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The level of disability among severely mentally ill persons is a substantial and costly burden on society as well as a burden on family members and the affected individual. In the past decade, research findings have brought new hope that the disabling aspects of severe mental problems can be significantly reduced by early interventions that bring individuals under the care of professionals using effective treatment and rehabilitation methods. A major challenge for research in the 1990s will be to provide the information necessary to improve the existing systems of care by answering two questions:

- How can services for severely mentally ill persons be organized, administered, and financed most effectively to reduce disability and enhance their quality of life?
- How can these services be better integrated into the range of American communities, which vary in the mix and availability of resources and in the organization of health care and other services?

Although some severely mentally ill people reside in long-term inpatient settings (e.g., nursing homes, State and Veterans Affairs (VA) hospitals), most live in communities. This report focuses on the problems of severely mentally ill people in obtaining the services and housing they need to reduce the devastating impact of disability on their lives. The proposed research recommendations primarily concern adults who are severely mentally ill; research needs related to children and adolescents (Institute of Medicine 1989; National Institute of Mental Health 1990) and to the elderly are addressed in other recent reports, whose recommendations are fully endorsed by this report.

Adequacy of the Current Systems of Care. Severely mentally ill people seeking or receiving appropriate care, housing, income maintenance, and social support face a range of organizational, financial, family, community, and legal problems. The systems for providing health insurance coverage, housing, income maintenance, and rehabilitation encompass a complex array of agencies, eligibility criteria, and recertification requirements. There are other problems: adequate resources are not available in many areas; when available, they may not be staffed, organized, managed, or financed sufficiently; attitudes of the public, and even of professionals, toward severely mentally ill people create barriers to effective care; and when severely mentally ill people come into contact with the legal system, they may not be referred for appropriate services or even recognized as needing care.

Community care requires that comprehensive service systems be organized to facilitate access to care and to coordinate services to match client needs, including treatment, rehabilitation, housing, and income support. Although considerable progress has been made in developing community-based services and evaluating their effectiveness, it is increasingly evident that understanding is still lacking about ways to organize and finance community service systems to meet the total needs of people with severe mental illnesses.

Indicators of system failure are frequently cited: high hospital readmission rates, low employment, substantial numbers of homeless mentally ill people, reliance on jails and the penal system to cope with psychiatric crises, and increasingly vocal complaints from consumers and family members of the mentally ill about inadequate funding of needed services and inap-

appropriate staffing of programs. Many of these indicators may be viewed as symptoms of fragmentation in the community system.

Research directed at testing and evaluating strategies for improving community and State systems of care for severely mentally ill people needs to be given the highest priority. Without substantial advances in the knowledge base regarding the design and management of systems, many mentally ill people will not benefit from available effective treatments.

Complexity of the Service System. Severely mentally ill people often suffer from multiple problems which are caused directly or indirectly by their disorders, and live in disadvantaged social environments. To live in communities rather than institutions, severely mentally ill people often need assistance of many types, and that assistance is available only from a wide array of loosely connected and sometimes competing service agencies.

The complexity of the mental health system needs to be fully appreciated to understand the challenges faced by providers and researchers trying to develop and test innovative models of community care that can be widely adopted. Unlike the elderly, who have national programs that provide almost universal income support through social security and pay for medical expenses under Medicare, severely mentally ill individuals may receive income support and health care coverage from a variety of sources, and many receive none at all.

Income support for severely mentally ill people may come from the Social Security Disability Income (SSDI) program if the individual has worked a sufficient number of years, from VA if the mental disability is military service connected, from the Supplemental Security Income (SSI)

program if the individual meets Federal disability criteria and does not qualify for SSDI or VA disability, from State welfare, from families, or from a job (which may be connected to a rehabilitation program). On the other hand, the mentally disabled may have no sources of income support. In 1989, about 45 percent of severely mentally ill individuals in the community were covered under either SSDI or SSI for a diagnosed mental illness. Some of those not covered by these two Federal programs are covered by the VA, but many are not covered by any Federal disability benefit program and thus may have no regular source of income.

