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▲ 52.4 Psychiatric Rehabilitation

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The growing recognition that a large proportion of persons with schizophrenic and mood disorders experience a poor quality of life with long-term disability, persisting symptoms, or a relapsing course of illness has given birth to the field of psychiatric rehabilitation. Early intervention and effective treatment of acute episodes of symptom exacerbations are important for minimizing long-term disability. On the other hand, workers in psychiatric rehabilitation emphasize continuous, comprehensive, coordinated, and indefinite treatment of lifelong mental disorders to maintain symptom control, prevent or reduce relapses, and optimize psychosocial performance. The goal of psychiatric rehabilitation is to teach skills and provide community supports so that individuals with mental disabilities can function in social, vocational, educational, and familial roles with the least amount of supervision from the helping professions.

Treatment and rehabilitation are interconnected seamlessly, as are the full range of biopsychosocial services, in a continuous and comprehensive effort to reduce impairment, disability, and handicap among the mentally disabled. In addition, a major goal of psychiatric

rehabilitation is enabling the mentally disabled person and family members to be actively involved in treatment decisions and to achieve the highest feasible quality of life in the community.

An enormous population of mentally disabled persons needs psychiatric rehabilitation to bolster their quality of life. For example, the National Plan for the Chronically Mentally Ill used the triad of diagnosis, disability, and duration to identify persons who suffer from persistent or recurrent organic, schizophrenic, mood, anxiety, and other disorders that become chronic and erode or prevent the development of their functional capacities in relation to three or more primary aspects of daily life. These functional areas of daily life include personal hygiene and self-care, self-direction, interpersonal relationships, social transactions, learning, recreation, and economic self-sufficiency.

Since many childhood developmental, psychotic, and mood disorders that persist for many years and impede normal psychosocial development are included in the target population, the total number of persons in the United States who need psychiatric rehabilitation in any 6 month period may exceed 10 million, based on data compiled by the National Institute of Mental Health (NIMH) Epidemiologic Catchment Areas study.

The terms "chronically," "severely," or "seriously mentally ill" have been used interchangeably to identify persons with long-term disabilities resulting from schizophrenia, persisting depressions, and bipolar disorder, delusional disorders, borderline personality disorders, and dementias. Estimates of the prevalence of persisting mental disabilities, such as those shown in Table 52.4-1, are now considered gross underestimates, given more recent data from the NIMH Epidemiologic Catchment Area and Co-morbidity studies, the difficulty of counting homeless and jailed mentally ill persons, and the number of persons with dual diagnoses as well as those disabled by serious mood and anxiety disorders. Although this section focuses on rehabilitation of persons with psychotic disorders, persons with disabling mood, anxiety, substance abuse, and personality disorders can also benefit from many of the same structured and skills-training modalities. Behavioral rehabilitation can also slow the functional deterioration of persons with dementias, using modalities found effective with younger, mentally disabled persons.

The challenge to psychiatric rehabilitation is amplified by the inadequate resources and poor organization of service delivery for the target population, which results in thousands of homeless, mentally ill persons in urban centers of the United States and a concentra-

tion of mentally disabled persons in state and local prisons. With over 5000 mentally ill prisoners, the Los Angeles County Jail is said to be the largest psychiatric institution in the United States. The transinstitutionalization of the seriously mentally ill from state hospitals to jails, custodial board-and-care homes, and inner city streets is a condemnation of our society's humane values. Our failure to provide high-quality, continuous psychiatric treatment is made more tragic by the availability of new rehabilitative technologies that, when systematically organized and delivered, have the potential to reduce morbidity, disability, and handicaps among serious and chronic mentally ill persons.

Organization and delivery of therapeutic and rehabilitative interventions for persons experiencing serious mental disorders requires a longitudinal, informed, mutually respectful and collaborative therapeutic alliance between the patient and caregiver. Whether the caregiving function is fulfilled by a psychiatrist, allied mental health professional, or paraprofessional case manager, the qualities inherent in a supportive, empathic, individually tailored relationship must be present. Given the primary role of the family and other natural caregivers (e.g., operators of residential care homes) in maintaining treatment and compliance, plus the enormity of the family burden experienced by relatives, professionals must also involve families in treatment planning and implementation. Rehabilitation is a labor-intensive and person-to-person venture. Even the pharmacotherapy that must accompany psychiatric rehabilitation is effective only to the extent that the doctor-patient relationship contains trust, problem solving, and shared goals. Medication is never prescribed, ingested, or metabolized in a socioenvironmental vacuum; both drug and psychosocial treatments depend upon a working alliance between treater and treated.

The terminology used to refer to an individual receiving mental health services can vary depending on the site at which the individual is being treated. For example, *patient* may be a suitable term for inpatients in a hospital; *client* may be appropriate in mental health centers; and *consumers* or *members* may be useful in outpatient programs or vocational and residential settings. The term *patient* is used in this chapter for consistency with other chapters in this book. However, readers need to be mindful of the appropriate terminology when developing and implementing rehabilitation programs.

CONCEPTUAL FRAMEWORK FOR REHABILITATION

Studies in Europe, the United States, and Japan that followed up persons who experienced disabling forms of schizophrenia during early adulthood found, 20 to 40 years later, a remarkable 50 to 66 percent functioning actively in their communities with few symptoms, a reasonably good subjective quality of life, and only limited dependence on professional caregivers. These findings have spurred interest in psychiatric rehabilitation as a way to facilitate social and symptomatic recovery of seriously mentally ill persons. With an attachment to data-based empiricism and hypothesis testing, an interdisciplinary cadre of specialists in psychiatric rehabilitation derived new assessment and intervention methods from the vulnerability-stress-protective factors model of psychiatric impairment, disability, and handicap (Fig. 52.4-1). The course and outcome of major mental disorders are defined by:

1. *Impairments*, the characteristic positive and negative symptoms and associated cognitive and affective abnormalities of disorders such as schizophrenia, autistic disorder, and bipolar disorder
2. *Disabilities*, the restrictions impairments impose on such func-



Table 52.4-1
Point Prevalence of Persisting, Long-Term Mental Illness and Disability in the United States

Prevalence estimates for chronic mentally ill (2.1–2.6%)	4,000,000–5,000,000
Community estimates of chronic mentally ill	2,800,000–3,500,000*
Treated prevalence of chronic mentally ill patients	
In mental hospitals	50,000–60,000
In other specialty facilities†	250,000
In nursing homes	1,000,000–1,100,000
In prisons and jails	100,000

* Excluding 1.2–1.5 million living in institutes.

† Includes halfway houses and other large community residential facilities not covered in community survey.

Data from Barker PR, Manderscheid RW, Hendershot GE, Jack SS, Schoenborn CA, Goldstrom ID: *Serious Mental Illness and Disability in the Adult Household Population of the United States, 1989*. Center for Mental Health Services, Rockville, MD, 1992.

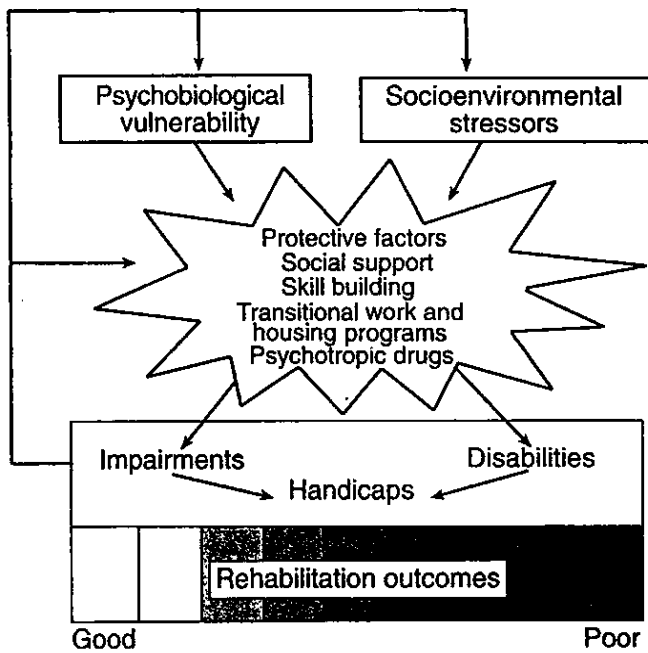


FIGURE 52.4-1 Graphic representation of the vulnerability-stress-protective factors framework for understanding the determinants of symptom impairments, disabilities, and handicaps of the major mental disorders. Protective factors buffer or filter the noxious effects of stressors superimposed on enduring vulnerability in producing psychopathology. There is a feedback loop from impairments and disabilities back to vulnerability and stress; for example, improved social skills and coping capacity can mitigate stressors and may even modify neurobiological vulnerability.

tional life domains as personal hygiene, medication self-management, recreation for leisure, and family and social relationships

3. *Handicap*, the disadvantage experienced by an individual with impairments and disabilities that limits or prevents the fulfillment of normal roles, such as worker, student, friend, citizen, and family member

Moving mentally disabled persons along the spectrum of impairment, disability, and handicap from poor to good outcomes requires orchestration of protective factors in treatment and community support services. As long as the psychobiological vulnerability factors responsible for the specific syndrome are unknown, interventions cannot directly modify them. Those vulnerability factors (most likely genetic and neurodevelopmental) endure. They likely exist before the symptoms of the disorder emerge as well as during periods of symptom remission and relapse. Similarly, as long as the principles of community care of the mentally ill are adhered to, vulnerable individuals cannot be isolated from socioenvironmental stressors. Stressors, whether drugs of abuse or social overstimulation, are a fact of life for mentally ill persons, even in the so-called asylums, where privacy is absent and violence is omnipresent. Even in the absence of major life events or the noxious effects of illicit drugs and alcohol, vulnerable persons can succumb to tension or conflict in their environments or to microstressors and daily hassles if they lack the protection conferred by medication, coping abilities, and social support.

Psychiatric rehabilitation must harness the protective factors in both the treatment and natural environments to offset and buffer the adverse effects of stress superimposed upon vulnerability. Those protective factors include optimal psychopharmacological interventions that can raise the threshold at which environmental stressors

precipitate symptoms in an individual with a given level of vulnerability to a serious mental disorder. But even prescribing pharmacotherapy with attention to the highest possible benefit to risk ratio (i.e., using atypical antipsychotic drugs to maximize therapeutic effects while minimizing side effects) does not ensure protection against relapse. Medications must be supplemented by psychosocial interventions that (1) equip patients with personal, social, and vocational coping and competence and (2) galvanize necessary social support services to compensate for the intrusion of symptoms, deficits, and disabilities that even the best system of care cannot remediate.

MULTIDIMENSIONAL REHABILITATION KEYED TO DISORDER STAGE

The clinical practice of psychiatric rehabilitation joins three major sets of factors that protect against stress and vulnerability: (1) pharmacotherapy tailored to the type and severity of psychopathology at dosages that do not produce sedation or adverse effects that interfere with positive engagement in rehabilitation; (2) development of skills so the patient can meet the challenge of stressors and life situations that demand adaptation and independence; and (3) a range of supportive social services, including housing, transitional and supported employment, financial support, and case management to sustain a mentally disabled person in the community. Psychiatric rehabilitation assumes that disabled persons need maintenance medication, social and independent living skills, and environmental resources and supports to fulfill the role demands of community life.

The organization of truly comprehensive psychiatric rehabilitation is diagrammed in Figure 52.4-2. One dimension of the cube represents the stage of the disorder, ranging from prodromal, to acute, to residual phases. The second dimension contains treatment and rehabilitation modalities, such as drug therapy, family and cognitive therapies, social skills training, and vocational rehabilitation. The third dimension holds requisite support programs aimed at compensating for disability and minimizing handicap (e.g., family education and support, social service entitlements, case management, housing, and psychosocial clubs). The psychiatric rehabilitation practitioner or team following a person for many years through various phases of a disorder should be able to use this multidimensional framework to match treatments and support services to the changing needs of the patients as dictated by their impairments, disabilities, and handicap at any point in time.

Rehabilitation of individuals with chronic and serious mental disorders had to respond to the transition in locus and focus of care from institution to community and from custodial care to functioning in society. Community support programs, psychosocial self-help clubs, and community mental health centers are now the hubs of psychiatric rehabilitation services where new modes of intervention are coordinated and delivered by case managers in league with multidisciplinary teams of clinicians who assume long-term responsibility for sustaining seriously mentally ill patients in the community. As is shown in Figure 52.4-3, the tripartite roles and competencies of case managers are the key to comprehensive and continuous rehabilitation.

Engagement The successful engagement of a patient in a therapeutic relationship is the first step in psychiatric treatment and rehabilitation, no matter what the venue for service delivery. The clinician or clinical team attempting to engage seriously mentally ill persons in treatment must build a collaborative relationship with patients and

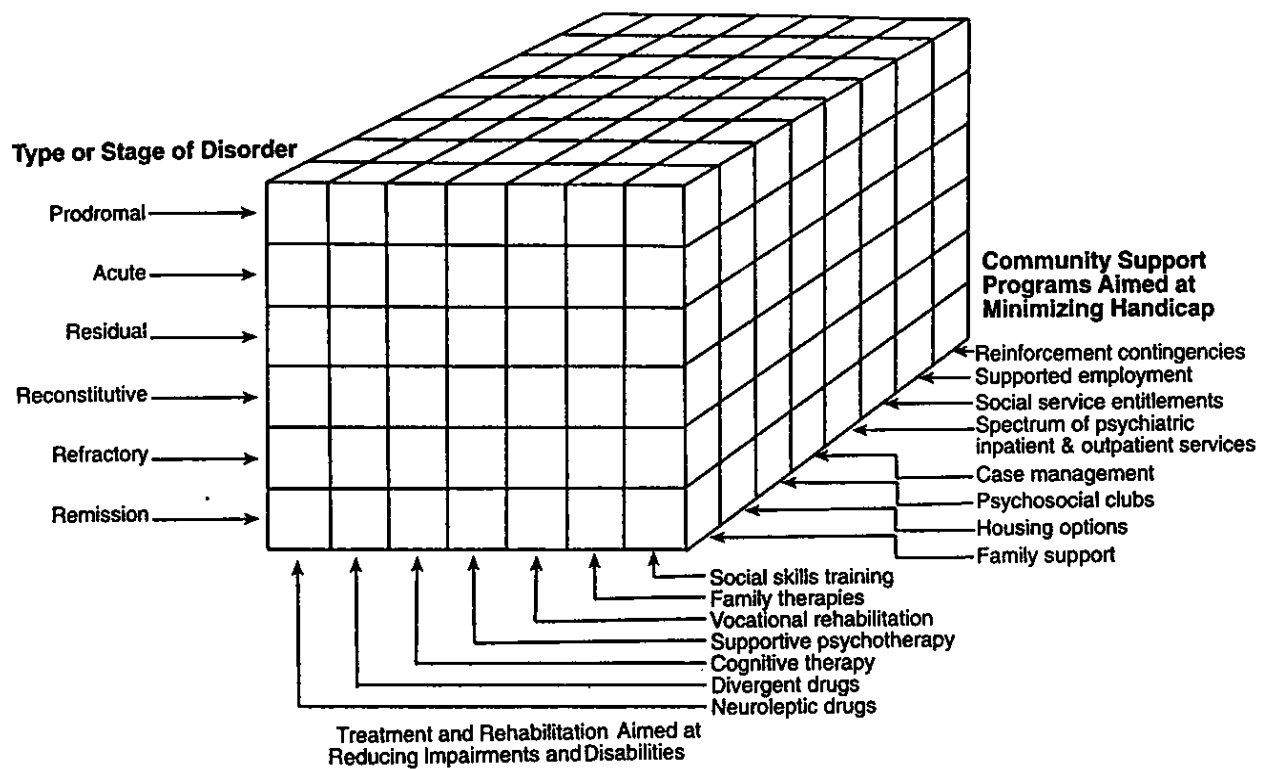


FIGURE 52.4-2 Complex cube of psychiatric rehabilitation.

