Incidentally, alcohol use was positively correlated with sedentary
behavior as well. It appears that avoidant tendencies may be characterized by an unstructured lifestyle, marked by a lack of goal-directed behavior.

INTERPERSONAL RELATIONS AND SOCIAL SUPPORT

In the seminal Heppner et al. (1982) study, ineffective problem solvers reported more relationship problems than the effective problem solvers and interviewers observed interactively rated the effective problem solvers more interpersonally skilled than the ineffective problem solvers. Effective assertiveness skills are thought to be crucial in adjusting to chronic and disabling health conditions, and effective problem-solving abilities were significantly predictive of assertion skills among individuals with spinal cord injuries in the Elliott et al. (1991) study.

It seems logical to assume that effective problem-solving abilities would be associated with higher levels of social support. Social problem-solving abilities and social support might share considerable statistical overlap and a common, underlying social dimension that conceptual differences may not be of real importance. Social support did not mediate the relationship between social problem-solving abilities and depression, nor did it mediate the problem-solving-personal health relationship (Grant et al., 2001). More important, social problem-solving abilities accounted for more variance in depression and health than social support. A negative orientation may be a better predictor of depression status than social support (Grant, Weaver, Elliott, Barolucci, & Giger, in press).

There is evidence that problem-solving abilities moderate the social support–adjustment relationship among individuals with health conditions. In a study of individuals with spinal cord injuries, effective problem-solving ability was associated with less psychosocial impairment when support offering material assistance was low; in contrast, ineffective problem solving was associated with greater impairment when this support was high (Elliott, Herrick, & Witty, 1992). A second interaction revealed that effective problem solving was associated with less impairment when support offering advice and guidance was low; under conditions of high guidance and advice, effective problem solving was associated with greater impairment. A recent study found ineffective problem solving was associated with higher depression scores when support for pain behavior was low among individuals admitted into a pain management program (Kerns, Rosenberg, & Otis, 2002). Effective problem solvers may experience greater benefit from some types of social support than ineffective problem solvers, but effective problems solvers may encounter difficulties with support systems that provide direct advice and guidance (which may be characteristic of many health professions).
Family Dynamics

Observational studies indicate that families differ considerably in their ability to identify and solve problems that affect its members. Effective problem-solving skills have been observed in the interactions between parents of children who have been compliant with dietary regimens for a chronic disease (Fehrenbach & Peterson, 1989), and families with adolescents who abuse substances often display deficits in family problem solving and in coping with everyday problems (Hops, Tildesley, Lichtenstein, & Ary, 1990). Effective problem-solving abilities are associated with lower distress among mothers of children with disabilities (Noojin & Wallander, 1997), family caregivers of older individuals in stroke rehabilitation (Grant et al., 2001), and individuals assuming a caregiver role for a loved one with a recent-onset spinal cord injury (Elliott & Shewchuk, 2003). A negative orientation in particular is predictive of the subsequent trajectories of caregiver depression, anxiety, and ill health during the first year of assuming the caregiver role (Elliott, Shewchuk, & Richards, 2001).

The ability to manage the rigors and demands of caregiving may be directly related to the health and well-being of the care recipient. Individuals who incur a severe disability, for example, may have restricted mobility and disruptions in sensory perception; these individuals require routine assistance in adhering to therapeutic regimens for self-care, movement, diet, skin inspections, and toileting. The responsibility for adhering to these regimens usually resides with the family caregiver. If a caregiver lacks the problem-solving abilities necessary to observe the expected rituals—while simultaneously attending to the other tasks essential to family functioning and daily life, with a minimum of preparation, training, and formal support—nonadherence will likely ensue and the care recipient will be at risk for secondary complications (such as pressure sores among individuals with paralysis). Caregiver impulsive–careless problem-solving styles have been associated with care recipient difficulties with disability acceptance before discharge from an inpatient spinal cord injury rehabilitation program, and this association was independent of previous levels of care recipient depression during the program (Elliott, Shewchuk, & Richards, 1999). Moreover, caregiver impulsive–careless styles significantly contributed to the prediction of the occurrence of a pressure sore among individuals evaluated in the outpatient clinic one year later (with 87.88% accuracy).