The estimated cost of specialty mental health care in 1985 approached \$12 billion (National Institute of Mental Health 1988). A large proportion of these resources is for the care of severely mentally ill people. The cost of health and mental health care, however, is only partially covered by Medicare for SSDI recipients, by Medicaid for SSI and State welfare recipients, and by VA when qualified individuals are treated at a VA facility. Most of those not qualifying under Medicare, Medicaid, or VA programs have to rely on publicly funded services through community mental health centers (CMHCs) and State hospitals. State and local government commitments to the public funding of services to people with mental illness vary substantially, ranging from \$21 per capita to more than \$96 per capita in 1988 (National Institute of Mental Health 1988). As a result, many individuals have little or no access to needed mental health services.

Even when income support and health care are provided by a State or Federal program, housing may not be available at an affordable price or through government subsidy programs.

Research Issues. Although it is recognized generally that innovations in systems of care are needed, not enough is known yet about what currently does and does not provide a strong basis for the next stage of system development. There are too few rigorously tested community-based treatment and rehabilitation models; where tests have been done, evidence indicates that community-based care can be successful and no more expensive than institutional care (Weisbrod 1983).

Because Medicaid eligibility and coverage and the availability of mental health services vary by State, and housing markets vary by locality, a range of models for community-based mental health services needs to be identified that can be applied to the variety of communities in this country.

Research efforts should be directed at understanding how alternative models in different community settings meet the needs of specific subgroups of people with severe mental illness. It must be recognized that severely mentally ill people are a heterogeneous group, including people from ethnic minorities and a broad range of age and socioeconomic backgrounds, who are at various stages of a long-term disease process with many possible outcomes. Drug treatment can do much to control symptoms, whereas rehabilitation services offer opportunities to develop social, work, and personal skills.

In summary, existing community models should be evaluated and new ones tested. Where research findings indicate success, a strong and well-supported program for national dissemination is required to help translate new knowledge into practice. Even when research has shown how substantial improvements can be made in treatment systems, it has taken too long for the findings to be

accepted and incorporated into State and local mental health systems. One means to encourage more rapid adoption is to fund well-designed demonstration-evaluation programs at the State and community levels; such programs can provide improved information on effectiveness and cost as well as encourage more rapid adoption.

Service Systems at the Local Level

The population of severely mentally ill individuals consists of heterogeneous groups of individuals with various diagnoses, patterns of symptoms, functional disabilities, courses, and outcomes. The need for research in service systems is clear because the population usually suffers from multiple disabilities (e.g., psychotic symptomatology and impaired social and vocational role functioning) requiring a multidimensional, flexible treatment program appropriate for every phase of illness. Therefore, collaboration and integration of programs are necessary, both within the mental health service delivery system and between that system and other community agencies and programs, such as social services, vocational services, housing, and medical care. Furthermore, the course of illness in this population usually includes exacerbations followed by full or partial remissions with some degree of impaired functioning and residual symptomatology. Thus, as would be true of any chronic illness, it is essential to tailor treatment to the phases of illness and offer comprehensive and continuous care.

The development of effective service systems at the local level will be facilitated by research from three major areas. First, determination must be made of which treatments and services should be provided in a local service system. Second, researchers must con-

sider how to organize and deliver these treatments and services to ensure access and to reach clients in a timely manner. Third, macrolevel organization and financing must be determined that support and provide incentives for developing and operating the most effective local system. This section of the report takes up the first two areas, briefly summarizing the status of current research and then defining some critical areas in need of investigation. Service system questions related to several special populations are also addressed. Macrolevel organization and financing questions are covered later in this report.

Treatments and Services for Local Service Systems.

Current knowledge. The ideal building blocks of an effective local service system are treatments and services that have been empirically demonstrated to be necessary or helpful in reaching desired outcomes for clients, family, and community members. These are the interventions and supports that should make up the substance of the system. The results of clinical services research studies should provide valuable information about which interventions and supports are most effective. As will be seen shortly, however, service system planners need information far beyond the current findings of clinical research to determine the content and organization of an effective system.