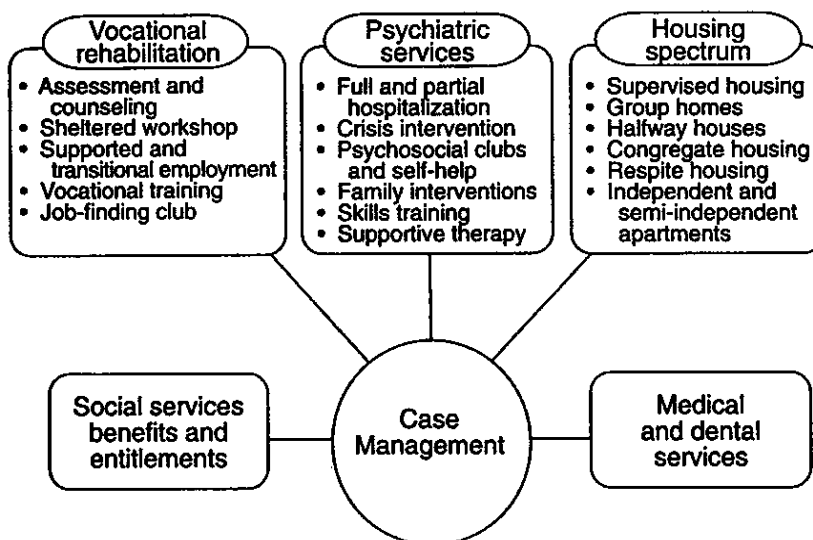


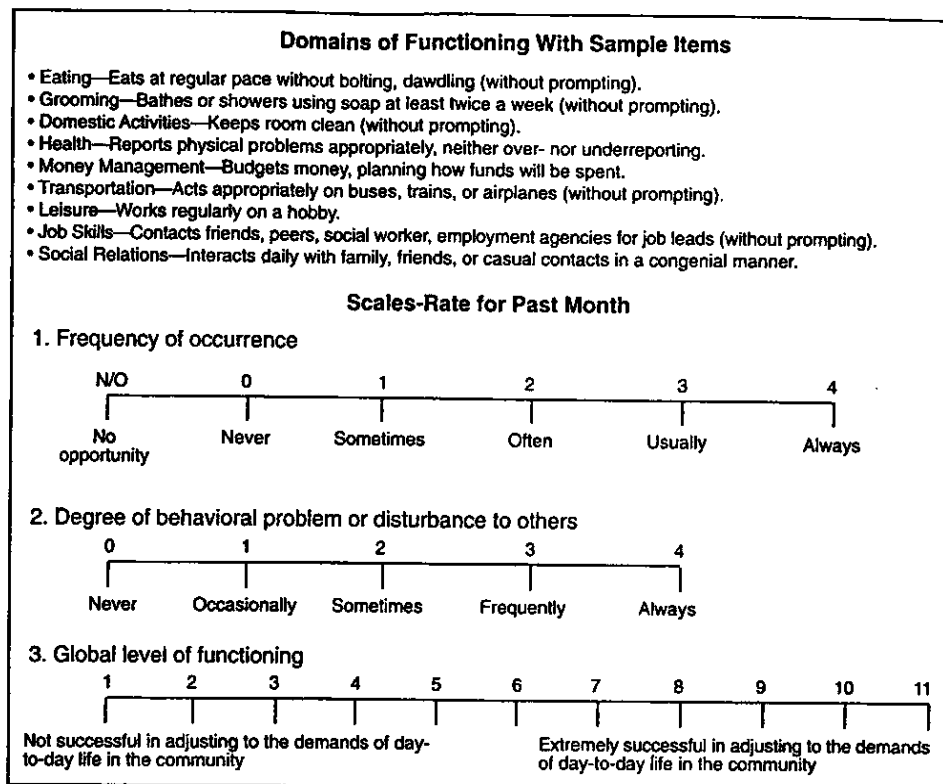
FIGURE 52.4-3 Case management functions for serving the comprehensive needs of seriously mentally ill persons.

their families. Professionals and patients must recognize each other's agenda and seek some common ground in developing a comprehensive treatment plan. Engaging homeless, mentally ill persons often requires active outreach, with mental health practitioners meeting prospective consumers of services on their own turf, frequently the streets and back alleys of urban centers.

The process of engagement is contemporaneous with the setting of overall rehabilitation goals. Helping individuals define their desired life roles can be a vehicle for engaging and motivating them to participate in a lengthy rehabilitation process. Patients who actively participate in goal setting are more likely to abandon denial of their

illness, acknowledge ownership of their goals, seek reinforcement from significant others when they work toward their goals, and customize or modify their goals as their rehabilitation proceeds. Successful engagement of the patient and family or other natural caregivers in rehabilitation often requires not only active outreach by the professional, but also a nonjudgmental and nonauthoritarian approach and even toleration of nonadherence to medication for periods of time. Engagement, a long-term effort, is often challenged by obstacles in service delivery, reflected in the current terms supplanting "patient" such as "consumer" or "customer." The following case vignette illustrates engagement.

FIGURE 52.4-4 Independent Living Skills Survey.



Mark was a 23-year-old man who experienced the onset of schizophrenia during his last year in college. He was referred to the rehabilitation team after efforts to engage him in treatment had previously failed. He was found to be severely psychotic, evidencing disorganized thinking, paranoid delusions, auditory hallucinations, and bizarre behavior. He had refused earlier efforts to have him take antipsychotic medications because of adverse effects he experienced. The information about his psychotic symptoms gathered by using the Brief Psychiatric Rating Scale (BPRS), particularly that relating to disorganized thinking and the hallucinations, was shared with Mark. He was specifically told about the impact the symptoms had on his daily functioning and was shown the ratings for his symptoms. He was told that his ability to use his social and independent living skills was limited as a result of his psychosis. He agreed to a trial of antipsychotic medication, during which time he would self-monitor his psychotic symptoms using a scale similar to that used in the BPRS. He and his parents were sent home with this scale, and were asked to complete the Independent Living Skills Survey (Fig. 52.4-4), a self-report assessment of daily functioning.

When Mark returned, his psychotic symptoms had decreased from the extremely severe level to mild and moderate levels. He reported enhanced self-efficacy since taking the medication and especially noted his improved attention and concentration, which allowed him again to read for reasonably long periods of time. That effect was important to Mark because it allowed him to pursue his longer-term rehabilitation goal of completing his college education. Close examination of the Independent Living Skills Survey revealed difficulties in grooming and self-care and basic conversational skills. He and the rehabilitation team agreed to target those deficiencies during their initial skills-training efforts.

Community Reentry Program Ideally, engagement should begin when patients first encounter mental health services, regardless of treatment setting. For instance, inpatient treatment for individuals with serious and persistent mental illness should be seamlessly integrated with community services so that hospitalization is brief and minimally disruptive and the community's rehabilitation services can be implemented as quickly as possible. Unfortunately, this ideal is often not achieved, and many psychiatric inpatients do not follow through with community care after discharge. Often, the result is a cycle of relapse and rehospitalization, known as the "revolving door" phenomenon.

The poor rates of transition to community-based treatments are likely to be both system and patient related. Efforts to alter the structure and function of mental health systems to make them more cohesive and accessible (e.g., the Program for Assertive Community Treatment) have had some success in reducing recidivism, but model programs have not been widely adopted and are unavailable to most patients who might benefit. Fewer efforts have targeted the other half of the aftercare equation, namely, the patient. The Community Re-entry Program—a 16-session modularized, skills-training program—was designed to teach inpatients how to actively collaborate with the mental health system in creating and implementing their own tailor-made aftercare plans. Once engaged in this fashion, educated patients might acknowledge the need for continuing care and actively participate in treatment, discharge, and rehabilitation planning. Studies at New York Hospital-Cornell Medical Center and UCLA/Olive View Medical Center have shown that inpatients who participated in this program improved their knowledge and performance of the skills presented in the program, had significantly higher rates of engagement with aftercare services after discharge, and had improved levels of community functioning 2 months after discharge. These results suggest that engaging patients in psychiatric rehabilita-

tion procedures such as skills training can begin in the hospital and continue without interruption into the community, linking inpatient and outpatient facilities in a common treatment philosophy and a matching set of treatment techniques.

ASSESSMENT

If engagement is the first (albeit continuing) step on the road to successful psychiatric rehabilitation, then assessment is the roadmap for the journey. A thoroughgoing, carefully conducted assessment pinpoints the areas for rehabilitation and provides a baseline for monitoring its effects. Furthermore, assessment within the framework of psychiatric rehabilitation, with its emphasis on positive goals and functioning linked to the current phase of illness and symptoms, fosters a collaborative relationship between patient and practitioner that greatly facilitates treatment.

Assessment is part and parcel of any therapeutic interaction, and some might argue that the clinical sensitivity of an experienced mental health practitioner is all that is needed to conduct an adequate assessment. Indeed, only minimal sensitivity may be needed to detect certain problems such as assaultiveness, which if present must be a target of treatment. Comprehensive assessment not only reveals factors that subtly influence even the most obvious problems, it also establishes both the baseline for monitoring the effects of treatment and the collaborative relation that sustains it. This comprehensive assessment process is illustrated by a recently developed, integrated and coordinated assessment and treatment-planning instrument, Client Assessment of Strengths, Impairments, and Goals (CASIG).

Client Assessment of Strengths, Impairments, and Goals CASIG is a multidimensional assessment tool that helps practitioners plan, document, and evaluate psychiatric rehabilitation. The acronym of this instrument takes into account the empowerment of the client or consumer in identifying service needs, while following the World Health Organization’s International Classification of Impairments, Disabilities [the reciprocal of capabilities or “Strengths”], and Handicaps [the reciprocal of participation in set-

ting interests and goals]. CASIG is based on the model of psychiatric rehabilitation outcomes presented above, with the additional assumption that the plan for services must solicit the active participation and integrate the goals, assets, deficits, needs, resources, and constraints of all the relevant stakeholders. Stakeholders include client or patient and significant others including family members and other caregivers and those paying for the services.

As shown depicted in Figure 52.4-5, CASIG assesses performance in 10 areas of functional living skills, subjective quality-of-life in 11 areas, presence of 5 symptoms, 20 medication adverse effects, compliance with medication, and performance of 10 unacceptable community behaviors. The information is collected from the patient during a 60- to 90-minute interview, with corroborating information collected from the patient’s significant others and treatment personnel who know the client well. Additionally, the patient’s preferences to change his/her behavior in each area are elicited.

Regardless of the area being assessed or the source of the assessment information, CASIG items have all been designed to achieve several objectives:

- to be reliably administered by any of the paraprofessional and professional staff who typically provide services for patients (even high-functioning consumers can reliably administer CASIG to other patients)
- to be easily incorporated into programs with diverse staffing patterns, resources, locations, and clinical responsibilities
- to include multiple sources of information about particular social deficits or symptoms of the patient so that any disagreements can be resolved to plan services better
- to bridge the many facilities in which patients are served to monitor (with repeated administration) the progress of individual patients in their treatment and rehabilitation programs and in the aggregate monitor the effectiveness and changing characteristics of programs

Two clinical examples for the CASIG—one assessing a symptom (depression), and the other assessing a functional living skill (money management)—are presented in Figures 52.4-6 and 52.4-7, respectively.

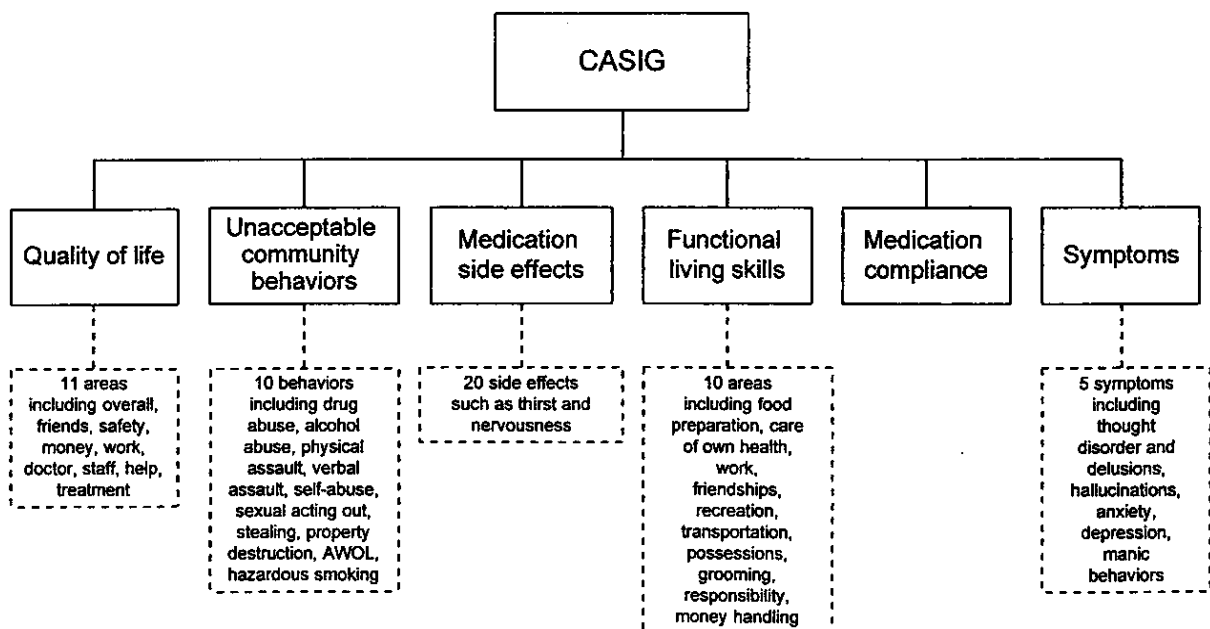


FIGURE 52.4-5 Areas assessed by Client Assessment of Strengths, Impairments, and Goals (CASIG).

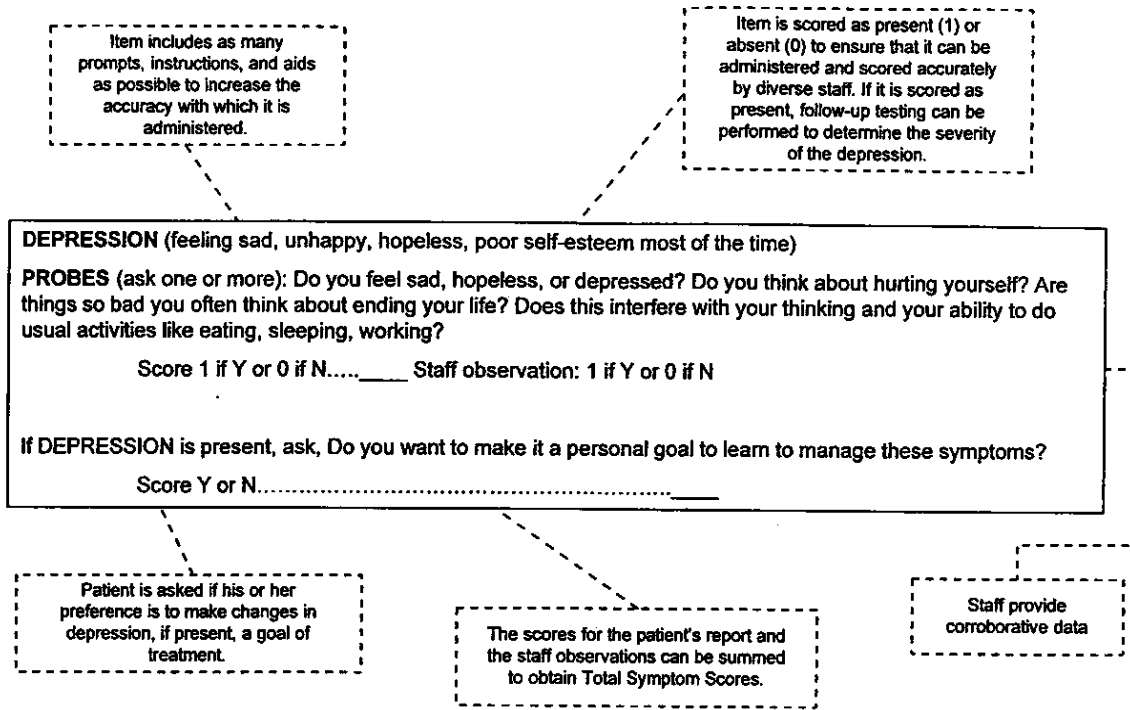


FIGURE 52.4-6 Example of a symptom—depression—assessed by CASIG.

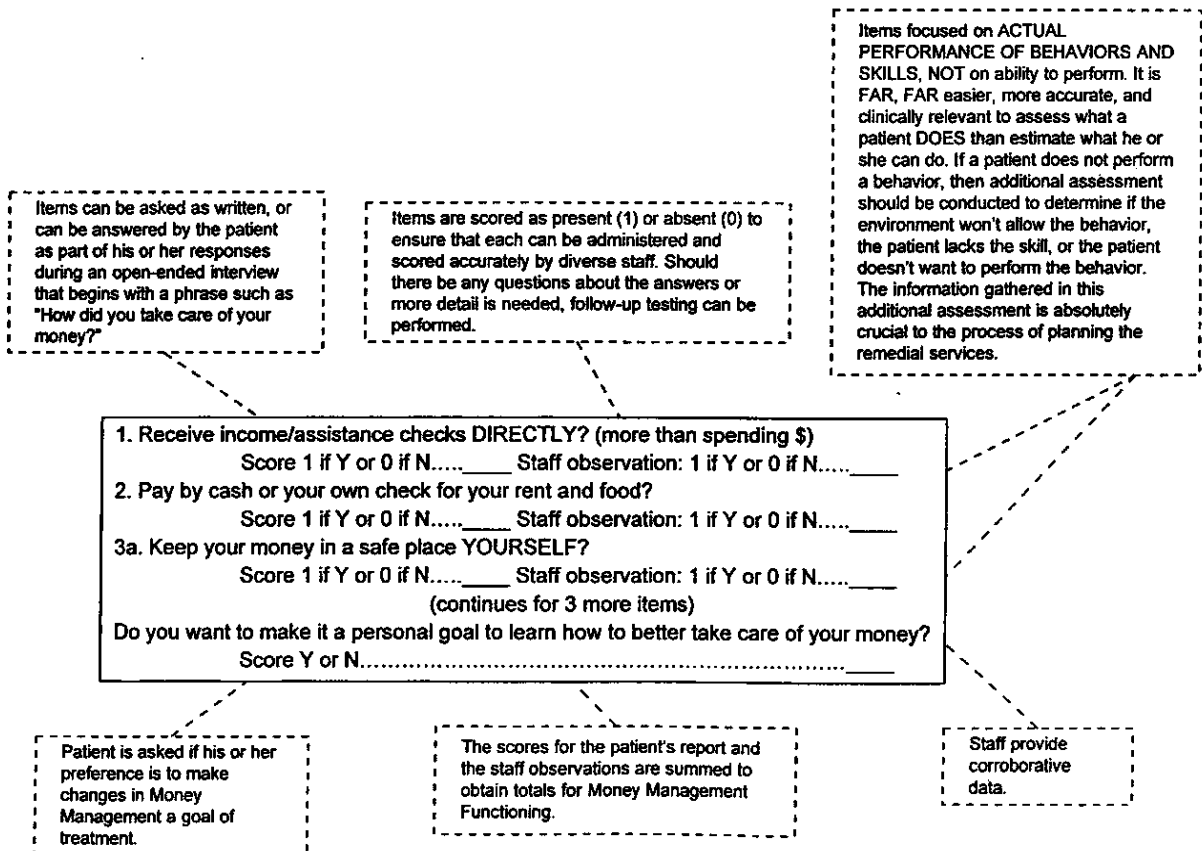


FIGURE 52.4-7 Example of functional living skills: three items from the money management section of the CASIG.