PROBLEM-SOLVING INTERVENTIONS IN BEHAVIORAL HEALTH

Cognitive–behavioral therapies have been used in health care settings for some time, and problem-solving training (PST) has documented
effectiveness in a variety of settings in lowering depression among older adults (Arean et al., 1993). PST has been described in detail for individuals with cancer (Nezu, Nezu, Friedman, & Faddis, 1998), and it is effective in promoting weight management over time among women with obesity (Perri et al., 2001). A recent study indicates that the benefits of PST in lowering distress among cancer patients may be evident a year after treatment (Nezu, Nezu, Felgoise, McClure, & Houts, 2003).

Other health-related interventions can be framed in problem-solving perspectives. Problem-solving principles can be incorporated into family education and caregiver preparation programs, and these can be delivered in community sites (Houts, Nezu, Nezu, & Bucher, 1996) and in the home (Kurylo, Elliott, & Shewchuk, 2001). Distressed caregivers may receive greater benefit from PST than those with less distress (Toseland, Blanchard, & McCallion, 1995); similarly, caregivers who exhibit poor problem-solving skills may be more responsive to training (Roberts et al., 1995).

Manualized PST has demonstrated limited effects in helping mothers of children with cancer over an eight-week period (Sahler et al., 2002). Another clinical trial using three groups—PST, a sham intervention, and a control group—examined the efficacy of PST in telephone sessions with family caregivers of stroke survivors on their return to the community (Grant, Elliott, Weaver, Bartolucci, & Giger, 2002). Caregivers were trained over a series of eight contacts during a 12-week period (including initial training in the home followed by weekly telephone contacts for the first month and biweekly contacts through the second and third months) to use social problem-solving skills in managing stressors that were identified at each contact. Trajectory modeling revealed that participants in the training group had better problem-solving skills over time, and they reported less depression and improvements in personal vitality, social functioning, mental health, and preparation for the caregiver role.

Implications and Future Directions

The extant literature and clinical experience have advanced our understanding of social problem solving, and it is evident that these abilities are meaningfully related to the ways people may sense and interpret physical symptoms, to the development of certain health conditions, and to the distress and impairment experienced by people who live with chronic conditions. There is evidence to support the utility of PST in health care settings. Nevertheless, several overarching issues in this literature temper the understanding of social problem-solving abilities in behavioral health.
What Is the Problem?

People who face acute health problems and those who live with chronic conditions encounter many potential stressors that can complicate their adjustment and well-being. These problems may relate to some aspect of the condition, but they may also stem from other roles and activities of daily life (e.g., parenting, budgeting finances). Unfortunately, determinations about what is stressful and what is a problem are often made by clinicians and theorists, who then typically design interventions in a top-down fashion based on clinical and research needs. As we have seen, we are at loss to explain some findings in the literature when we make assumptions about what problems participants experience without consulting them (cf. Herrick & Elliott, 2001). Individuals who live with chronic conditions are articulate about the problems that cause them stress (Miller, Shewchuk, Elliott, & Richards, 2000). A manualized approach to PST that does not actively attend first to the subjective, immediate concerns of the individual may be of little benefit to those living with a chronic health condition (Shanmugham, Elliott, & Palmatier, in press). In contrast, interventions that have documented effectiveness began each session with a discussion with the participant to address specific problems of concern at that time (Grant et al., 2002).

In some situations, individuals may be overwhelmed with many problems, or they may be reticent to share their problems with an interviewer. We have found that participants are more willing to consider problems that have been obtained from a group of peers; in some cases, this information might serve to stimulate discussion about other problems experienced by the participant that might not be identified by the group (Elliott & Shewchuk, 2000). Providing a list of problems identified by a peer group can normalize an individual’s experience and may also be used to augment basic problem-identification skills. This kind of an approach can be used to tailor PST to the unique needs of a person. Individuals who sense greater relevance in training will have more motivation for learning and using problem-solving skills.