The report of the Clinical Services Research Panel (Attkisson et al. 1992, this issue) details a wide range of interventions found to be useful in facilitating the desired clinical and rehabilitative outcomes of people with severe mental illnesses. Medication is usually a necessary concomitant for the psychosocial interventions described. For the treatment of acute episodes, research suggests that short-term hospi-

talizations and various alternatives to the mental hospital (e.g., home care, crisis family treatment, crisis residences, day hospitals, in-community outreach support) are effective (Herz and Mostert 1990). For most clients, treatment and support must continue over the long-term course of these mental disorders.

Family support and education, problem-solving therapies, and certain approaches to social skills training help delay or prevent relapse (Hogarty et al. 1991). Results of efforts to improve the social and task-oriented functioning of clients have shown less powerful effects than have interventions aimed at symptom control. For the majority of severely mentally ill individuals, social skills approaches and vocational rehabilitation methods have led to only modest gains that, unfortunately, are most evident within the learning environments themselves. New approaches to vocational rehabilitation are being studied that emphasize supporting clients in the natural workplace ("supported employment") rather than relying on a learn-and-transfer philosophy.

The Clinical Services Research Panel report also points out that other potentially useful interventions have not been researched; these include crisis intervention teams and client self-help approaches. Two modalities that have been studied fairly extensively but seem to have no advantages over their more cost-effective alternatives for treating the great majority of people with severe mental illnesses are longer term hospitalization for acute episodes and psychodynamic psychotherapy models for long-term inpatient or outpatient treatment. On the other hand, group therapy approaches targeted toward patient deficits in cognitive and interpersonal skills have begun to show positive results and

may be more cost-effective than individual approaches (Malm 1990).

In addition to incorporating treatment and rehabilitation to prevent relapse, increase coping skills, and optimize functioning, it is clear that service systems must include a range of other services and supports not traditionally associated with the mental health field if people with severe mental illnesses are to remain in the community and enjoy a decent quality of life. The reason is that these illnesses often seriously limit an individual's ability to obtain the basic requirements of life—adequate housing, food, income, health care, personal hygiene, and safety. Clients often lack the funds and skills to procure these essentials. An additional problem is the unfortunate trend toward inappropriate use of nursing homes and the prison system for these people.

The needs for adequate housing are clear. As the report of the Clinical Services Research Panel points out, however, surprisingly little research has been done on the relative effectiveness of housing options ranging from "special facilities" to recent attempts to provide visiting supports to clients who live in integrated housing ("supported housing"). Additional services that must be provided and integrated into an adequate system of care include income support programs (e.g., SSI, SSDI, public assistance), health insurance mechanisms (e.g., private, Medicaid, Medicare), and the provision of concrete assistance to clients in daily living tasks such as meal preparation and procurement, money management, and use of transportation. Such social services are critical to quality of life; providing them is also paramount to preventing relapse. A vulnerability-stress model of severe mental illness predicts increased relapse as a result of the inordinate stress that is created when basic

life needs go unmet. Indeed, research has demonstrated that programs that help clients meet basic needs often have markedly reduced hospitalization rates.

An important caveat for virtually all effective biopsychosocial interventions is that for many clients the positive effects last only as long as the intervention lasts. Although this has long been recognized to be true for many pharmacological interventions, it also appears to be true for psychosocial-rehabilitative interventions. Current knowledge suggests that many clients, perhaps most, need continuous or periodic rather than time-limited treatments and supports. The treatment plan must be continually adjusted to the phase of illness and the functional status of the client.

Research needs. The above findings indicate that a variety of services is needed in an adequate local service system: services to ensure that basic living needs are met, treatments to ameliorate symptomatology and prevent relapse, rehabilitative interventions to support and enhance positive functioning for patients, support and education for families and other caregivers, and improvement of the social networks of patients and their families. The existing knowledge base about what works and what is necessary provides the service planner with a rough idea of the kinds of supports and treatments needed in a local service system. Studies to date, however, offer only limited information to the local mental health planner about how to set priorities for services and treatments in the real-world arena of limited resources. A research agenda that informs service system planners of the relative benefits and costs of different approaches, as well as the mix and timing of services to use, is critical. Some general strategies toward and

specific questions about this end are described below.