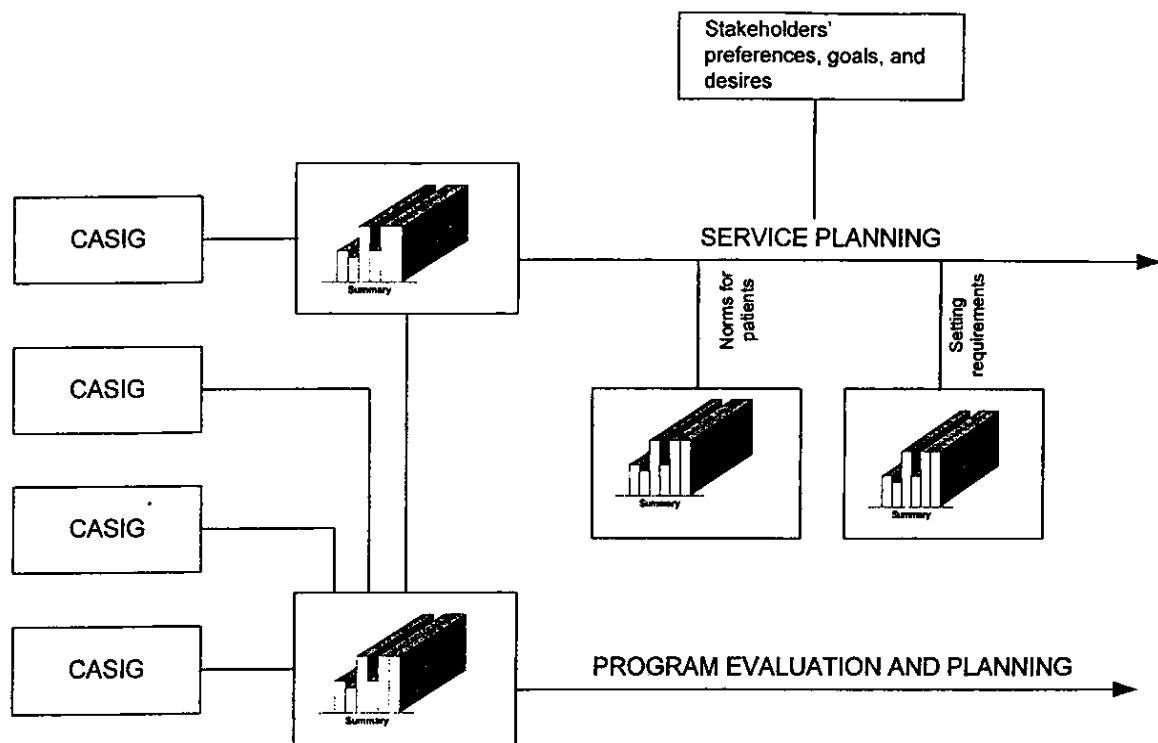


FIGURE 52.4-8 Output of CASIG. Service planning, and program evaluation and planning.

The assessment results are summarized and then interpreted by comparing them with norms developed from other patients and with the requirements for successful functioning in various environments. As indicated in Figure 52.4-8 these comparisons, combined with the expectations of the stakeholders, provide the basis for treatment planning.

SHORT- AND LONG-TERM GOALS

To guard against deviating from the rehabilitation pathway, both the engagement and assessment processes emphasize the importance of focusing on the rehabilitation goals endorsed and validated by the individual. However, making the patient a full and equal partner in the treatment and rehabilitation process is not always easy. Negative symptoms, disabilities, intrusive hallucinations, institutionalization, and cognitive dysfunction may impede the patient's ability to participate actively and helpfully in this crucial endeavor. The setting and resetting of short- and long-term goals provides the road markers by which clinician and patient can judge whether (or not) they are traveling in the same desired direction.

Within a few months, Mark had noticeably improved his grooming and self-care habits. However, he still had trouble initiating and maintaining conversations. Because of this persistent deficit, the rehabilitation team encouraged Mark to reformulate his goal of pursuing a college education into a long-term plan with several intermediate steps. The team helped Mark identify a series of short-term tasks that would build toward his matriculation at a local community college. Mark began by attending a daily group focused on basic conversation skills at the mental health center. Within a few months, his progress led the rehabilitation team to offer Mark the opportunity to colead the skills-training group, which Mark readily accepted. Within a few weeks

Mark was not only cofacilitating the group but also conducting ad hoc tutorial sessions for patients who lagged behind. At a subsequent meeting with the rehabilitation team Mark announced that rather than go to college, he wanted to be hired by the mental health center as a peer advocate. Once again, Mark and the team designed a step-by-step approach that allowed him to work toward this new goal.

The clinician and patient are guided by the continuous interaction of the patient's overall rehabilitation goals with the current stage of the disorder. During the acute, florid stage of the illness, the task for the clinician may be to help the patient move from grandiose, unrealistic fantasies to articulating the more proximal and immediate realistic changes and steps that must be accomplished before the longer-term goals can be reached. As symptoms stabilize and (hopefully) ameliorate, the focus shifts to helping patients define their goals in terms of occupational, student, friendship, familial, and residential roles. Another shift occurs during the late rehabilitation and recovery phase, when individuals begin to look for goals which transcend their status as patients qua patients. In this phase, the goal is to develop and nurture the wellness factors (e.g., hope, courage, self-esteem) that enable patients not only to manage but sometimes to overcome the illness.

Logistically, an individual's preferences, desires, and motivations should be operationalized in behavioral terms and divided into long- and short-term goals. Long-term goals involve months to years and should correlate with overall rehabilitation goals to progress toward functional life roles. Long-term goals should be comprehensive in subserving progress in all relevant domains of life functioning (Social/Interpersonal, Familial, Financial, Recreational, Medical/Psychiatric, Activities of Daily Living/Independent Living Skills, Vocational/Educational, Spiritual, and Housing/Residential). Short-term goals involve days, weeks, or months and should articulate with

long-term goals as stepping stones, or subgoals. Short-term goals also must be prioritized and endorsed by all parties participating in the rehabilitation. To facilitate accomplishment, individuals should prioritize their goals and, when possible, have them endorsed by the family, caregivers, and responsible clinicians.

Keith was a 26-year-old man recently diagnosed as having paranoid schizophrenia. When psychotic symptoms were controlled with antipsychotic medications, he engaged in a rehabilitation planning effort with an occupational therapist who was a member of a community mental health center treatment team. When first asked to identify his goals, he said he wanted to enter college and complete his bachelor's degree. He hadn't been in school for 6 years, yet he said he wanted to matriculate as a full-time engineering student in a prestigious school. The clinician thought that goal was unrealistic. On further exploration it was learned that Keith had felt happiest when he was in school, and he now thought this would be the best way to realize his goal of being "happy and independent."

Once this goal of becoming independent and more pleased with himself was identified, Keith was helped by his therapist to set as a long-term goal resumption of his schooling at a local trade school. He then began to work with his therapist to target skills and deficits in the areas of time management, organizing scheduled activities, and self-assertion. He saw those as essential to prepare for his goal of entering school. He had been an organized person with good study habits prior to developing his illness, so those were seen as potential assets. His basic conversational skills were more than adequate, but he needed training in speaking up to obtain his needs in the classroom, with teachers and with peers. He had the prerequisite resources to engage in the recommended training sessions (i.e., time, a car, and the availability of social skills training services in his local community support program). Six months later, after benefiting from structured and systematic skills training to improve his self-advocacy, he entered a course in automotive mechanics at a vocational school.

MONITORING THE QUALITY OF INTERVENTIONS AND CLINICAL PROGRESS

Biopsychosocial assessment and intervention is an ongoing process requiring the psychiatrist to titrate medications and psychosocial services on the basis of an individual's fluctuating need. In fact, the effectiveness of drug treatment depends on the clinician's ability to elicit, rate, and monitor symptoms, leading to appropriate adjustments (or maintenance) of treatment (e.g., medications, crisis services, skills training). Instruments such as the BPRS have been used by a wide variety of practitioners as sensitive indicators of impending psychotic relapse. Behavioral observations (e.g. time sampling or experience sampling) can be even more sensitive indicators of the need for psychiatric intervention than interview-based ratings, but these are more demanding to implement.

The CASIG evaluation system was designed with the presumption that treatment planning does not end with the collaborative development of the patient's service plan. As shown in Figure 52.4-9, treatment consists of recurring cycles of assessment, planning, and service delivery. These cycles reflect the ever-changing nature of treatment; as the services achieve their effects, all of the stakeholders change. In such a fluid environment, treatment cannot be successful unless assessment and services are intertwined in the on-going process. New information obtained from an updated assessment engenders new treatment plans designed to make the information obsolete and hence require yet another assessment. This pattern proceeds through the patient's journey from acute episode to stabilization, rehabilitation, and (if successful) recovery.

According to his parents, Matt had been unable to "fit in" since his early teenage years. Now 35 years old, Matt's daily routine consisted of eating at fast food restaurants, working as a stock boy at a local retailer, and spending most of his time alone in his apartment. During the CASIG interview, Matt stated that he had no friends, attended no social gatherings, and was bored most of the time that he was not at work. His parents complained that

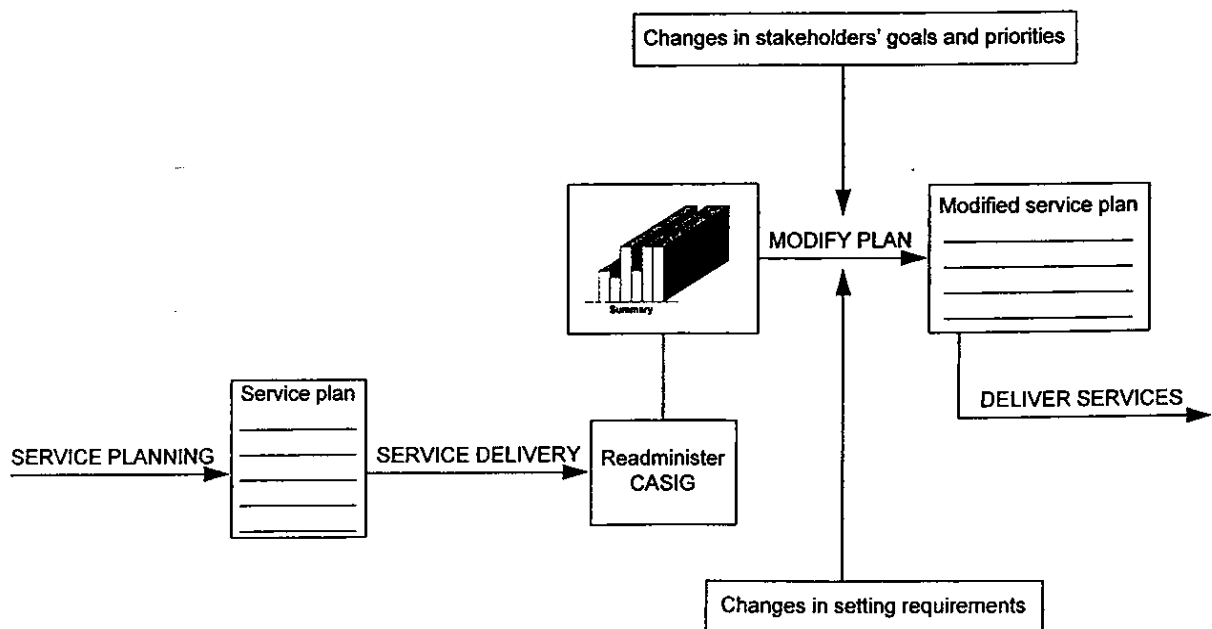


FIGURE 52.4-9 Cycle of service plan, evaluation, and new service plan. This cycle is repeated as often as needed to fulfill service goals.

Matt failed to groom himself regularly and was being threatened with eviction from his apartment for not cleaning properly.

The initial treatment goal derived from the CASIG interview focused on increasing Matt's opportunities for social engagement. He was initially given a homework assignment to count the number of chances he had each day to interact briefly with someone. It quickly became clear to Matt that he had 15 to 25 opportunities each day to say "Hello" to other employees or residents at the apartment building. Consequently, Matt and his therapist updated the CASIG plan, adding social skills training to increase his ability to interact appropriately when the opportunity presented itself.

After learning some brief conversation skills and when to apply them, Matt was next assigned to count the number of times each day that he actually engaged people in brief conversations as well as the percentage of these engagement attempts that were successful. As his percentage of successful engagements increased, he developed more confidence in his ability to "fit in" and thus modified his CASIG plan once again to include attendance and participation in social gatherings. He told his therapist that he wanted to invite a few coworkers to his apartment to watch television after work. This idea required adding goals that he had not considered in his original CASIG plan, such as improved grooming and better housekeeping. Using the recurrent, interconnected technique of the CASIG evaluations allowed Matt to see how his self-identified goal of increased social relationships could be facilitated by improvement in self-care and daily living skills.

FITTING TREATMENT AND REHABILITATION INTERVENTIONS INTO THE GOALS

One must move from the identification of symptoms and functional deficits and formulation of positive goals to the delivery of the appropriate biopsychosocial treatment modalities. Although setting specific, concrete interpersonal goals is perhaps the most challenging step in a patient's rehabilitation, the failure to reinforce these goals with consistent, yet modest accomplishments may lead to discouragement, frustration, and ultimately treatment discontinuation. The clinician choosing and using the needed intervention must encourage patients to reach just beyond their grasp and help facilitate the success of their efforts.

In preparation for his "party," Matt rehearsed with his therapist each conversation he was to have with his coworkers. Matt had little difficulty in the role play with his therapist, but he reported several failures when he tried to invite his peers to his apartment. This was useful information for Matt's therapist who, rather than simplifying the goal increased his level of intervention by accompanying Matt into the field to provide closer prompts and feedback during the peer contacts. The *in vivo* support provided by his therapist enabled Matt to make the invitations and successfully host his party. Soon thereafter, Matt began to receive and accept invitations to social gatherings hosted by others, including members of his family.

REHABILITATION SERVICES

Case management services are required to coordinate a wide range of entitlements, community support, and rehabilitation services now available to mentally disabled persons. Specific rehabilitation services include social skills training, family psychoeducation, cognitive remediation, vocational rehabilitation, and self-help programs. The effectiveness of these and other services has been established,

and their importance is highlighted by recent notable changes in the nature and organization of care for severely mentally ill persons. For example, introduction of the atypical antipsychotic medications including clozapine (Clozaril), risperidone (Risperdal), and olanzapine (Zyprexa) has led to hypotheses regarding potential enhancement of cognitive and learning capacities that underlie individuals' abilities to benefit from rehabilitation interventions. A wide range of social factors have highlighted the importance of rehabilitation in effecting community reintegration and functioning, including the dramatic reorganization of health care services and funding over the past decade, the growing problem of homelessness and criminalization of the mentally ill, and the Americans With Disabilities Act. The utility and effectiveness of rehabilitation strategies have been recognized, and they are prominently included in a number of treatment guidelines for schizophrenia published by organizations such as the American Psychiatric Association.

As illustrated by the Practice Guidelines for Treatment of Schizophrenia by the American Psychiatric Association:

[P]sychiatric rehabilitation aims to optimize the recovery of individuals with schizophrenia and other disabling mental disorders. This is accomplished through the use of the full array of biopsychosocial interventions, strengthening the supports and resources available for the person in the community, a collaborative approach with the patients and the natural caregivers, and an emphasis on function rather than symptoms. There is an attempt to improve the patient's performance in social, vocational, educational, and familial roles to achieve the highest quality of life and productivity attainable.

Social Skills Training Social skills training involves behavioral techniques or learning activities that enable patients to acquire instrumental and affiliative skills in domains required to meet the interpersonal, self-care, and coping demands of community living. While skills training can be done with individuals and families, the typical skills-training session is conducted as a group or class with one or two cotherapists as trainers and 5 to 10 mentally ill patients. Sessions last from 45 to 90 minutes, depending on the patients' level of concentration and symptom control, and meet one to five times a week. Since most mentally disabled persons have pervasive deficits in social functioning, skills training should become a central element in their long-term rehabilitation. It is not unusual for skills training to be offered for years, as the person's abilities, goals, and values ascend a hierarchy of community adaptation. Trainers draw on learning activities like those listed in Figure 52.4-10 to help patients master each skill area.