Some researchers have opted for condition-specific assessments of problem-solving abilities, arguing that the multifaceted aspects of a disease imposed many problems that required strategies to address these specific concerns (e.g., cancer; Sahler et al., 2002). The ability to solve problems specific to diabetes, for example, has been associated with more optimal adjustment (Toobert & Glasgow, 1991). It is often assumed that a condition constitutes the major focus of everyday life for people who live with a chronic disease or disability. Yet people vary considerably in the degree to which they attend to other aspects of life and as they find meaning and
pursue fulfilling activities independent of their condition. Individuals who
adjust optimally following the onset of chronic disease or disability do not
regard the condition as the centerpiece of their life; conversely, individuals
who have greater difficulty coming to terms with their condition often
demonstrate difficulties coping with other aspects of life (Elliott, Kurylo, &
Rivera, 2002). Thus, if a person has difficulty solving problems that
accompany the routines of daily life, it is probable that they will have similar
difficulty tending to the tasks, regimens, and symptoms prerequisite for
optimal adjustment while living with a chronic disease or disability.

There are situations in which condition-specific assessments are perti-
nent, but these should not be administered with a general disregard for the
impact of problem solving on the life experience, and assumptions about
the nature of stress and problems (and the relative valence of these) should
be anchored to the individual’s experience. Problem-solving interventions
that are tailored to the individual experience will be more relevant and
elicit more motivation than standardized protocols. Furthermore, this kind
of an approach is conducive to fostering a partnership with individuals who
live with chronic conditions, and in doing so, they are trained to operate
as active participants in their health and its care.

Emphasizing the Negative, Ignoring the Positive?

The tendency to assume the existence of problems—a result in no
small part to the theoretical underpinnings and clinical focus of the social
problem-solving model—unfortunately contributes to a rather pessimistic
and unbalanced view of individuals who live with many health conditions.
But there is ample evidence that effective problem solvers possess favorable
opinions about their abilities, have good self-concepts, and have a fair
amount of motivation to handle minor problems with dispatch, and thus
carry a good deal of confidence to the business of solving major problems.
When facing a major health event, individuals with effective problem-
solving abilities will likely process available information in an adaptive
manner, maintain their sense of motivation, and engage in goal-directed
behavior that has served them well in the past. In one direct study of this
issue, effective social problem-solving abilities were associated with disability
acceptance among individuals with a recent-onset spinal cord injury (Elliott,
1999). These data indicate that social problem-solving abilities are associ-
ated with adaptive beliefs, values, and sense of purpose and meaning that
characterizes acceptance of disability. These findings raise other intriguing
questions: Do ineffective problem solvers have persistent problems with
ruminations about their condition? Do they perceive the chronic health
condition to be the centerpiece of their lives? Do they have recurrent
interpersonal or social problems that reflect their inability to handle the
minor, routine tasks of life? In contrast, do effective problem solvers report a different cluster of problems altogether, perhaps related to their goals and aspirations, or do they report fewer stressors of any type?

Studies relevant to this issue have explored the relationship of problem-solving abilities to life satisfaction among individuals with diabetes (Elliott, Shewchuk, Miller, & Richards, 2001) and caregivers of stroke survivors (Grant et al., 2001). In the Elliott, Shewchuk, Miller, et al. (2001) study, social problem solving was associated with satisfaction with life in a theoretical direction, and it should be noted that participants of this study had lived with their condition for some time. In the Grant et al. (2001) study, problem solving was not significantly correlated with life satisfaction; these caregivers were assessed before their family members’ discharge from the rehabilitation unit. A cross-sectional study of caregivers of individuals with SCI found an effective problem orientation was significantly associated with greater mental health and happiness (Elliott & Shewchuk, 2003). There is also some promising evidence that PST can enhance quality of life: Grant et al. (2002) found PST significantly improved reports of mental health and happiness among family caregivers.