First, in deciding which services to include in a system, planners require measurement of a far greater range of outcome variables than is often assessed in traditional clinical services research. Specifically, although clinical services research to date has focused most heavily on client-related outcomes (mostly those that assess individual pathology and functioning), service system researchers must also be concerned about the impact of interventions on other stakeholders, such as family members and other citizens. Further, regarding client outcomes, much greater attention needs to be paid to measures of quality of life and client satisfaction (e.g., satisfaction with particular housing options and particular psychosocial and rehabilitation interventions). The range of outcome variables assessed in intervention research needs to be broadened to include client quality of life and satisfaction, family and community burden and satisfaction, and economic costs and benefits. Because measurement tools and procedures in these areas lag far behind traditional clinical assessment instruments, priority needs to be given to research that develops and refines such instruments and establishes their validity and reliability. Training manuals and devices for disseminating these procedures also need to be developed so that researchers in the mental health services area do not have to develop their own instruments anew. Use of standardized instruments would be of great value in comparing different investigators' results.

A second general need is for more comparative studies of interventions to establish what is most effective, when, for whom, and at what cost. To date, most treatment and rehabilitation strategies have been studied in

isolation and compared with minimal treatment controls. Although it is known that certain interventions are helpful, the relative advantages, disadvantages, and economic costs and benefits of various "effective" interventions are not known. Further, interventions and supportive strategies need study for longer periods to examine long-term costs and benefits. Another major problem is the inadequate study of techniques for building on newly acquired elementary social and self-care skills that would enable patients to reach even higher levels of functioning.

A third general need is for research that addresses the special treatment and service needs of specific subpopulations of persons with severe mental illnesses. To date, assumptions of homogeneity have pervaded many investigations. Not only do the service needs of persons with severe mental illnesses differ by diagnosis and functional level, but they also differ by gender, ethnic background (see below), and age. Women with children are an example of a subgroup that requires some unique services. Further, although there has been some recent focus on the special characteristics and needs of young adult clients, very little is known about the needs of persons with severe mental illnesses as they grow into their middle and later years in this era of community care. Many of these individuals have concomitant chemical abuse problems, and there are almost no hard data about how to treat them effectively. Regarding categorization, there is a need for a more comprehensive approach that encompasses functional deficits, coping skills, assets, motivation, and personality characteristics (Axis II) in addition to Axis I diagnosis. It may be that some of the above descriptors have more to do with types of services most likely to be ef-

fective for particular patients than Axis I diagnosis has.

Another critical research priority is to determine the most effective and cost-effective ways of enabling people with severe mental illnesses to meet their basic needs. In view of the obvious relationship of this area to client quality of life and the linkage of unmet basic needs to greatly increased risks of client relapse, there needs to be more research on it. For example, the merits of skill-training approaches that teach clients to participate in entitlement programs, manage their money, and seek out necessary health care might be compared with interventions that rely to a greater degree on environmental support, such as use of outreach workers to assist clients in these areas or the prudent use of financial guardians. It is important to learn which patients can learn skills and generalize them, and which would benefit more from environmental supports, as well as to determine the relative costs of these strategies.

An issue related to meeting basic needs is access to entitlement programs. Data suggest that currently only a segment of persons eligible for entitlements such as SSDI and SSI receive them. Research is needed to investigate why this is the case, what the differences are between eligible persons receiving and not receiving these entitlements, and what mechanisms might eliminate the barriers for those who are eligible and desire to be recipients.

In general, much more attention needs to be paid to learning the characteristics of safe, predictable, and health-engendering environments, which allow clients to use their already existing skills and adaptive capacities without experiencing ongoing symptom interference. Such research has been limited to family environments and needs to be extended to

residential and work environments. The newer supported-housing and supported-work approaches deserve attention and require rigorous evaluation; it needs to be learned which clients can benefit from these approaches and which may be better helped by approaches with less emphasis on community integration. Along with relapse and level of independent functioning, the more typical measures, client satisfaction and quality of life need to be studied as valued outcomes of these models. Although there is certainly a need to extend the frontiers of knowledge about ways to help clients improve functioning, it is important to recognize that, because of limits to both technology and resources, significant improvements in functioning may not be achieved by most clients. The goals of decent quality of life and satisfaction are extremely worthy of pursuit.