In conducting social skills training, therapists engage patients in goal setting and motivational enhancement. Patients are given an understanding of how the skills to be learned can help them achieve their own personal needs and desires. For example, in generating motivation to participate in a conversation skills group, patients are given examples of how conversation can mediate friendships, dating, and job success. The component skills in the skill area are next presented to the patients as learning targets. For example, a trainer leading a basic conversational skills session aimed at teaching patients how to start a friendly chat would say:

In this skill area, you'll learn three skills that you need to start a friendly conversation. First, you'll learn how to find places where there are people to talk to. Second, you'll learn how to find people who are willing to talk to you. Finally, you'll learn how to find topics of conversation. For example, one way to find a topic is by observing what another person is doing and use that activity as your topic to start a friendly conversation.

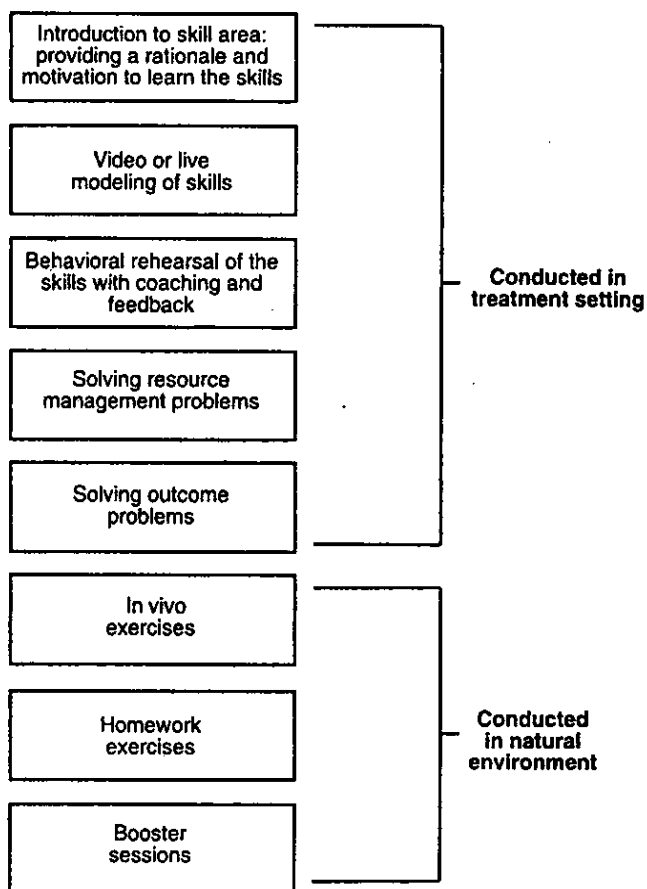


FIGURE 52.4-10 Learning activities used to teach social skills.

Modeling is used next to give patients an opportunity for vicarious learning. Using prearranged situations or situations taken from participants' everyday lives, the skills are demonstrated by the trainer or by peers in the group. Modeling can be provided by video samplers as well as by role playing by the trainer or another group member. Generalization can be enhanced by having the model or trainer annotate or speak aloud what steps are involved in successfully completing the skills:

Wow, I'm supposed to go up and start a conversation with that girl. But I'm scared she might turn me down. Wait a minute. I remember in class that it is a good idea to start a conversation about what another person is doing. Let's see, she's sitting over there knitting a sweater so I could start by talking to her about knitting.

Thus modeling and other steps in social skills training combine cognitive techniques with more-overt behavioral techniques into a cognitive-behavior therapy.

Patients are then provided opportunity to try the new skills in guided behavioral rehearsal, or role play. Specifically, patients practice interpersonal situations from their lives that involve the targeted skills and role play a scenario using those skills. Trainers provide active coaching during the role playing and give generous positive feedback afterward by rewarding approximations to the targeted behaviors. Critical feedback can be counterproductive and should generally either be avoided or be couched in constructive terms. One particularly effective training technique involves videotaping the pa-

tient's role playing and replaying the video, highlighting the positive signs of progress by the patient.

After patients have demonstrated some mastery of skills in the supportive context of role playing, they are given in vivo homework assignments to facilitate transfer of newly acquired skills into the community. Homework assignments are more likely to be successful when patients are given specific tasks to do in their community (e.g., "Go home tonight and ask your roommate to play cards with you for 10 minutes") and when they are helped, in advance, to anticipate obstacles to success and to engage in problem-solving exercises to overcome these obstacles (e.g., "Let's anticipate some of the things that might interfere with your inviting your roommate to play cards and what you might do about them.'). Trainers can also accompany patients into their real-life settings to provide coaching in vivo as well as liaison with the patients' natural caregivers to ensure opportunities and encouragement to use the skills. Subsequently, patients need to be reinforced for homework-related efforts. One advantage of doing social skills training in groups is the amplified reinforcement that occurs when patients give their peers positive feedback for implementing their skills in real-life situations.

Variants of Social Skills Training Social skills training can be conducted in the context of individual, family, or group therapy. Goals can be individualized to fit the functional and symptomatic needs of each patient or can follow a prescriptive format in which preset goals are pursued that have general relevance for a large proportion of the patient population. Most patients with chronic schizophrenia can benefit from educational curricula that teach medication and symptom self-management, grooming, social conversation, self-directed recreation, management of personal finances, and family communication. Four variations on the standard skills-training approach have been used effectively to remediate the deficits of persons with severe mental disorders: training of verbal and nonverbal expressive skills in response to specific situational expectations and personal needs; training to improve the accuracy of social perception; training in problem-solving skills; and enhancement of skill generalization via environmental intervention.

Behavioral Response Training In behavioral response training, a task analysis is conducted of the interpersonal situation that is problematic, and socially acceptable responses are targeted as goals for the patient. Each situation is assumed to call for a set of discrete verbal, paralinguistic, and nonverbal skills that combine to form a competent social response. For example, to be a proficient conversational partner, an individual needs to use appropriate forms and amounts of eye contact, facial expression, voice intonation, and interpersonal distance as well as judicious amounts of self-disclosure and social curiosity. Helping patients learn to combine these specific behaviors closes the gaps in their social ineptness.

Abundant research has shown the efficacy of this variant of skills training in reducing deficits in expressive behavior. In addition, the importance of conducting individualized task analyses linked to the phase of a patient's disorder merits emphasis. For example, inpatients struggling with persistent psychotic symptoms who have difficulty finding adequate housing have different behavioral training goals than stable outpatients who wish to improve their vocational functioning. On the other hand, behavioral response training has been criticized for its unidimensional, limited view of social interactions. Impaired processing of social information has been proposed as a more comprehensive model for understanding the social deficiencies of patients with chronic mental disorders. Thus, diminished sensitiv-

ity to social cues, inability to comprehend interpersonal problems and generate relevant solutions, poor comprehension of rule-governed social behavior, and deficits at the discourse level of linguistics have been implicated as core limitations in the social behavior of persons with schizophrenia and other chronic mental disorders.

Training in Social Perception Skills Recently efforts have been made to develop strategies for training patients in affect and social cue recognition. Patients with chronic psychotic disorders often have difficulty in accurately perceiving and interpreting the subtle affective and cognitive cues that are critical elements of communication. Social perception abilities are considered the first step in effective interpersonal problem solving; difficulties in this area are likely to lead to a cascade of deficits in social behavior. Training skills in social perception address these deficits and help provide a foundation for developing more-specific social and coping skills.

Despite attending several social gatherings, Matt felt apart from the rest of the group. He reported that he experienced these events like "a jumble of sights and sounds." His therapist, recognizing Matt's difficulty with social perception, provided him with a series of questions designed to help organize and give meaning to the social stimuli he encountered. For example, when Matt was confused about a conversation someone was having with him, he would ask himself, "What is this person's short-term goal? At what level of disclosure should I be? Should I be talking now or listening?" Identifying the rules and goals of a particular social interaction provided a template for Matt to recognize and react to a greater variety of social cues, thus enhancing his behavioral repertoire.

Information-Processing Model of Training Methods of training that follow a cognitive perspective teach patients to use a set of generative rules that can be adapted for use in various situations. For example, a six-step problem-solving strategy has developed as an outline for helping patients overcome interpersonal dilemmas: (1) adopt a problem-solving attitude; (2) identify the problem; (3) brainstorm alternative solutions; (4) evaluate solutions and pick one to implement; (5) plan the implementation and carry it out; (6) evaluate the efficacy of the effort and, if ineffective, choose another alternative.

While the step-wise, structured, linear process of problem solving occurs more intuitively and without conscious awareness in normal persons, it can be viewed as a useful interpersonal crutch to help cognitively impaired mental patients cope with the information needed to fill their social and personal needs.

Skill Enhancement via Environmental Organization

Skills training is most effective if the patient's environment allows repeated opportunities and encouragement to practice newly learned skills. One example is in vivo amplified skills training. Here the patient's case manager or treatment team, together with the patient, makes direct and repeated efforts to create opportunities, encouragement, and reinforcement for using the acquired skills in the patient's living, working, and social environments. These efforts involve contacts with family, employers, agency officials, peers, and other persons who can facilitate the patient's use of specific skills in the environments where they are most relevant.

A related strategy involves teaching individuals to modify their home environment to incorporate specific cognitive and behavioral

cues for skills. Reminder cards, notes, schedules, prompting devices (e.g., remotely activated beepers), and other concrete cues can be systematically used to augment skills learned in training programs.

Modules for Training Social and Independent Living Skills

Based on the cognitive model of social skills training, a set of psychoeducational modules was developed at the University of California at Los Angeles (UCLA) Clinical Research Center for Schizophrenia and Psychiatric Rehabilitation for use by interdisciplinary professionals and paraprofessionals in a wide array of mental health facilities and natural environments to teach patients the social and instrumental competencies of key domains of community functioning. The domains include self-management of antipsychotic medication, identifying warning signs of relapse, coping with psychotic symptoms, grooming and personal hygiene, recreation for leisure, interpersonal problem solving, job finding, community reentry, safe and satisfying sex, family coping, street smarts, and engaging in friendly conversations. Those domains were chosen because competency in them has been associated with better social adjustment, longer community tenure, and lowered risk for relapse and rehospitalization.

Each module uses the same highly structured and thoroughly specified instructional techniques, so even paraprofessionals can use them with a minimum of training and consultation. The techniques also compensate for patients' cognitive dysfunctions by using overlearning, visual as well as auditory instruction, and in vivo training. Each module is a self-contained package that can be used alone or in combination with other modules in comprehensive rehabilitation programs.

The training modules were constructed to teach patients specific functional skills, to solve problems they might encounter while attempting to use newly learned skills, and to practice the skills in the natural environment. That model of social skills training offers considerable promise for patients who have the cognitive capacity for learning social skills in small groups. Each module is divided into separate skill areas, and each area has specific behaviors taught to achieve personal effectiveness and competence. For example, as shown in Figure 52.4-11, the Medication Management Module contains skill areas for (1) understanding the benefits of antipsychotic medication, (2) mastering medication self-administration, (3) coping with the adverse effects of medication, and (4) negotiating medication issues with health care providers. Similarly, the Symptom Management Module comprises four specific skill areas: (1) identifying the early warning signs of relapse; (2) managing a prodrome and developing a relapse prevention plan; (3) coping with persistent symptoms; and (4) avoiding street drugs and alcohol.

Each module contains a prescriptive clinician's manual or guide, a videotape demonstrating the skills to be learned, and a patient's workbook containing practice exercises and monitoring forms. Skills are trained by using a combination of focused instructions, videotaped demonstrations, role-playing rehearsals, social and videotape feedback, problem solving, and practice in the natural environment through in vivo exercises and homework assignments. Patients proceed through each skill area in a specific sequence of learning exercises and activities, starting with an introduction that explains the values and advantages of the module. The training procedure emphasizes discovery learning rather than expository or didactic teaching.

INTRODUCTION TO THE MODULE The objective of the first learning activity in the module is to help patients identify the goals of the module, the consequences of achieving the goals, and the steps needed to achieve each goal. Patients are also introduced to

FIGURE 52.4-11 Domains of skills training with skill areas in the Medication Management Module. The fourth skill area comprises specific verbal and nonverbal behaviors that are the educational objectives taught in this skill area.

Skill Domains		
Interpersonal	Self-Care	Coping with Illness
-Basic conversation	-Hygiene and grooming	-Medication management
-Recreation for leisure	-Clothes and maintenance	-Street smarts
-Assertiveness	-Money management	-Symptom management
-Problem solving	-Basic nutrition	-Relaxation
-Dating and friendship	-Finding a job	-Relapse prevention

Skill Areas in Medication Management Module
-Obtaining information about antipsychotic medication
-Knowing correct self-administration of medication
-Identifying side effects of medication
-Negotiating medication issues with health care providers
-Understanding the effects of depot medication

Module: Medication self-management
Skill area: Negotiating medication issues
Requisite behaviors:
Pleasant greeting
Describe problem specifically
Tell length of occurrence
Describe extent of discomfort
Specifically request action
Repeat/clarify advice/orders
Ask about expected time for effort
Thank for assistance
Good eye contact
Good posture
Clear audible speech

the language used in various aspects of training. The introductory exercise consists of a brief description of the module and the topics and goals to be covered in each skill area. Questions such as the following are asked until all patients can answer them correctly:

1. What is the goal of this module?
2. What problems are addressed by this module?
3. If you achieve the goal, what will happen?
4. Do you have time, money, skills, and people to help?
5. What steps are required to achieve the goal?

The purpose of the introduction is to inculcate realistic and favorable expectations and motivation to continue module training. The major goal at this stage is to encourage the patients to think and talk about the material they are about to learn. The therapist concentrates on establishing a highly reinforcing environment rather than on the correctness of patients' responses. However, if patients respond incorrectly to any question, the trainer asks an additional set of ever-more-leading questions designed to prompt patients to give the correct answer.

TRAINING SKILLS Following the introduction, training progresses through the various skills that comprise each domain or area of the module. Training involves two basic sets of procedures. First, patients view a videotaped demonstration of the correct performance

of the skills they are about to learn. The tape is stopped periodically, and patients are asked questions to assess their attentiveness and comprehension of the information presented in the videotape demonstration. Incorrect answers result in replay of the videotape and highlighting of the information needed to answer the question correctly when it is repeated.

Next, patients use a role-playing exercise to practice the skills they have just learned. This performance is videotaped for subsequent review by patients and the therapist. The therapist evaluates the performance and provides positive feedback and suggestions for improvement. Role playing with video feedback is depicted in Figure 52.4-12. The role playing is then reenacted, and the process is repeated until the patient exhibits mastery.

PROBLEM SOLVING The training protocol recognizes that patients may encounter obstacles that make it difficult for them to achieve expected outcomes as they perform their newly acquired skills. Training in problem-solving skills is designed to teach patients methods they can use to overcome the obstacles. The problem-solving model used is a five-step procedure: defining the problem, generating alternative solutions to it, evaluating the alternatives in terms of their potential positive and negative consequences, choosing an alternative based on the evaluation, and implementing the chosen alternative. Patients are taught how to overcome two types of obstacles: resource management problems and outcome problems.



FIGURE 52.4-12 A social skills training group at Camarillo State Hospital in which video feedback of the role-playing learning activity provides self-modeling and positive reinforcement for the participating patients. (Photograph courtesy of Thomas Smith, M.D.)

The training in solving resource management problems is designed to teach patients how to gather the resources necessary to implement a particular medication or symptom management skill. For example, even if training in the Symptom Management Module has taught an individual the skills needed to request an appointment with the psychiatrist to evaluate a prodrome, the patient must have access to certain resources such as a telephone to make an appointment and transportation to visit the doctor. A set of resource management problems is presented during the training in each skill area in each of the modules. The therapist describes a skill and asks the following questions:

1. What is your goal in using this skill?
2. What resources must you have to carry out the skill?
3. How would you obtain the resources?
4. If you were to obtain these resources, what positive consequences would happen?
5. If you were to obtain these resources, what negative consequences might happen?
6. Do the positive consequences outweigh the negative consequences? If yes, the method generated by patient is role played; if not, the patient is asked what else he or she would do.

The training in solving outcome problems teaches patients how to respond when the environment fails to provide the expected outcome following the performance of a particular skill. For example, if an individual arrives for an appointment with the doctor and finds that the doctor has been called away to an emergency, what must the patient do to solve the problem? The training methods are similar to those used during the training in resource management problems.

Training begins as the therapist describes an obstacle that might be encountered as patients attempt to use their skills. Patients are then asked a series of questions that engage them in the problem-solving model.

1. What is the problem?
2. Do you have the time, money, skills, and people to help?
3. What can you do to solve the problem?
4. Is the chosen method feasible?
5. If you use the chosen method, are you likely to achieve your goals?

6. If you were to use that method, what positive consequences would happen?
7. If you were to use that method, what negative consequences would happen?
8. Do the positive consequences outweigh the negative consequences? If yes, role play the alternative generated by the patient; if no, what else would you do?

PROMOTING GENERALIZATION Patients must have the opportunity to practice newly learned skills in the natural environment as an additional step toward programming for generalization. Skills that can only be used in the context of the clinic or hospital are of little use to the patient. In vivo exercises are used to facilitate the transfer of training. Essentially, patients perform the skills in their own world. However, a therapist accompanies the patient to prompt and reinforce the patient's performance and to provide corrective feedback. The exercises are arranged to present increasingly difficult situations that require extending skills beyond the training provided in the clinic. An example in the Medication Management Module is an exercise in which the patient (and therapist) generate questions regarding the patient's antipsychotic medication, after which the patient questions a nurse on his or her treatment team to get the answers. Following that, patients may be encouraged to ask the same or similar questions of their physician or a local pharmacist. In each in vivo exercise the therapist helps patients fine-tune their performance while identifying needed resources and anticipating obstacles that may be encountered during the exercise.