Piecemeal Publication and the Big Picture

The bulk of the extant literature has addressed basic theoretical questions or targeted specific adjustment issues in need of treatment. In many studies, statistical techniques were used to isolate the separate components of problem solving to test specific theoretical properties and clarify the role of the separate components in the prediction of adjustment, behavior, or some other relevant outcome. However, this approach does not instruct us in the ways the different components of social problem solving might operate in tandem, or if there are subgroups or profiles of individuals who have varying levels of adjustment at any point in time. The reliance on tests of specific theoretical tenets contributes to a rather piecemeal view of social problem-solving abilities and their role in the adjustment of an individual in a given day. We simply do not know how the various components of problem solving work together to influence adjustment among individuals who live with chronic health conditions. We could assume that the full array of social problem-solving abilities would be instrumental in facilitating personal health and quality of life, particularly among people who live with chronic health concerns, and perhaps among those who face acute and severe health problems.

In one of the few studies that attempted to identify subgroups of individuals based on their problem-solving profiles, Elliott, Shewchuk, Miller, et al. (2001) found four distinct problem-solving clusters among individuals with diabetes that varied significantly in depression and life
satisfaction. Two of the groups mirrored the theoretical extremes of the model, but the other two groups presented a more complicated picture. One group clearly had the skills requisite for adjustment: They had the second highest positive orientation average and the second highest average on rational problem-solving skills. Yet this group also had the second highest average depression score and the second lowest in life satisfaction. Participants in this group then appeared skilled but nonetheless frustrated, pessimistic, and embattled, because their negative orientation and avoidance scores were also high.

Another intriguing group—which had the most members, it is interesting to note—had very low scores on practically all problem-solving scales. They also had the second lowest average depression score and they were the second highest in life satisfaction (although this average score was still rather low). These low-key individuals were not necessarily motivated or feeling competent, but it was apparent that they were not distressed or frustrated either. Perhaps there are times in chronic disease when individuals find it adaptive to rein in their goals and aspirations and find some sense of adjustment in lowered expectations (or, at least, a less aggressive approach to solving problems). These profiles are inconsistent with the presumed linear relationship between problem solving and adjustment among individuals with health conditions, as perpetuated in most cross-sectional studies.

**Low-Cost Providers and Efficacious Service Delivery**

The research to date germane to behavioral health suggests that PST can be a cost-effective approach to treating individuals with depression (and presumably, other emotional disorders) that are seen in primary care (Mynors-Wallis, Gath, Lloyd-Thomas, & Tomlinson, 1995). PST can be effectively provided by colleagues from other health professions (Grant et al., 2002; Roberts, et al., 1995). The use of low-cost service providers is particularly attractive in the delivery of services to individuals who have chronic health conditions and who may have daily, ongoing issues in daily living. These individuals are also likely to have decreased coverage for health care services, are more likely to be on public health care programs, and they are also more likely to have mobility and transportation difficulties. In sum, these individuals are at risk for complications that tax public-supported health care systems, but their needs are not logically or reasonably addressed by traditional programs of care centered in fee-for-service models and outpatient clinics. Additional research should explore the effectiveness of PST provided in innovative approaches such as Internet bulletin boards (Bucher & Houts, 1999) and in-home videoconferencing devices (Rivera, Shewchuk, & Elliott, 2003).
CONCLUSION

Social problem-solving abilities are related to several broad areas in behavioral health. Research concerning the relation of social problem-solving abilities to acute care needs has been lacking in general. Social problem-solving abilities appear to be particularly germane to the adjustment of individuals who live with chronic health conditions, because these individuals simultaneously cope with tasks and symptoms associated with their condition and perform roles essential to the function of everyday life. Available research supports this position. However, there is a remarkable lack of PST research among individuals with other chronic conditions. We should expect to see studies of PST in the treatment of chronic low-back pain, rheumatoid arthritis, cardiac rehabilitation, asthma, and AIDS/HIV (to name but a few examples). The social problem-solving model and its supportive literature base offers clear directives for assessment and intervention in these areas.

Similarly, a problem-solving perspective can provide a powerful vantage point for assessment and triage. Available evidence suggests that individuals with poor skills are at greater risk to develop secondary complications and incur greater expense to health care service delivery systems. More research is needed to demonstrate the prospective predictive ability of the model in identifying individuals who are in fact at risk for adverse outcomes and greater health care expenditures across many health conditions (such as those listed earlier). Information about individual deficits will then be pivotal in tailoring strategic, community-based training programs for individuals who are known to be susceptible and vulnerable to complications when left on their own recognizance.

REFERENCES