It is also critical to study various approaches to enabling clients to have meaningful daily structure and activity, with client satisfaction being a goal as meritorious as improvement in functioning. Furthermore, it has been established that understimulation may be just as damaging to patients as overstimulation and may lead to deterioration in symptom state and functioning and to increased risk of relapse. The relative benefits and costs of day treatment, psychosocial centers, social clubs, and supported employment need examination to establish what is best for whom, as well as which options can be used on a wide-scale basis. In this light, it is critical to study self-help groups and client-run alternatives, for they offer extraordinary opportunities for client empowerment and meaningful social roles. The development of social networks also warrants further investigation, because research suggests that clients

who develop and improve their social networks have better outcomes.

Much greater attention needs to be paid to the role of the family in the service system. Research implies that families continue to be major care providers. Many clients live with their families who provide them with enormous amounts of ongoing support. The actual and preferred roles of families need to be determined, because at times it is in the best interest of patients and families that they not live together. Service formats should be developed and evaluated that can enhance the family's knowledge of mental illness and develop problem-solving skills that can decrease the family burden and improve the living environment of patients and families.

Further research is required on strategies for preventing relapse through early intervention. Research suggests that identification of prodromal symptoms of relapse coupled with early intervention through crisis therapy and pharmacotherapy can prevent many relapses and hospitalizations (Herz 1984). Studies need to consider how these strategies can best be integrated into a service system, because they require collaboration of clients and family members as well as the availability of crisis services 24 hours a day, 7 days a week. Currently, crisis intervention usually occurs after the patient already has full-blown psychotic symptoms and seriously impaired role functioning.

In addition, much needs to be learned about the long-term treatment, rehabilitation, and support needs of clients (Anthony and Blanch 1989). Important long-term studies have demonstrated that people with severe mental illnesses have various outcomes, and research suggests that after 5 or 10 years, schizophrenic symptomatology may be less severe. It is now necessary to learn more

about what sequencing and amounts of treatment, rehabilitation, and supportive interventions should be provided over the long run to optimize long-term growth.

Organization and Timely Delivery of Treatments and Services.

Current knowledge. The discussion above makes clear that people with severe mental illnesses often need a wide array of treatments and services to remain in the community with a decent quality of life and to function optimally. Because the needed interventions and services are diverse and are often provided by different agencies or persons under different "roofs" and supported by different funding streams and levels of government, one cannot simply assume that the necessary services reach clients who need them. Not only is the service system complex, but the symptoms of severe mental illnesses, such as decreased motivation, thought disorder, denial of illness, and interpersonal problems, further impede the ability of many mentally ill people to negotiate the system successfully. Resulting problems include exceedingly high dropout rates, lack of coordination and continuity, and unavailability of necessary or preferred services. These problems exist not only cross-sectionally (i.e., at any given point in time) but longitudinally (i.e., across time) as the client's service needs change because of growth or decompensation. The result is often a poor outcome even in communities that have some well-developed services. It is thus imperative that service systems research pays great attention to ways of organizing and delivering services so that these services reach their intended recipients and are acceptable and meaningful to them.

Research in this area has been extremely limited. Most attention has

been directed toward case management as a potential solution to the problem of the fragmented service system (Baker and Intagliata 1992). Although the term is variously defined and conceptualized, case management most often refers to a person or team responsible for assessing client needs, developing a comprehensive service plan, arranging for service delivery, and monitoring and assessing the services delivered. Case managers may or may not be involved in other functions, such as the direct providing of services. Case management is viewed as the glue that holds the fragmented service system together; even the best organized case management program cannot succeed, however, unless a wide variety of services is already in place.

The paucity of research assessing the effectiveness and cost of case management services is remarkable, especially given that Public Law 99-660, the Comprehensive Mental Health Service Act, requires States to develop and implement case management services as part of their required mental health plans. The handful of controlled studies of case management that have been done have found inconsistent effects of case management on clients; some studies indicate positive outcomes and some indicate little or no impact. All suffer from some limitations in research design—not surprising, given the difficulty and cost of this kind of research. The National Institute of Mental Health (NIMH) is currently supporting a number of studies of the effectiveness of various models of case management.