Homework gives patients an opportunity for performance independent of the skills they have learned. Because the module's goal is to teach patients to function independently, homework represents the ultimate step in training. Wherever possible, patients are asked to return from the assignment with tangible evidence that the assignment was completed. For example, if the assignment is to obtain information from a pharmacist about one's medication, the patient can verbally report the information to the therapist and bring back the pharmacist's business card. The role of the therapist in the exercises is to provide feedback to patients regarding their performance.

Validation Meta-analyses and reviews of the more than 50 controlled studies of social skills training have shown that individuals

with schizophrenia can acquire and retain skills, and that training results in significant favorable effects on social adjustment, symptoms, relapse, and rehospitalization rates. The most recent skills training studies showed significant methodological advances, including the use of control or comparison groups, increased reliability of assessments, and a better understanding of the cognitive psychology of schizophrenia and the distortions in learning processes commonly encountered. Skills training has consistently led to diminished symptom levels and improved social and interpersonal skills. Strong evidence indicates that skills training leads to skill acquisition and maintenance in schizophrenia, especially if training is intensive (more than two sessions per week) and of sufficient duration (at least 6 months). While schizophrenic patients with even high levels of hallucinations and delusions can acquire skills through systematic training, cognitive disorganization (e.g., severe distractibility and thought disorder) and the deficit syndrome (i.e., primary negative symptoms) appear to interfere markedly with the training process.

Recent advances in rehabilitation include the integration of skills training programs with other standard treatment interventions for schizophrenia. One program combines modular skills training with low-dose antipsychotic medication. This therapeutic strategy is aimed at minimizing neuroleptic adverse effects that can intrude on social functioning while equipping patients with the knowledge and skills to do a better job of managing their illness. Patients participating in this skills training program demonstrated significant skill acquisition and also showed gains in social activities, personal well-being, and overall adjustment. When patients learn through skills training to identify the early warning signs (prodromes) of relapse and to seek early intervention to avert relapse, outcomes are markedly improved, especially with lower doses of medication in patients who had an early onset of their illness.

Other recent developments in skills training involve the use of briefer, highly focused training protocols for commonly encountered clinical situations. In one program, the Community Re-Entry Module, hospitalized patients are taught the skills necessary to collaborate in their discharge planning. These skills are a critical aspect of treatment, given the obstacles in engaging with community-based treatment programs and the increased pressure on clinicians to keep inpatient treatment as brief as possible. A training protocol for chronically mentally ill individuals with comorbid substance abuse problems aims to teach skills necessary to manage the cravings, high-risk situations, and stressors contributing to substance abuse.

The impact and utility of social skills training can also be documented through professional validation, that is, the extent to which it is being implemented by practitioners and mental health facilities. The modules for training social and independent living skills developed at the UCLA Clinical Research Center for Schizophrenia and Psychiatric Rehabilitation have been implemented in 48 of the United States by over 1000 private and public hospitals, community support programs, mental health centers, and practitioners in private practice. A survey of module users found that 61 percent of the respondents used the modules regularly, and another 36 percent planned to institute or reinstitute the modules when administrative and logistical obstacles were overcome. In addition, the modules have been translated into 15 languages and are in use in Asia, Europe, South America, and Africa. Controlled studies have validated the efficacy of the modules in Quebec, France, Switzerland, Germany, Finland, Bulgaria, Poland, and Japan. The growing use of skills training methods around the world and their adaptation to local culture and conditions heightens the value of this modality as a major technique in psychiatric rehabilitation.

Three types of rehabilitative interventions overlap with social

skills training in terms of treatment goals and behavioral learning principles: (1) family skills training and psychoeducation, (2) token economy and social learning programs, and (3) cognitive remediation. The choice of a particular rehabilitative modality depends on the needs of an individual as determined through symptomatic and functional assessment; the phase of illness; level of incapacity, structure, and supervision required; and the availability of resources to deliver the services. Thus, individuals with serious cognitive, functional, and symptomatic problems who need frequent prompting and reinforcement to learn basic life skills will benefit from a token economy. Patients who have contact with their family members will benefit from a psychoeducational and skill-building program aimed at improving communication and problem solving. Cognitive therapies and remediation, newer treatment modalities that have yet to prove their clinical validity, represent the cutting edge of treatment development for the attentional, memory, symptomatic, and executive dysfunctions of persons with schizophrenia that endure, limit rehabilitation, and are refractory to pharmacotherapy.

Family Psychoeducation and Behavioral Management

Removing the barriers to the generalization of social and independent living skills can be facilitated by involving both the family and the patient in a collective enterprise of (1) education about the patient's particular mental disorder and the ways to obtain professional and community services for it, (2) training in communication skills, and (3) using the communication skills in systematic application of problem solving with the stressors and daily hassles that inevitably accompany mental disability. Because the family comprises an important part of the patient's natural support system and living environment (even chronic mentally ill patients living apart from their relatives may maintain significant personal and phone contact with them), improving the family's attitudes, knowledge, and coping skills regarding serious mental illness can be rapidly translated into better opportunities, encouragement, and reinforcement for using skills learned in the family therapy arena and other rehabilitation settings.

Many international studies have replicated the findings that family stress—reflected in criticism of and emotional overinvolvement with the mentally ill relative—is the most powerful predictor of relapse in schizophrenia and mood disorders. Therefore, several modes of family intervention were designed and empirically validated for the ability to equip relatives with coping skills and thereby change the emotional climate of the family and reduce the incidence of relapses and rehospitalizations. From the vantage point of the vulnerability-stress-protective factors model of serious mental illness, families are viewed as struggling with the stress of positive and negative symptoms and disability of their severely mentally ill relatives. In an interactive process the stress load produces demoralization, tension, and emotional and financial burdens on the family, while it can precipitate relapse in the index patient with fragile coping capacity and significant psychobiological vulnerability to stress.

Disavowing the anachronistic and antitherapeutic theories of the past that implicated family interaction in the etiology of schizophrenia, clinicians now engage relatives as essential allies in treatment and rehabilitation. The psychoeducational model has five basic aims. First, the treatment team must develop collegial relationships with family members and other support persons. Since many mentally disabled persons live apart from their families in group homes or half-way houses, the operators and staff of these facilities in psychoeducation must also be involved. Family members and support persons need coping skills and social support, and active engagement

in the educational process is encouraged by involving them at all stages as colleagues and collaborators in the patient's treatment. Secondly, a specific psychoeducational program is used to teach what is known scientifically about the patient's mental disorder and direct the family and other caregivers to locally available treatment and rehabilitation services. Topics might include information about positive and negative symptoms, effects of psychotropic medications, relapse prevention, crisis management, and treatment options for psychiatric rehabilitation. As much as possible, empirically validated treatment principles drawn from the clinical psychiatric literature are used in the psychoeducation, carefully translated to a layperson's level of comprehension.

Factual material is typically presented during the first half of an education session followed by a guided discussion in which families are helped to personalize their learning with comments or questions regarding their own experiences. A third principle underlying the psychoeducational approach is critical at this point, the assumption of least pathology. Problems understanding or managing a family member's illness are assumed to be a consequence of ignorance or the lack of necessary skills for managing specific situations, not of family dysfunction. Family members are assumed to be doing the best they can and acting in the interests of the patient and family, given their coping capacities and biobehavioral vulnerabilities. With this approach, setbacks are considered to result from lack of knowledge, treatment services, or skills, and the demoralization and extreme self-criticism that severely inhibit the family's efforts to help are minimized. Instead, treatment alliances are strengthened, and families can successfully pursue the next step, which involves developing step-by-step communication and problem-solving skills, the fourth major aim of the psychoeducational approach.

To produce durable clinical effects, family interventions must go beyond education and train family members in such necessary coping skills as basic communication and contingency management. Examples of communication skills that form the basis for effective problem solving include active listening, giving positive feedback, and making positive requests. With these skills, families can better address recurring difficulties associated with patients' symptoms and disabilities and the stressors of everyday life. Skills training strategies similar to those reviewed above are used to help individual families learn to interact in more constructive and goal-oriented ways. Thus, family psychoeducation is a specific form of social skills training, using the family system as the vehicle for targeting goals and skills. For example, the six steps of problem solving are taught using real-life problems faced by the family. Often one family member is chosen as leader of a problem-solving session who guides the family through a process, as shown by the family group in Figure 52.4-13.

Most of the members of the Hanrahan family had been concerned about John's smoking in his room at night. His parents, Jackie and George, were particularly worried that John might fall asleep smoking in bed and start a fire. Using the problem-solving steps they learned in the family skills training sessions, the parents decided to call a meeting to discuss the matter. The Hanrahan family rotated leadership of the meeting each session; today it was John's sister Beth's turn to review the steps.

Although John first saw the problem as his parents' nagging him about his smoking habits, with gentle pressure from Jackie and Beth, John soon agreed with the others that he had a problem with smoking in his room at night. Beth then encouraged everyone to generate solutions to the problem. Jackie said that John should be encouraged to learn new ways to stop smoking and thought he should be rewarded \$1.00 each day he went without smoking



FIGURE 52.4-13 A family participating in a problem-solving session of behavioral family management, led by a therapist. (Photograph courtesy of Thomas Smith, M.D.)

in his room. George did not like the idea because he thought this would only coddle his son. Beth reminded George that the family should only evaluate the solutions after several had been generated and challenged him instead to come up with a solution. George retorted that they should take away John's smoking privileges altogether.

After listing six solutions, the group reviewed the pros and cons of each alternative. Family members were then asked to vote on the worth of each solution. Four of the five agreed that "finding John another place to smoke at night" would be a good alternative. To implement the solution, Beth volunteered to help John walk through the house after the meeting to find a safe and quiet place to smoke between 8:00 and 10:00 PM. They agreed that the basement family room would be just such a place. The plan was to start the next night, and a week later the group would reconvene and discuss progress.

Next week it was George's turn to lead the family meeting. Under his guidance, the group discussed whether the frequency of John's bedroom smoking had decreased. John reported that he had smoked in his room at night only once the preceding week, which pleased everyone. Jackie, however, said she now found watching TV in the family room a bit unpleasant at night because of John's smoke. Because the original target of bedroom smoking had decreased markedly, the family decided to wait a week before deciding whether and how to tackle the smoke problem in the family room.

The last basic aim of psychoeducation programs involves developing a network of like-thinking people. Chronic mental illness presents substantial burden, stigma, and isolation to families, and a network of involved, understanding support persons and resources is of tremendous help. Psychoeducational programs encourage not only collaboration regarding the treatment process, but also active socialization and the development of lasting, personal relationships among families and treatment staff. Relationships are also encouraged with self-help groups like the affiliates of the National Alliance of Mentally Ill or local mental health associations.

Validation Over two dozen well-controlled studies in the past decade from several countries have examined the effects of family psychoeducation and coping skills training on patients and their families. Results showed that the rate of relapse and subsequent hospitalization for patients who participated in that type of treatment was significantly lower than for patients who completed various comparison treatments. In one study, only 6 percent of patients who participated in behavioral family management's problem-solving treatment with their families relapsed in a 9-month period following treatment, while 44 percent of the contrast group receiving individual supportive therapy relapsed. Over 2 years, only 11 percent relapsed in the family program, versus 78 percent of those who received supportive therapy. Moreover, the patients who participated in behavioral family management also gained significantly more in social adjustment and required less overall neuroleptic medication.

Recent studies show that family psychoeducation programs have significant benefits in areas other than symptom and relapse management for the family member with a chronic psychiatric disorder. When psychoeducation and skills training are conducted in a multiple family group format, family burden is lowered, and relatives' sense of self-efficacy regarding their ill family member improves. Participating in a multiple family group can reduce stress, isolation, and stigma experienced by family members; the burden of care no longer seems unique, and families can exchange helpful suggestions and coping techniques with each other. Evaluation of the clinical effects of multiple family groups suggests that the format may be at least as effective as single-family psychoeducation in reducing relapse while also offering special advantages in case management and vocational rehabilitation. The components of behavioral family management, now replicated in two subsequent studies, are listed in Table 52.4-2.

Research on various forms of family intervention suggests that training in communication and problem-solving skills may be necessary to reduce family burden and stress-induced relapse as well as being prerequisite for achieving gains in social functioning. Family psychoeducation and skills training can be conducted with success in the clinic or in the family home. Recent work suggests that the modality may be as applicable for bipolar disorder and recurrent depressions as for schizophrenia. Studies have not yet isolated the specific, effective ingredients of behavioral family intervention or determined how much of the therapeutic effect results from the non-specific social support that ensues from discussing common problems.

Cognitive Remediation The cognitive disorganization and neuropsychological deficits commonly seen in schizophrenia play a major role in determining the success of psychiatric rehabilitation strategies. Enduring thought disorder, short-term memory, and verbal learning deficits are more predictive of skill acquisition than psychotic symptoms. In addition, deficits in vigilance, memory, and



Table 52.4-2
Component Interventions of
Behavioral Family Management

Behavioral analysis of all members of the family
Defining individual and familywide problems
Setting goals for each individual and family system
Identifying reinforcers
Education of all family members on nature of schizophrenia and currently available treatment and rehabilitation modalities
Training in communication skills
Expressing positive feelings to others and acknowledging when others do or say something positive toward you
Active, reflective listening
Making positive requests and asking for what you want
Expressing negative feelings in constructive ways
Training in problem-solving skills
Be specific and objective in describing the problem
Express how you feel directly and subjectively about the problem
Listen to each other actively and reflectively as the problem is described and feelings are expressed
Help each other generate alternatives and options in dealing with the problem
Weigh the potential consequences or outcomes (risks and benefits, pros and cons) of each alternative
Choose a reasonable alternative
Decide how to implement the alternative
Behavioral interventions for specific problems
Contingency management for negative symptoms
Job-finding skills training
Friendship skills training
Independent living skills training
Realistic and incremental expectations for performance
Reinforcing process through successive approximations (shaping)

executive functioning have been repeatedly associated with social skill and overall social adjustment. Further evidence of the importance of neurocognitive deficits in determining social adjustment in schizophrenia comes from studies of antipsychotic medications, especially the novel medication clozapine. Clozapine has greater efficacy than typical antipsychotic medications, which has been attributed in part to improved neurocognitive capacities that mediate the development and use of social skills. Recent studies suggest that clozapine and newer antipsychotics such as risperidone and olanzapine exert a beneficial effect on executive functioning, short-term memory, and attention systems mediated by basal ganglia function.

While many clinicians have assumed that the cognitive deficits of schizophrenia represent an irreversible, enduring form of dementia that cannot be mitigated by rehabilitation, evidence is accumulating to justify strategies for remediation of these basic cognitive deficits. Two types of cognitive remediation strategies have been developed that differ in the behavioral targets for remediation and the nature of the intervention. Both strategies aim to elevate the individual's capacity to learn a wide variety of social and independent living skills, thereby permitting psychiatric rehabilitation to begin at a higher plateau of rehabilitation readiness.

Direct Remediation of Basic Cognitive Deficits Individuals with schizophrenia have pervasive cognitive deficits that are substantially independent of psychotic symptoms. In addition to treating psychotic symptoms with traditional methods, programs have been developed to address these more basic information-processing deficits. Demonstrations have shown that laboratory-based measures of cognitive dysfunctions (e.g., reaction time, memory, card sorting, span of apprehension, and vigilance) can improve sig-



FIGURE 52.4-14 Computer-assisted cognitive remediation. A patient is viewing the video monitor during an abstract reasoning task. (Photograph courtesy of Robert Kern, Ph.D.)

nificantly with behavioral training. A variety of remediation strategies can be used, including repeated practice, instructional modification such as providing ongoing detailed instructions with cues and immediate feedback throughout a training session, positive reinforcement in the form of money or points that can be redeemed for desired incentives, and errorless learning that teaches discrimination and problem solving in small steps that maximize success and minimize trial-and-error learning. As shown in Figure 52.4-14, the patient participating in this form of cognitive remediation is typically seated in front of a computer screen and instructed to repeat multiple trials on vigilance, memory, reaction time, discrimination, or concept tasks. As a rehabilitation instrument, the computer provides consistent and repeated trials, while monitoring patients' responses and adjusting test stimuli and consequences to shape gradually improving performance on the cognitive task.

Recent efforts have incorporated more complex models of social cognition into remediation protocols for schizophrenia. In one approach, patients are involved in a hierarchical series of training subprograms, beginning with cognitive differentiation and proceeding through social perception exercises to verbal communication, social skills, and interpersonal problem-solving phases. A modification of this strategy involves methods for assessing discrete cognitive styles (e.g., reality distorters, impoverished, or disorganized), with the subsequent training program designed to address deficits in social cognition hypothesized to underlie the specific cognitive style. Data from these and other similar studies will help elucidate the nature of social cognition and the most appropriate interventions. Another approach adds vocational relevance to the cognitive training by having patients

maintain a focus on concentration while performing quasi-job tasks such as folding, cutting, stapling, and sorting papers.