A somewhat different approach to organizing service systems that has been studied is a model using "continuous treatment teams." This approach, developed in Wisconsin under the name Training in Community Liv-

ing (TCL; Test 1992), attempts to avoid the problem of a fragmented service system rather than trying to fix it, as more traditional case management does; it employs teams that serve as fixed points of responsibility for designated clients and that directly deliver most treatment, rehabilitation, and social services. The same team remains with clients across time and thus provides the vital ingredient of continuity of care. In addition, most services are provided through assertive outreach to prevent dropout and to provide supports in clients' natural environments.

Research findings from studies of this model have been very encouraging. It should be emphasized that, as in other therapeutic approaches, positive results erode if clients are not maintained in the program. A study of this model offering continuous care over a number of years is under way. This model has been evaluated with only relatively small samples of clients, however, and it remains unknown whether such an approach is feasible as the basis for services in an entire catchment area.

Several controlled studies of TCL variants that use "assertive community teams" as fixed points of responsibility for the most recidivistic clients in a catchment area have also shown preliminary positive results. These teams fall somewhere between traditional case management and the original TCL in that team members themselves provide many services to clients, although usually not as many as in TCL. This body of research clearly suggests that the use of assertive outreach by staff is highly effective in ensuring that a greater proportion of treatments and services actually reaches clients, a mechanism in part responsible for the significant reductions in hospitalizations that these programs show. The individual

elements of the TCL model need further examination: Which are essential to success? Are there more cost-effective ways of operating such programs by using only the key elements?

A major limitation of research on the organization and delivery of care to date is that it has been on a small scale. For instance, studies of case management or continuous treatment teams have dealt with relatively small groups of patients and have often been implemented by special programs. Consequently, these models end up being additional parts of a system but do not address how to organize an entire system. This kind of research is a necessary beginning to understanding what types of strategies may be effective, but research is also needed to tackle an entire area (e.g., catchment area) and evaluate the pros and cons of various sociopolitical models of system design.

Research needs. Research investigating the most effective ways of organizing and delivering services to persons with severe mental illnesses must receive a high priority on the services research agenda. If the problem of the fragmented service system goes unresolved, resources spent on treatments and services will be wasted because other essential treatment components often do not reach clients.

Research in developing and evaluating local system organization to achieve comprehensive services with continuity of care needs to continue and be expanded. Innovative coordinating strategies need to be compared with the status quo to determine if they are more effective, and then the methods used in effective programs need to be compared with one another to ascertain their relative effectiveness and costs. For example, the Robert Wood Johnson (RWJ) Foundation demonstration projects for nine cities (see the Organization of Mental

Health Care section) could be analyzed to learn which were successful and which were unsuccessful. The analyses could be used as individual case studies and also for cross-comparisons. A critical organizational question is to what extent resources should be put into a variety of agencies and services to which an additional coordinating component would be added (i.e., more traditional case management) versus putting most resources into integrated continuous treatment teams who provide most services themselves. Different blends of these approaches need to be assessed and compared. Particular attention should be paid to rural versus urban contexts, for these settings might require different strategies.

In research on organizing systems, much more attention needs to be paid to clearly defining and measuring the interventions as well as the service systems context in which they take place. For example, researchers should ask, What exactly did the case managers or continuous treatment teams do? What other services existed? What was the role of the family in the system? Also, although it is useful to assess the degree to which different arrangements result in better coordination and continuity of care, ultimately positive client outcome, not coordination itself, must be the measured goal.

Interpersonal factors should not be forgotten in the quest for the best organizational structure, for they may be powerful contributors to outcome and client satisfaction. For instance, which organizational models facilitate continuity of caregiver and true collaboration of clients, families, and providers? Measurement strategies to assess these variables need to be developed. Then these interpersonal system variables need to be related to outcome.

Issues of confidentiality should be studied. Mechanisms need to be developed and evaluated that protect clients' rights while allowing for exchange of information between agencies working with the same individual. Consumers and families should be involved in developing options and research addressing these questions.