Empirical evaluation of the efficacy of these direct approaches to cognitive training suggests that striking improvements—approaching normalization of some functions—are possible in the cognitive tasks, but the links between improvements in laboratory-based molecular levels and in molar social and clinical status remain to be documented. Current research aims to promote clinical generalization of direct cognitive remediation by identifying and strengthening the cognitive, behavioral, and social processes that mediate learning of adaptive skills. For example, short-term verbal memory and sustained attention are possibly rate-limiting in the acquisition of social and instrumental skills. Vocational outcomes are predicted much more accurately by the patients' attentional capacities than by their symptoms of disorder; hence, current cognitive remediation efforts are directed at normalizing those deficits of attention, concentration, memory, and problem solving that appear to be the core obstacles to a person's responsiveness to rehabilitation. However, the ecological validity of laboratory-based remediation of cognitive dysfunctions awaits demonstration.

Cognitive-Behavioral Therapy of Psychotic Symptoms Another remediation strategy ameliorates psychotic symptoms through cognitive restructuring and behavioral learning principles. To date, strategies have been developed for treating delusions, hallucinations, and negative symptoms. Sometimes referred to as cognitive strategy enhancement, these approaches involve identifying specific symptoms and subsequent training in the use of cognitive coping strategies. Commonly used strategies include distraction (e.g., listening to music or humming when auditory hallucinations occur) or methods such as reframing, self-reinforcement, reality testing, and verbal challenging, all of which have the patient use cognitive protocols to test the logic of specific delusional beliefs. For example, delusional beliefs can be altered by collaborative, reframing methods with an investigative style that leads the patient to discover and test the dysfunctional quality of the irrational beliefs.

Mr. Smith believed he was being poisoned by his father. As a result he was anxious and paranoid during home visits. Rather than confronting the patient's delusion with reality testing, Mr. Smith's therapist engaged him in an examination of how these beliefs had an adverse impact. For example, harboring the persecutory ideas prevented him from feeling close to his father and from enjoying his home visits. The therapist helped Mr. Smith identify times when he felt safe and secure in the presence of his father, such as when they watched a football game together on TV and had some spirited conversation. The contradiction between happy times and fearful times became the opening wedge for questions about the validity of the patient's delusional beliefs.

Self-instruction and self-reinforcement can be used to counter delusions and hallucinations and to improve concentration.

A lawyer with a paranoid delusional disorder was chronically fearful that his colleagues were trying to extrude him from the firm. He was constantly on guard, vigilant, and tense when interacting with them. He was taught to take a more proactive stance at the firm and, instead of waiting for someone to say something, instructed himself to approach his colleagues each day, smile, and exchange some pleasantries. When these social initiatives had succeeded in disarming them, he was given practice in rewarding himself by saying, "That was a good gambit!"

A final therapeutic variant in this category is the use of cognitive-behavioral modification techniques to increase adaptive behavior and reduce the frequency and preoccupation of thought disorder, delusions, and hallucinations that are refractory to antipsychotic medication. Contingent reinforcement, reinforcer sampling, discrimination training, fading procedures, and discrete trials learning have all been effective, at least during short-term follow-up in hospital and clinic settings. Much of the emphasis is on increasing adaptive behavior that is incompatible with the symptoms and that, used frequently, will displace the psychotic symptoms. For example, in the attention-focusing procedure, repeated prompting, modeling, and reinforcement of appropriate verbalizations during many conversational learning trials enhances acquisition of verbal skills and reduces incoherence. The high density of prompts, modeling, and reinforcement makes it almost impossible for a thought-disordered patient to make incorrect responses.

Token Economy While systematic, planned provision of social and tangible reinforcers for patient's participation and progress is an indispensable element of social skills training, family psychoeducation, cognitive remediation, and vocational rehabilitation, contingent use of reinforcement becomes a round-the-clock necessity in token economy and social learning programs for the most seriously mentally disabled patients. If the pervasive positive and negative symptoms, instrumental role deficits, and intolerable, acting-out, and bizarre behaviors of treatment-refractory patients are to be remediated, the entire therapeutic milieu and its staff cadre must be united and consistently deliver systematic positive and negative consequences to patients' behaviors and encourage adaptive and prosocial behaviors from them.

The use of tokens, points, or credits as secondary or generalized reinforcers can be seen as normalizing a mental hospital or day hospital environment with a program mimicking society's use of money to meet instrumental needs. Token economies establish the rules and culture of a hospital inpatient unit or partial hospitalization program, offering coherence and consistency to the interdisciplinary team as it struggles to promote therapeutic progress in difficult patients. These programs are challenging to establish, however, and their widespread dissemination has suffered because of the organizational prerequisites and the additional resources and rewards needed to create a truly positively reinforcing environment.

Elements The first step in designing a token economy is targeting specific behaviors to be increased or decreased in frequency. For example, self-care and appropriate social participation in therapeutic activities would be targets for positive reinforcement, while aggressive and intrusive behaviors might result in token fines. Each behavior needs to be described well enough to be recognized reliably by patients and staff. For example, showering includes gathering soap, shampoo, towel, and clean clothes; preparing the shower area; washing the body; shampooing the hair; rinsing and drying the body; and cleaning up the area after use. Without extreme specificity, patients and staff may not reliably agree upon what behaviors justified token rewards.

After identification of token economy targets, contingencies need to be created that govern the consequences of those behaviors. Contingencies describe if-then rules connecting a target behavior with a reinforcer. Staff specify payoffs much like the contingencies in Table



Table 52.4-3
Contingencies of Reinforcement in the
Token Economy Used at the Camarillo-UCLA
Clinical Research Unit*

Token earnings	
Morning rising from bed and getting dressed on time	3
Satisfactory completion of morning activities of daily living	3
Satisfactory participation in a social skills training group or recreational therapy activity	10
Satisfactory participation in individual behavioral therapy session	10
Satisfactory participation in leisure time activities (per activity)	5
Meets criteria for dress and grooming checks during day (per check)	3
Showers satisfactorily	3
Completes assigned jobs or tasks on unit (per job or task)	4
Participates in off-unit vocational rehabilitation or adult education activity (per half-day)	10
Token fines	
Smoking rule violation	5
Lying on floor	5
Stealing	10
Forgery of token credit card	10
Assault or property destruction	20
Late return from grounds privileges	20
Reinforcers available for tokens	
Cigarettes	4
Drinks (coffee, tea, sodas, hot chocolate)	10
Snacks (potato chips, pretzels, ice cream, candy)	10
Grounds privileges (per half-hour)	4
Music time (per half-hour)	4
Private room time (per half-hour)	4
Nintendo, Walkman stereo, private TV (per half-hour)	4

* This token economy uses a card that can be punched with holes to document token earnings and purchases. The token economy has three levels, which differ in the immediacy and type of reinforcement and privileges. At the highest level of performance, the patient carries a "credit card" and has full access to all unit privileges and rewards without having to pay with tokens.

52.4-3, with the size of the payoff differing across behaviors and proportional to the difficulty of changing that behavior. As the token economy progresses, specific contingencies can be adjusted depending on the frequency with which individual behaviors are performed by the patient group and the fluctuating rate of commodity purchases.

Frequently, behavioral contingencies are confounded by opportunity. Staff must be able to observe the patient perform the skill so the patient can be reinforced. Hygiene activities are easily scheduled into the daily routine so that staff know when to observe patients perform the target. However, other skills like social behaviors are performed continually throughout the day. Staff may miss a learning opportunity if they do not observe the skill or behavior being exhibited.

Patients must also have the opportunity to perform the targeted skill. Patients cannot be reinforced for leisure activities with peers if they do not have access to games or other recreational activities. Similarly, if the goal in a medication management program is to increase the rate of appropriate drug self-administration, then patients need to be given independent access to their drugs.

After targets are fully defined and reinforcers are in place, rules must be developed to designate how patients receive and return tokens. Administrators of token economies need to define where and when tokens can be exchanged for commodities and other reinforcers. Typically, treatment units dedicate one small room to store cigarettes, decaffeinated coffee, candy, pop, personal radios, videos, and magazines. The store needs to open at least every 2 to 3 hours

during waking hours so that patients have ample opportunities throughout the day to exchange tokens for reinforcers.

The prices for commodities are listed at the token store and vary depending on the demand for the item and the cost of purchasing the item from outside retailers. Thus, prices of frequently purchased items may be periodically inflated to maintain the attractiveness of all items in the store.

Empirical Findings Token economies are among the best replicated modality in the treatment of chronically ill psychiatric patients. Studies have shown that symptoms, bizarre behaviors, aggression, and self-care skills of psychiatric patients in token economies have improved significantly even after other treatments were ineffective. Many early studies of token economies focused on chronically institutionalized psychiatric patients and found that many patients in token economies were discharged from the institutions with positive effects that were maintained for up to 2 years. While token economies remain widely used in long-term inpatient programs, recent research shows that these strategies can also be used effectively on acute inpatient psychiatric units and in community-based residential and rehabilitation programs. Token economies are also useful treatment programs for geriatric, chronically aggressive, and dual-diagnosis patient populations.

An exemplary token economy, embedded in a comprehensive social learning program that included skills training, reinforcer sampling, and individualized goal setting, was studied in a rigorous experimental design by Gordon Paul and Robert Lentz. The absolute efficacy of this social learning program (in contrast to milieu therapy or custodial care) was documented in the realms of adaptive functioning, psychotic symptoms, bizarre behaviors, aggression, and cost-effectiveness. For example, the average social-learning patient increased interpersonal and communicative skills by over 1200 percent of entry level. Twenty-five percent of these severely disabled patients improved enough to be indistinguishable from the normal population on a blind, time-sampled behavioral checklist. Over 97 percent of the social-learning patients were successfully discharged to the community with tenure exceeding 120 days, compared with 71 percent of the milieu therapy group and 29 percent of the custodial patients.

A token economy operated continuously for 26 years at the Camarillo State Hospital, cosponsored by the California Department of Mental Health and the UCLA Clinical Research Center for Schizophrenia and Psychiatric Rehabilitation. Patients were recruited from among the most impaired, treatment-refractory population in the hospital. An integrated pharmacological and behavioral program of interventions was applied. Table 52.4-4 shows the results of a cumulative empirical evaluation of the program, based on direct observation of problem behaviors during patients' baseline assessments and the frequency of the same behaviors in the month prior to discharge. A wide array of positive and negative symptoms, psychosocial deficits, and bizarre and intolerable behaviors were successfully modified in this exemplary model of public-academic liaison. More importantly, follow-up evaluations found that over 80 percent of gains were maintained, and half of the patients discharged from the unit maintained residence in the community.

For the increasing reservoir of treatment-refractory psychotic patients living in state hospitals, forensic institutions, or community residential facilities, the token economy is the psychosocial treatment of choice. To ensure a high-quality, ethical token economy (1) staff must be well trained in providing positive reinforcement and shaping successive approximations to adaptive behavior, (2) competent supervision by a behavioral psychologist is essential, (3) administration



Table 52.4-4
Behavioral Outcomes*

Behavioral Problems	No. of Problem Behaviors Treated	Average Improvement Level
Self-care, grooming	151	1.91
Assault and property destruction	97	2.18
Social skills deficit	80	1.95
Work and leisure skills	48	1.84
Verbal aggression	43	1.67
Stereotypic movements and posturing	32	1.97
Delusional speech	21	2.19
Self-injury	26	1.54
Intrusiveness	22	1.59
Social isolation	17	2.24
Depression	13	1.92
Prader-Willi syndrome (obesity)	9	1.00
Sexual deviance	10	2.00
Hallucinations, self-talk	6	2.50
Screaming, tantrums	6	2.00
Psychogenic polydipsia	7	1.71
Incontinence	9	2.00
Spitting and mucous smearing	4	1.00
Inactivity, amotivation	3	2.67
Obsessive-compulsive behavior	2	3.00
Mutism	2	2.50
Incoherent speech	2	2.50
Antisocial behavior (stealing, breaking and entering, disruption)	6	1.83
Vomiting	2	1.00
Anxiety	2	1.00
Entering restricted areas	2	1.50
Symptom self-management	1	1.00
Noncompliance, oppositional behavior	1	1.00
Total number of behaviors treated	624	
Overall average improvement level		1.83

* Levels of improvement for different categories of targeted behavior problems in patients who completed treatment on the Camarillo-UCLA Clinical Research Unit between 1970 and 1994. The level of improvement is based on a 4-point scale; 0 = no improvement and 4 = no evidence of the target behavior.

must provide extra support so that the environment is enriched with reinforcers rather than resorting to behavioral control through deprivation and response costs, (4) the token contingencies should be supplemented with approximately 30 hours per week of planned and scheduled rehabilitation activities consistent with social learning methods, and (5) maintenance and generalization of clinical improvements must be promoted through well-planned aftercare programs and gradual fading of the structure and frequency of the contingencies. As an example of the principle of fading, patients being readied for discharge can be shifted from daily receipt of tokens to a credit card level in which they have free access to all the rewards and privileges of the unit noncontingently as long as they maintain a reasonable level of performance of self-care, social skills, and instrumental skills.

While a faithfully designed and implemented token economy has predictable and salutary effects on chronic and refractory schizophrenia patients, few ideal programs exist. Administrative support is essential for a token economy to succeed. Other variables contributing

to patients' benefiting from a token economy include higher intelligence quotient, female sex, and involvement of patients more actively with staff in determining the specific tasks and goals of the program. Patients who negotiate aspects of their contingencies are more likely to comply with the behavior therapy program.

Psychosocial Clubhouses and Self-Help Programs

Fellowship clubs of formerly hospitalized patients were developed in the early years of deinstitutionalization. Many psychosocial clubs now exist in most large cities in the United States. The most influential organizations that spearheaded the clubhouse movement include Portals in Los Angeles, Fountain House in New York City, Horizon House in Philadelphia, Center Club in Boston, and Thresholds in Chicago. Clubhouses help satisfy their members' basic needs for acceptance, friendship, advocacy, housing, destigmatization, social and recreational activities, and emotional support. Through the years, the goal of those programs has gone from stabilizing individuals in a normalizing environment by providing peer support to offering opportunities for people to participate actively in planning their own rehabilitation program, including the chance to engage in meaningful and gainful work. Although the psychosocial clubhouse movement developed separately from the more medically oriented community mental health centers, in the past few years an increasing number of community mental health centers have converted their traditional day-treatment programs to the clubhouse model.

Central to the psychosocial self-help philosophy is the belief that individuals with mental disabilities have a fundamental right to work, socialization, and a home and that these basic needs, when satisfied, generate self-esteem and the positive identity necessary for community adjustment. Thus, psychosocial clubhouses focus on developing employment opportunities, peer support, and housing programs tailored to the capabilities of their members. Recently, the increasing influence of consumer empowerment as a philosophy, with its emphasis on patients as consumers of services as well as choice vis-à-vis mental health planning and service delivery, has spurred the growth and popularity of psychosocial self-help programs. The success of those programs, including those operated by patients themselves (so-called consumer-run agencies), is reflected by reimbursement of the services by Medicaid and Medicare and state departments of mental health and rehabilitation, by their certification by accreditation agencies, and by the vitality of the International Association of Psychosocial Rehabilitation Services, an organization spawned by the clubhouse network. Increasingly, the psychosocial self-help programs are evolving toward full-service enterprises with assertive community management, pharmacotherapy, and community support.

Validation For the most part, research on the psychosocial clubhouse model has been impeded by the regrettable barriers between academia and the clubhouses, resulting in studies that lack diagnostic rigor, random assignment of subjects, and reports of subjects' medication status. The outcome research that has been published provides supportive evidence for increased community tenure, increased adaptation, and enhanced satisfaction of members, compared with traditional approaches. However, there is a relative lack of empirical research about the effectiveness of the clubhouse model, in spite of the recognition and acceptance that it has received.

Fountain House, the prototypical clubhouse, was also the first to evaluate outcome systematically. The outcome measures selected were consistent with clubhouse goals, namely, to create a restorative environment within which individuals disabled by mental illness could be helped to lead vocationally productive and socially satisfy-

ing lives. Thus, early studies focused on preventing hospitalizations. For example, a 2-year study found that individuals randomly assigned to receive peer outreach services from Fountain House members had a 37 percent rehospitalization rate, compared with the 77 percent recidivism rate of their counterparts who did not receive peer outreach services. Other clubhouses have achieved similar outcomes in randomized, controlled studies aimed at decreasing rehospitalization rates.

The establishment of a Rehabilitation Research and Training Center at the Thresholds Psychosocial Clubhouse has permitted the study of a broader variety of outcome measures. For example, a number of programs that focused on different aspects of psychosocial functioning have been successfully implemented at Thresholds including assertive community treatment, supported education, supported housing, and human immune deficiency virus (HIV) risk reduction. However, studies of transitional employment have found that this prolongs artificial work settings and impedes eventual gainful employment.

Vocational Rehabilitation Vocational rehabilitation has traversed three distinct eras in the pursuit of improved employment outcomes for seriously mentally ill persons. The first was institution bound, with community- or hospital-based, sheltered work programs as the mainstay of intervention. Sheltered approaches were found counterproductive; their dead-end jobs offered no future hope for real jobs and taught few marketable work skills.

The second era was ushered in by the community mental health movement of the 1960s and by the psychosocial rehabilitation clubs. While the community mental health movement set the necessary conditions for building gainful vocational programs, its potential was never realized because most vocational efforts were sponsored by state departments of rehabilitation whose rehabilitation counselors' activities took place outside the main body of the mental health treatment sector. State-sponsored vocational rehabilitation programs tended to focus their efforts on physically disabled and on less seriously mentally ill persons.