Attention needs to be directed toward understanding the role of the hospital in the system as well as the mechanisms that facilitate smooth and rapid transfer of clients from community to hospital and vice versa. Many hospitalizations take place in psychiatric units of general hospitals and in psychiatric hospitals, yet very little is known about how these facilities are used or how they fit into the rest of the mental health system. What are the ideal roles for these hospitals in a comprehensive system?

Elderly clients and nursing homes are also vastly understudied subjects. Research on the quality of care and access to care in nursing homes is critical. It is also imperative to evaluate the impact of the nursing home preadmission screening program that has been put into effect. What should the role of the mental health care system be in evaluating and treating nursing home patients? These same issues apply to the prison system. There are many people with severe mental illness in the Nation's prison system; most do not receive adequate treatment, and many would be more appropriately placed in mental hospitals.

A major component of the service system for persons with severe mental illnesses is housing. Research must address the effectiveness of various housing models, ranging from highly structured special residential settings to normative integrated community housing in which patients receive support from outreach staff. Which patients do best in what kinds of models

and at what stages of their illnesses? How are decisions made to move patients from one level of supportive housing to another, less structured one? The issue of sequencing needs to be studied. A number of community residential programs operated by private hospitals would be valuable to study. One such program is operated by the McLean Hospital in Belmont, MA, which provides a comprehensive network of residential programs as well as partial hospitalization services with day, evening, aftercare, group, and weekend programs. The services range from around-the-clock staffed programs to independent apartments, from a program for adolescents in high school to one uniquely designed for the elderly. Collectively, the program has 78 beds and can serve up to 60 individuals in various partial hospital programs. The basic goal is to foster the highest adaptive capability of each resident in the setting that is the least restrictive yet still rehabilitative.

Research on a model program of graduated responsibility and a comprehensive residential program might be useful for determining efficacy and applicability to the large number of public patients who are severely mentally ill. In particular, it is important to learn the advantages and disadvantages of transitional housing versus permanent integrated housing, where the amount of support can depend on patients' needs. At the nonclinical level, a critical problem is the shortage of available low-cost housing; a major question is how to achieve maximal leverage with public funding. Policy and economic studies are required to determine ways of increasing housing stock and improving the access of mentally ill individuals to existing housing. A related problem is public rejection of new housing for severely mentally ill people in the local com-

munity. How to overcome stigma and its related fears is a critical issue.

Another major issue is vocational rehabilitation. Again, there is a need to study the pros and cons of a range of models, including transitional approaches and newer supported-employment options in which patients receive training and support in actual job slots. It is important to determine the most helpful model, who benefits from it, and at what stage in rehabilitation. Relationships, responsibilities, and coordination among mental health and rehabilitation agencies need to be studied. Should the severely mentally ill clients be mainstreamed in vocational rehabilitation programs with the physically disabled or developmentally disabled, or should there be special programs for them?

As noted above, a major limitation of organizational research to date is that it has not yet addressed the organization of entire catchment areas. The establishment of CMHCs should be studied carefully. In the past, for example, drawing catchment boundaries in large urban areas often resulted in zones with no real meaning; they were not true geographic entities, often dividing local ethnic and racial communities, school districts, and so on. On the positive side, however, all CMHC program elements were usually accountable to one administration, a situation that does not exist in fragmented systems of care.

A major problem arose with many CMHCs: they did not focus on treating people with severe mental illness. Research in the organization of catchment areas is critical and involves sociopolitical questions such as who should play what roles at the local level (e.g., levels of government or public versus private) as well as more clinical questions such as what services should be provided and how

these services should be organized and delivered to reach clients. Many of these issues will be dealt with more thoroughly in the next section of this report.

Local Service System Issues With Special Populations. Particular attention should be paid to the ways local service systems can best meet the needs of several special populations. These populations are "special" either because they have been markedly underresearched and underserved (e.g., ethnic minorities) or because their problems span the boundaries of several major service systems (e.g., people who have dual diagnoses or are homeless).