Transitional employment programs, such as those in the Fountain House type of psychosocial clubs, evolved independently and often without much input from mental health professionals. Transitional employment involved prevocational work activities or work enclaves in industrial settings with the philosophy of train-then-place in a real job. A job in the competitive work sector was considered stressful, requiring gradual work hardening through jobs intrinsic to the psychosocial clubhouses: clerical services, food preparation, janitorial services, and other maintenance tasks. Research has shown that lengthy periods of work hardening in transitional employment actually reduce the likelihood of competitive employment and that accelerated placement—as occurs in supported employment—yields better outcomes. That isolation unfortunately still exists today, and most psychiatric treatment systems neglect the area of vocational rehabilitation.

A renaissance in vocational rehabilitation, sparked by emergence of the supported employment movement, may be developing in the 1990s. The federally sponsored supported employment initiative springs from the understanding that persons with psychiatric disabilities require ongoing services, such as training in the skills necessary to maintain employment, once they secure competitive employment. It deemphasizes the importance of what has been labeled prevocational training, advocating instead a place-then-train approach. Based on their interests, skills, experience, and deficits, clients are placed in employment settings and then offered the training and supports necessary to maintain their positions. In its fully applied form, per-

sons are offered services indefinitely, with job coaches visiting them at their workplaces to help them learn and retain the technical, interpersonal, and problem-solving skills they need to sustain employment. Supported employment requires close collaboration and communication among the client in the job, the vocational specialist (or job coach), and the community-based, interdisciplinary treatment team responsible for medication management and case management.

For example, the vocational specialist or job coach assesses a client's stamina, emergent psychopathology, medication adverse effects, and interpersonal relations directly on the job site. In league with the other members of the community mental health team, the job coach or case manager ensures that interventions are delivered to strengthen stamina, nip relapses in the bud, consult with concerned employers, control adverse effects, and improve social skills. In mastering the technical aspects of a job, the job coach carries out a task analysis of the requisite work and subdivides the training process into component, incremental steps. In contrast with the supported employment of mentally retarded persons, in which hands-on, coach-client contact is important, job coaching for mentally ill individuals demands more crisis intervention and liaison with psychiatrists who provide medication to promote clients' tenure on the job.

What are the determinants of successful vocational rehabilitation? The following factors make independent contributions to an individual's prospects for obtaining and retaining a job: psychiatric diagnosis and severity of psychopathology (especially conceptual disorganization and negative symptoms), stress in the family (expressed emotion), neurocognitive functioning, being on a disability pension (disincentive to work), poor premorbid social and work adjustment, no recent work experience, age and gender (older individuals and males are less likely to find jobs), interest and desire to work, and availability of supported employment imbedded in a comprehensive array of community-based psychiatric services.

The Individual Placement and Support (IPS) Program, developed at the New Hampshire–Dartmouth Psychiatric Research Center, is a model of supported employment for individuals with long-term impairments due to severe mental illness. The essence of this model is integrating employment specialists into case management or mental health teams to provide clients with practical assistance in finding and maintaining competitive employment. A critical component of this model is that it is time-unlimited; follow-along support from the mental health team, rather than closure of services by a state's vocational rehabilitation department, is often necessary to sustain employment. Controlled evaluations of the IPS model of supported employment have revealed successful job placements in competitive, community-based work for over 50 percent of the seriously mentally ill persons who participate in the program—more than twice as many as achieved these outcomes through transitional employment.

To minimize stress-induced relapses that can defeat the best-intentioned forms of vocational rehabilitation, practitioners and service systems must ensure that (1) occupational goals are realistically linked to patients' assets and deficits, (2) progress is promoted incrementally with abundant supports and reinforcement, (3) social skills training is made available to help the worker develop social support inside and outside the workplace, and (4) pharmacotherapy and crisis intervention services are kept accessible.

Sex and AIDS Education Sexual issues have been neglected in most work with seriously mentally ill persons. That neglect has historical roots and reflects a tendency of psychiatric practitioners to avoid exploration of sexual problems or to assume that seriously mentally ill persons do not have active sex lives. The sexual behavior of persons with schizophrenia differs from that of the general popula-

tion, especially male patients, whose predominant sexual activity is autoerotic, with few sexual partners. Their median number of lifetime sexual partners is below normative profiles. However, schizophrenic individuals are at increased risk for HIV infection, perhaps related to their infrequent use of condoms; number of anonymous sexual partners; hypersexuality during psychotic episodes; poor ability to decline sexual overtures; and male homosexual activity, which may be more prevalent than in their counterparts without schizophrenia. Most antipsychotic and antidepressant medications influence sexual drive and activity adversely. Known adverse effects (which undoubtedly influence compliance) include ejaculatory difficulties, erectile dysfunction, decreased libido, orgasmic dysfunction, and priapism.

Education programs on sex and acquired immunodeficiency syndrome (AIDS) have been designed with the following goals: increasing patients' knowledge and comfort about sexuality, helping patients identify and clarify their values and attitudes about sexuality, helping patients acquire decision-making skills regarding sexual activity, overcoming medication-related sexual dysfunction, preventing deterioration of sexual functioning, improving intimacy skills, providing basic AIDS education, and teaching proper condom use. To compensate for patients' attentional and cognitive difficulties, materials were kept graphic and simple. Videotaped presentations were used, as were behavioral techniques such as role playing and structured problem-solving methods. Although careful design of such programs compensates for the cognitive and motivational deficits of chronically mentally ill persons, data are not available to guide future efforts in sex education.

Clinical Case Manager as the Linchpin of the Service Delivery System

Successful coordination of the elements and modalities of any service delivery system depends on effective case management. Soon after the onset of the deinstitutionalization movement, many clinicians realized that ensuring continuity of care for seriously mentally ill persons in a system that is complex, fragmented, and frequently inaccessible would require professionals trained to navigate the murky waters of social services. Successful service delivery models with a case-management framework have increased the community tenure of previously institutionalized patients in a variety of settings.

Effective case management can integrate psychiatric treatment and rehabilitation services, incorporating the elements listed in Table 52.4-5. Most individuals with schizophrenia, as part of the nature of their enduring symptomatology, do not readily travel for medical and psychiatric appointments nor do they eagerly embrace the social contact that is offered by therapeutic services. It is often necessary to deliver services through a mobile, outreach form of clinical case management.

As experience with case management has grown, its prototype has changed from a broker of services to an intensive clinical service provider and advocate. Intensive case managers attempt to wrap needed services for community function and adaptation around each patient, with the type and amount of services matched to an individual's clinical status, values, and phase of illness. The Training in Community Living or the Program of Assertive Community Treatment (PACT) developed in Madison, Wisconsin, is a model of broad-spectrum case management organized in round-the-clock continuous-treatment teams. The program has been replicated throughout the United States and abroad in both rural and urban settings.

The PACT model has been adopted in several areas where funding for public psychiatric services faces greater constraints by state governments that are cutting back on budget support for human services.



Table 52.4-5
Elements of Clinical Case
Managers' Functions and Role

The client or patient is the central focus for the case manager, who works collaboratively with the client to formulate long- and short-term goals and create opportunities for treatment, rehabilitation and support
Caseloads for assertive-outreach, intensive, clinical case managers must be limited to less than 20 clients or patients per manager
Case management services should be delivered primarily in the client's community and natural habitat; thus, transportation, mobile communications, and in vivo work are key requisites
Case managers are expected to be accessible, either directly by being on call or indirectly through rotation with other case managers on the team; they often provide crisis intervention, either directly or indirectly
Case managers serve as advocates or brokers developing medical, psychiatric, dental, medication, financial, housing, and social support for clients or patients
Case managers serve as teachers, guides, role models and problem solvers
Case management services are not time limited; thus, long-term non-professional supports must be developed by case managers within informal and natural support networks to relieve themselves of cumulative stress and strain from increasing caseload demands

For example, in Los Angeles County, 7 percent of the mental health budget of \$400 million has been funneled into agencies providing PACT-like services to recidivistic mentally disabled persons. These individuals, who are the highest users of hospitalization and costly crisis services, expend 15 percent of the mental health budget and yet make up only 1 percent of the population served in the county (averaging \$50,000 per year). By providing the service agency with a capitated budget (usually between \$15,000 and 20,000 per patient a year) the funding agency (in this case the Mental Health Department of Los Angeles County) can maintain fiscal solvency through its ability to assess annual expenses more accurately while allowing the treatment provider maximum flexibility in the use of resources and selection of services such as housing, crisis intervention, vocational rehabilitation, medications, and continuous case management.

Although it is generally agreed that case management is a desired service for individuals with serious, persistent mental illness, there is little consensus about which elements of case management are most clinically useful. A case manager in a psychiatric rehabilitation setting has several specific tasks to perform including assisting patients in building social networks; facilitating procurement of housing and employment; helping patients interact with the various service organizations to meet ongoing needs; teaching patients the skills they require for illness self-management; monitoring the clinical progress of the patients; and, when necessary, undertaking timely clinical interventions. Each of these tasks requires specific competencies, illustrated in Figure 52.4-15. By acting as the fixed point of responsibility within a continuum of care, case managers have influenced patient outcomes toward improved vocational functioning, less social isolation, and more independent living.

Validation The current state of research inquiry into case-management services includes several well-designed, randomized, controlled studies with clearly operationalized and faithfully delivered models of case management and careful examination of outcomes such as symptomatic status, relapses, acquisition and generalization of social and independent living skills, vocational outcomes, quality of life, and service utilization. These studies showed that different models of case management may be more effective with

system outcomes (e.g., reducing the number and length of hospitalizations and consequently cost-effectiveness) than with clinical outcomes (e.g., symptoms, social functioning, and quality of life). For example, a 2-year study conducted at Department of Veteran Affairs (VA) medical centers found that high users of inpatient services who were randomly assigned to receive intensive psychiatric community care (IPCC) had 33 percent fewer inpatient hospitalization days than their counterparts assigned to standard VA care. The impact of the IPCC intervention was greatest at long-term hospitals, with older patients, and with patients with higher levels of preintervention inpatient service usage.

Despite its proven cost-effectiveness, case management as a clinical intervention cannot be justified solely by decreased service use and increased cost containment. For example, a case-management system that increases service use by homeless, mentally ill persons by moving them from bus stations, shelters, and alleys to hospitals and housing, should be seen as a success, not a failure. Unhappily, current concerns with cost savings have led statewide mental health systems to abandon clinical markers of success in favor of the least-expensive alternative—often leading to transinstitutionalization of mentally disabled persons to prisons and jails.

Ultimately, the success of any case-management approach depends on whether or not patients receive the appropriate services to meet their needs. The problems encountered in attempting to draw conclusions from the current generation of case-management studies include a failure to assess the needs of the individuals receiving the services, inadequate definition of the activities in a given model of case management, and little consideration given to the relation between process and outcome measures (i.e., how a particular intervention leads to a salutary result). Improvements in the yield from empirical evaluations of case management require better specification of case-management methods and objectives, characterization of the symptomatic impairments and psychosocial deficits of the study population, use of multiple outcome measures, and longer studies that follow clients over 3- and 5-year periods.

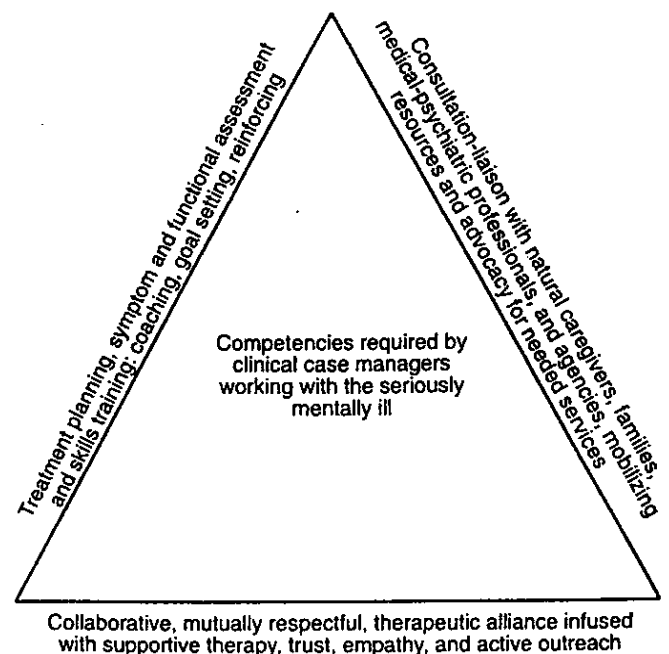


FIGURE 52.4-15 Clinical competencies of assertive, outreach case managers.

One such study began in the early 1990s when the California legislature created two pilot integrated service agencies (ISAs), The Village, located in urban Long Beach, and the Stanislaus County ISA, located in a small city within a rural county. The ISAs received a fixed payment for each enrolled patient to cover all mental health services (approximately \$15,000 per year). The treatment program incorporated the components of the PACT model, with interdisciplinary teams providing core services and assuming responsibility for each client, offering 24-hour coverage from a single service source for a 3-year period. Individualized treatment was based on a personal services plan developed jointly by patients, family members, and staff.

At each site a team of state, county, and ISA clinicians screened referrals to the programs. The authorizing legislation required that participants in the ISAs have a serious and persistent mental illness, demonstrated by a revised third edition of *Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R)* diagnosis other than a primary substance use disorder, substantial functional impairment due to the mental disorder, and eligibility for public assistance because of the functional impairment. Eligible patients at each site were randomly assigned to receive ISA services or a comparison group. Patients in the comparison groups continued to receive usual county mental health services, such as outpatient, day treatment, case management, inpatient, and minimal rehabilitative services.

After 12 months of the 36-month program a total 426 patients were assessed on a variety of outcome variables using subjective information from patient interviews and objective data from patients' records. Patients in both ISAs were more likely to remain in treatment, were less likely to use psychiatric hospital care, and were more likely to work for pay. However, much of the employment activity was part time or temporary, and no outcome differences were observed in several other socially and clinically important domains such as rates of long-term hospitalization, arrest, or conviction; symptomatology; substance abuse; homelessness; or quality of life. Data for the full 36 months will be important in either confirming these results or showing the increased impact of mature programs.

In summary, most studies of case management undertaken thus far have been first-generation studies concerned with comparing case management with more traditional models of service delivery. While helpful, this type of research often provides unwieldy comparisons of different models of clinical case management in markedly different care systems, with poorly defined or heterogeneous patient populations. The second-generation of case-management research will compare different models of case management or specific interventions within case-management services to determine which service elements are responsible for the various outcome domains. One hypothesis supported with data from case-management teams that incorporated specific expertise in supported employment and social skills training holds that reaching specified treatment outcomes (e.g., improvements in independent living skills) requires specific therapeutic intervention in that domain (e.g., training in independent living). In the larger perspective, researchers must determine whether adding competency in symptomatic and functional assessment, vocational rehabilitation, social skills training, and family psychoeducation to the repertoire of case managers is translated into superior, long-term improvement in the person's symptomatic and functional status.

Community Support Programs The signing of the Community Mental Health Centers Act by President Kennedy in 1963, and the extension of Social Security disability benefits to mentally ill individuals 10 years later, set the stage for the transition of care

of seriously mentally ill patients from large state hospitals to less-restrictive settings. However, by the mid-1970s, the fragmentation and complexity of deinstitutionalization-oriented services and supports were apparent. The prevailing psychotherapeutic paradigms were ill equipped to help individuals with serious and persistent mental illness cope with life in community settings. Most programs were facility or office based; and they expected people to come in to seek services and to negotiate a great deal of red tape. Thus, while the locus of care had shifted, no complementary shift in treatment focus had occurred, nor had new and appropriate modes of care been articulated and implemented.

An overarching conceptual framework was needed to counteract the pervasive fragmentation in the mental health field. The Community Support Program (CSP) was developed as a national model by the NIMH in 1976, with the input of field-based knowledge from practitioners, families, policymakers, and patients. According to this model, interventions were to be delivered in a coordinated fashion by multidisciplinary teams of clinicians who assumed long-term responsibility for the care of the seriously mentally ill patients across the spectrum of mental health services including inpatient units, outpatient programs, partial hospitals, and psychosocial rehabilitation centers. The community support system had several essential functions or components, listed in Table 52.4-6.

Several principles were to guide the development of local community support programs. People with disabling mental disorders were to be treated with dignity and their privacy and right to confidentiality respected. Services were to be adapted to the changing needs and preferences of each person on the basis of self-determined goals. The service system was to provide comprehensive, accessible services for as long as, and whenever, a person needed them, in settings that were the least restrictive and most normalized.

The impact of the CSP model, though difficult to quantify, has been extensive. Through national working conferences and a focused program of planning and demonstration grants directed to the states, the CSP model has been incorporated into a wide variety of successful community-based programs. One example of the success of the CSP initiative is with young adults diagnosed with both severe mental illness and substance abuse disorder. The results of 13 demonstration projects funded by the CSP branch of the Center for Mental Health Services showed that substance abuse treatments could be integrated with components of outpatient mental health services and that motivational interventions were fundamental. Patients could be engaged in integrated, community-based treatment, with the possibility of concomitant reduced hospital use, improved severity of substance abuse, and enhanced quality of life. These CSP-driven service demonstrations and related program evaluations provided a watershed in the development of dual-disorder services and research.



Table 52.4-6
Elements of a Community Support System

Outreach and engagement
Support of basic needs
Mental health care and treatment
Crisis and emergency services
Comprehensive psychosocial services
Range of housing options
Support and education for providers and families
Development of natural supports
Advocacy and protection
Case management

With the passage of Public Law 99-660, the Americans with Disabilities Act, states were required to incorporate CSP principles into their plans for providing vocational services to persons with serious and persistent mental illness. The act outlaws discrimination against persons with disabilities in nearly every domain of public life: employment, transportation, communication, and recreational activities. With respect to employment, the most important definition of discrimination is an employer's refusal to make a reasonable accommodation. When requested by a qualified applicant or employee with a disability, an employer must provide a reasonable accommodation unless doing so would impose undue hardship. A common example of a reasonable accommodation is building a ramp for an individual confined to a wheelchair. Similarly, individuals with psychiatric disabilities may require accommodations to address their functional limitations. For example, an individual who has difficulty concentrating may ask the employer to provide a private space for work, to limit interruptions and noise. Other possible accommodations for such an individual include maintaining a structured schedule with well-defined daily tasks, eliminating nonessential or secondary tasks that might be distracting, and minimizing supervisor or coworker interruptions of the employee. By invoking the principles of the Americans with Disabilities Act, many communities have been able to secure the mandate and resources needed to design and implement comprehensive, continuous systems of mental health care.

Housing Safe, acceptable housing is a critical element in the complex array of basic and extended services that persons with serious, disabling mental illnesses require to establish and maintain themselves in the community. In fact, rehabilitative efforts are doomed to failure unless affordable, adequate housing is available. Some of the most time-honored needs met in past eras by psychiatric hospitals—offering protection, social support, nutrition, security, supervision, and sanctuary for the mentally disabled—are now provided by the spectrum of community-based housing options. While most psychiatric patients desire such housing, obstacles prevent them from securing and maintaining satisfactory shelter.

Impairments related to the patients' illnesses, such as deficits in social and independent living skills, severe psychotic and affective symptoms, and cognitive dysfunctions; environmental barriers such as stigma, poverty, and discrimination; and service system inadequacies such as inattention to patients' need for support in their vocational and independent living endeavors, have compounded the problem. Consequences of that inattention include homelessness, inappropriate use of intensive psychiatric and general hospital services, family burden, and increased involvement of mentally disordered persons with the legal and penal systems.

Efforts to redress these problems have taken many forms over the past decade. Attention has been given to examining the level of support needed for seriously mentally ill persons to secure and maintain housing. Initially this involved developing comprehensive arrays of transitional living arrangements, so that patients could move from more- to less-supervised, supportive settings. Such elements as quarterway, halfway, and three-quarterway houses; board-and-care and other group living arrangements; crisis and homeless shelters; foster family settings; and supported apartment programs were popularized. The best efforts allowed consumer choice, easy access, and free movement among the service elements depending on patients' needs for supervision and support. However, many efforts suffered from the tendency for clinicians and systems to attend to their own needs, leading to fixed lengths of stay in each of the housing elements, with patients moving to meet systems' needs rather than having services

flexibly tailored to their own waxing and waning impairments and personal resources.

Over the past several years, partnership between mental health and public housing agencies have become more common. What has been lacking are approaches that attend to patients' individualized desires for housing. Service providers and policymakers have not implemented systems that actively ask patients what their housing preferences are and then teach them the skills they need to find adequate, acceptable housing. Future efforts will seek to solicit patients' goals for shelter and basic needs, identify their personal resources and deficits in the pursuit of those aims, and help them acquire the coping skills and competencies they require to attain their housing goals.

A shift in conceptual framework has already begun with the increased availability of supported housing. One element of the supported housing movement is a change from reliance on a facility-based residential treatment setting or a series of such specialized settings as the focus for treatment and rehabilitation to the need for a safe, secure home of one's own as a basis for a stable life in the community. In this new paradigm, professionals no longer select the setting or determine what type of placement is best for the patient, nor do they place a person on the basis of open beds or slots in the residential service system. Rather, the person is helped to choose an appropriate living situation on the basis of personal criteria, preferences, resources, and needs. As such, the patient assumes the role of tenant, householder, neighbor, and mainstream community member, working together with staff on mutually agreed on goals and tasks geared toward the individual's success and stability in the home chosen. Additionally, social support, case management, crisis intervention, in-home skills training, and accessible psychiatric consultation are flexibly wrapped around the changing needs of the patient. Financial assistance is available through subsidized rental vouchers (Section 8 grants) provided by the United States Department of Housing and Urban Development.

Two large research efforts have provided some information on the value of the supported housing approach. The Program for Chronic Mental Illness was sponsored by the Robert Wood Johnson Foundation in concert with the United States Department of Housing and Urban Development. The program was targeted toward overcoming fragmentation in the mental health system so that homeless persons with psychiatric disabilities were better housed and served. The nine cities selected developed comprehensive housing plans and designated a single mental health authority with defined, continuous responsibility for those in the target population. This single mental health authority had budgetary control, responsibility for targeting services and supports, and access to rental subsidies.

The demonstration program showed that comprehensive supports and housing subsidies had a major impact on the lives of persons who would otherwise be homeless, including decreased hospitalization and improved quality of life. However, these results were predicated on the patients receiving ongoing, intensive case management and practical help. Normalized housing with intermittent support from visiting case managers did not suffice to buffer the stressors attendant on living independently.

The second demonstration project was a joint venture of the United States Department of Health and Human Services and the Department of Housing and Urban Development. The McKinney Research Demonstration Program for Homeless Mentally Ill Adults consisted of five longitudinal, experimentally designed studies serving a total of nearly 900 participants. These sites tested a variety of methods of reaching, housing, and serving the target population. In

general, the studies demonstrated that homeless persons with serious, persistent mental illness can be engaged, will accept the services that meet their needs, and can successfully become stabilized in community-based housing with appropriate help. Participants displayed significant decline in symptoms of mental disorder and use of psychiatric hospitalization and a slight improvement in social and role functioning. Moreover, individuals' perception of their quality-of-life improved significantly. However, for a large minority of the participants, continuing substance abuse, social isolation, boredom, and overall difficulty adjusting to living alone negatively affected the stability of their lives.

Taken together, these demonstration projects indicate that innovative supportive housing programs do seem to allow many persons with long-term psychiatric disorders to develop a stable home in the community. However, an ambitious policy of independent housing—without consideration of such factors as substance abuse, an individual's social network, poverty, quality of housing, criminal activity in the neighborhood, and the amount and quality of ongoing, personalized support and assistance from community-based mental health teams—is not likely to maintain long-term residential stability.

Combined Psychosocial and Drug Therapies The biopsychosocial approach to comprehensive care including training in social and independent living skills, family psychoeducation, self-management of medication and symptoms, assertive clinical case management, and supported housing and employment can amplify the impact of medication in fostering better outcomes and higher levels of personal functioning. Optimal psychiatric treatment and rehabilitation offered in a coordinated, comprehensive, and continuous fashion can clearly facilitate symptomatic and social recovery from schizophrenia and other disabling mental disorders in many more individuals than are currently helped. Clinicians must teach patients the skills they need to be effective collaborators in the treatment planning process. The following case vignette illustrates this point.

Bill was a 23-year-old man with a 5-year history of schizophrenia. He had been resistant to taking medication due to the adverse effects he had experienced, including severe akathisia, tremors, and muscle stiffness. He acknowledged that these medications had diminished his psychotic symptoms and improved his attention and concentration but resisted efforts to become more compliant with prescribed regimens. He also related that some of his psychotic symptoms, particularly auditory hallucinations, persisted at a low level despite altered dosages and types of medications. Bill had been hospitalized an average of three times a year for psychotic exacerbations since the onset of his illness. He said that all efforts to treat him “missed the boat” and that staff had not attended to his own goals and ambitions.

At this point, staff engaged Bill in a goal-setting process, in which he identified targets of living independently without being hospitalized, taking little or no medication, and eventually getting a job. His psychiatrist and social worker accepted these goals as laudable and set out to establish clear and measurable landmarks to gauge his success in pursuing these aims. They then worked with Bill to identify his personal resources and the obstacles he faced in attaining his goals. Bill said that the most frustrating problem was his lack of understanding about his illness and its treatment, because this led to frequent relapses and concomitant life disruption.

Bill's psychiatrist and social worker next enrolled him in a class designed to increase his understanding of his illness and the medications used to treat it. He gained a good working knowledge of how these medications caused the adverse effects he found so intolerable, and he learned communication skills that would help him effectively negotiate the type and dosage of his medication. Following this, he worked with his psychiatrist and agreed to a trial of an atypical antipsychotic. He noticed that the new medication resulted in much less discomfort from extrapyramidal adverse effects. Finally, he was taught coping methods—such as humming and reducing social stimulation—to manage the persisting auditory hallucinations he experienced. This gave Bill a sense of mastery over his illness, and he adhered to his medication regimen. During the next year, he experienced two minor relapses but sought help from treatment personnel early in the prodromes of these relapses and did not require rehospitalization.

The key features of the foregoing example were that Bill's goals and personal desires were solicited, respected, and incorporated into the treatment plan; his resistance to medication was confronted in a straightforward, nonjudgmental, problem-solving manner; and he was taught skills he needed for effective collaboration in his own treatment and rehabilitation. Treatment occurred in a multidisciplinary team context, and Bill was seen continuously by the same group of treatment providers.

The new generation of antipsychotic medications offers distinct advantages over conventional antipsychotics in facilitating rehabilitation. These agents, which include clozapine, risperidone, olanzapine, quetiapine (Seroquel), and sertindole (Serlect), are superior to traditional antipsychotics in ameliorating negative symptoms such as social withdrawal and anhedonia and are less likely to produce extrapyramidal adverse effects, thus minimizing the use of anticholinergic agents that tend to impair attention and memory capabilities. They may also have direct salutary effects on information processing and attentional capacities in the central nervous system. For all of these reasons, increased use of these newer agents offers hope of greater recovery from the illness if continuous access to treatment and rehabilitation is provided.

Findings to date indicate that comprehensive treatment programs for persons with serious mental disorders should combine drug and behavioral, learning-based interventions. The following principles, distilled from the results of many studies and practice guidelines, summarizes current clinical wisdom regarding drug-psychosocial treatment interactions.

1. Psychosocial treatment is most helpful for patients in reasonably good partial or full remission from florid symptoms who have reached stable levels of maintenance medication. Psychosocial treatment during acute flare-ups of symptoms should be aimed at calming the patient, reducing levels of social and physical stimulation, and helping the patient integrate and understand the symptoms as part of an illness process.
2. The most effective psychosocial treatment—whether provided by individual, group, or family therapy; day hospital; or inpatient milieu therapy—contains elements of practicality, concrete problem solving for everyday challenges, low-key socialization and recreation, engagement of attainable tasks, and specific goal orientation.
3. A continuing positive relationship is central in the overall strategy for treating the patient with schizophrenia, no matter how much drug or psychosocial treatment contributes. That relationship may be with the prescribing psychiatrist or with a paraprofessional case manager.

4. The critical time to offer psychosocial treatment is during the aftercare period, when the patient can absorb rehabilitation and needs assistance in surmounting the problems and stresses of readjusting to family and community.
5. Psychosocial treatment should be long term; benefits rarely become apparent before 12 months and are even greater after 2 years. Indefinite, if not lifelong, psychosocial support, guidance, and training are probably optimal for most patients with chronic schizophrenia. As antipsychotic drugs are most effective in maintaining symptomatic improvements when continued indefinitely, it is not surprising that psychosocial rehabilitation efforts are similarly optimized by continuity.
6. Psychosocial treatment should focus on stressors in the environment and deficits in personal characteristics that seem to play specific roles in relapse and community maladjustment. Schizophrenic relapse is common, even when drug compliance is firmly established. No evidence suggests that a patient's level of manifest psychopathology at hospitalization or discharge predicts subsequent relapse. The best explanation, based on converging lines of evidence from empirical studies, is that the patient's personal assets and deficits, the social environment, and the type of psychosocial therapy are the most powerful influences on relapse, even in the face of reliably administered maintenance medication. Medication is never prescribed, ingested, metabolized, or excreted in a socioenvironmental vacuum.

FUTURE DIRECTIONS

With improved and more reliable methods of diagnosis, symptom assessment, and functional assessment, the population and needs of patients requiring psychiatric rehabilitation are becoming better defined. Because of its growing technology and its conceptual and empirical base, psychiatric rehabilitation has attracted an interdisciplinary group of practitioners and investigators whose work has contributed to its evolving scope and stature as a subspecialty of the mental health and rehabilitation professions. The challenges to community-based care for seriously and chronically mentally ill persons have been met by new initiatives at the clinical and policymaking levels, for example, social skills training, case-management models for coordinating continuing care, supported housing and employment services, greater advocacy and involvement by families, and the Americans with Disabilities Act.

Despite advances in assessment and treatment, implementation of psychiatric rehabilitation in the public sector has been frustrated by inadequate funding and resources, lack of trained personnel, limited dissemination of the new technology, insufficient affordable housing, unattractiveness of voluntary treatment, and a lack of administrative and financial integration of state and local community mental health and substance abuse services. The consequences of those systemwide problems have meant that too few mentally disabled individuals are actually receiving state-of-the-art services, and too many thousands are living on the streets of our cities and in jails and prisons.

Innovations for the Twenty-First Century How might the future of psychiatric rehabilitation be charted? Will the field continue to flourish or merely become a historical footnote along with deinstitutionalization and community mental health centers? Some ideas for clinicians and researchers emphasizing domains of rehabilitative activity are currently taking root.

Illness Self-Management Techniques Skills training modules, such as those in the UCLA Social and Independent Living

Skills series, will enable an increasing array of practitioners help patients acquire the abilities to monitor their psychopathologic and functional progress, to identify stress through changes in skin conductance and prodromal symptoms, and to seek early, flexible levels of intervention from professionals and caregivers. With patients also more knowledgeable about the benefits and adverse effects of their medication, a true partnership in managing pharmacotherapy will yield improved adherence and self-efficacy and fewer relapses, and more individuals will achieve symptomatic and functional recovery.

Cognitive Remediation As researchers learn more about the cognitive substrates and mediators of psychopathology and social dysfunction, techniques will be developed from applied behavior analysis and amplified by a new generation of atypical antipsychotic drugs that can effectively remediate and overcome the attentional, memory, and information-processing deficits. The brain is a plastic organ with many compensatory mechanisms that can be activated by structured, systematic environmental intervention; thus, the biopsychosocial nature of serious mental disorders will illuminate the bidirectional pathways among brain-behavior-environment interactions.

Assessment Technology Functional and symptom assessment will become better integrated, with mathematical models derived from large-scale research studies showing how personal, social, and psychopathological variables interrelate. One study of over 400 mentally ill persons showed that long-term employment outcomes were determined by a confluence of psychiatric symptoms, social competence, work capacity, and pension disincentives. When practitioners adopt quantifiable and repeated measurements of symptoms and functioning in their patients, interventions will be selected more judiciously and their effects monitored more precisely. Improving the quality of care ultimately depends on reliable and clinically relevant assessment instruments that give informational feedback and guide decision making.

Integration of Social Learning With Assertive Community Treatment Proponents of intensive forms of outreach case management and clinical intervention will adopt behavioral therapy techniques to promote greater gains in psychosocial functioning and independence of patients. Life adjustment teams will use structured skills-training techniques—which themselves will have been infused with new principles from research on cognitive science—while engaging patients in naturalistic settings in the community. Demonstration studies of this type of integrated mental health care have already accelerated and broadened the symptomatic and social recovery of persons with serious mental disorders.

Normalization of the lives of long-term mentally ill individuals will improve with a wider array of supported employment, housing options, and access to educational, social, and recreational opportunities that promote community adaptation. The anticipated contraction in the work force because of lowered birth rates, continuing growth of the economy, and the impact of the Americans with Disabilities Act will make jobs more accessible to disabled persons. The type and frequency of follow-along psychiatric services will be tailored to the individual's symptom patterns, work tolerance, stress vulnerability, and social disabilities. Volunteers, students, and retired persons will take on a greater role in providing social support, friendship, and community linkages for mentally ill individuals. Telephones, answering machines, beepers, and informatics made possible by fiber

optics, television, and computers will reduce the isolation and stigma of mental illness.

Family and Patient Participation With the growing size and political impact of the National Alliance for the Mentally Ill, the National Alliance for Research on Schizophrenia and Depression, the National Depression and Manic-Depression Association, and the consumer self-help movement, patients and family members will become more effective advocates for needed services and partners in treatment planning and intervention.

Financial Integration of Mental Services New initiatives will flow from the various states and from demonstration projects sponsored by the federal government to improve the cost-effectiveness of mental health services. With pressures to reform the nation's health delivery systems and the advocacy of the National Alliance for the Mentally Ill, efficient and efficacious psychiatric services will be reimbursed at levels commensurate with other medical and surgical services. Incentives will be offered to encourage community-based continuity of care through such mechanisms as capitation, health maintenance organizations, regional consortia of service providers, performance contracts, clinical information systems, and patient registers.

SUGGESTED CROSS-REFERENCES

Public psychiatry is the focus of Section 52.1, and the role of the psychiatric hospital in the treatment of mental illness is the subject of Section 52.3. The individual psychotherapy of schizophrenia is discussed in Section 12.10, and the psychosocial treatment of schizophrenia is discussed in Section 12.9.

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