The service and service system needs of severely mentally ill people from minority ethnic populations have received far too little attention, particularly in light of the fact that these groups may be overrepresented among severely mentally ill people because of the association of both ethnic minority status and severe mental illnesses with low socioeconomic status. To date, research has revealed clear-cut ethnic and racial differences in use of services and retention in services (Cheung and Snowden 1990). Underutilization continues to be a problem for some groups, whereas inappropriate use has been strongly suggested for others. Much more research is needed to document patterns of differential use and to understand the contributing factors, which may include insensitivity or discrimination. Such factors often lead to misdiagnosis tending toward the more severe illnesses and treatments, such as schizophrenia, and use of more restrictive forms of care, such as involuntary commitment. Other factors include socioeconomic variables and community attitudes toward service use. The point is to seek knowledge

about the origins of racial and cultural differences, to understand barriers, and to find remedies.

Because beliefs about mental health problems and the acceptability of alternative solutions can vary greatly by culture, research is also needed to understand what service or mix of services is most valued and effective for severely mentally ill people from various ethnic groups. Such research should consider the use of both formal and informal supports and services. Further, although there has been recent emphasis on culturally adapted programs, these must now be systematically evaluated. For instance, do outreach, minority staffing, and cultural sensitivity really improve minority service use and positive outcome? The use of natural support groups such as the church, civic organizations, and neighborhood community centers needs further study.

More must be learned about the financing of mental health care for minority group members. Much of this work will focus on public sector mechanisms for subsidizing the care of low-income people who are disproportionately minority; yet private sector financing should not be ignored. To what extent are differences between minority and majority service use attributable to differences in financing? Are there differences in the impact of financing mechanisms as they interact with race and culture?

Co-occurring severe mental illness and substance abuse. Severely mentally ill people who also abuse alcohol and other drugs present great problems for effective treatment, yet they constitute a large percentage of the severely mentally ill population, especially the younger age groups (Ridgely et al. 1986). Research is needed to subcategorize the population, to identify which patients should be managed primarily by mental health agencies

and which by substance abuse agencies, and to determine how to integrate treatment philosophies that are very different. For example, in drug abuse treatment programs the use of medication is often discouraged, confrontation is encouraged, and non-compliance often leads to expulsion. All of these policies conflict with the treatment philosophy of mental health agencies. Several demonstration projects treating dual-diagnosis patients are currently supported by NIMH. They should furnish important leads about future directions for service systems research.

Homeless severely mentally ill people. Estimates of the percentage of the homeless who are severely mentally ill vary, but it is probably at least 33 percent, with a substantial portion of the group having substance abuse problems as well. Some programs have demonstrated a moderate degree of success in engaging these individuals with an outreach case management approach. Initially, many of the homeless refuse any services, but some later accept them if trust can be established. Obviously, from a systems perspective it is important to study methods of identifying, engaging, treating, and retaining this population in programs as well as providing basic living needs such as housing and income. How should planning and programs be coordinated between agencies? Should mental health groups be the lead agencies?

Forensic issues are also relevant. How would outpatient commitment or involuntary hospitalization affect the ability to treat those individuals? A major problem is the lack of housing in general. One study showed that many homeless severely mentally ill individuals accept a supportive living program if one is offered (Rog 1991). The investigators concluded that individual problems were related more to

the lack of suitable housing alternatives than to individual psychopathology. It is important to know what housing and treatment alternatives are most acceptable to this population and which have the best outcomes.

Research Strategies, Methods, and Priorities. Various research strategies, including randomized experiments, quasi-experimental designs, and single case studies, can be used to study service systems. Randomized experiments, where feasible, continue to be useful for evaluating effective treatments and services. Review committees and funders must recognize, however, that in studies of interventions relevant to service systems, isolating individual variables may not always be a feasible or wise initial strategy. Given the difficulty of demonstrating positive impact on these severe illnesses, documenting the efficacy of a treatment package or program model is often a useful first step. Then, if successful, the package can be dismantled to determine more precisely the critical ingredients. Further, it is now time to do comparative studies of interventions that have been found effective to determine what is more useful for whom. Meanwhile, research strategies must extend far beyond randomized trials to address many of the questions outlined here. Methods relying much more on statistical controls are often required.

Quasi-experimental designs can be very useful and informative even though there are inherent problems in interpreting results from such studies. Two sociodemographically similar communities, one of which develops a new service system plan, can be compared by studying process and outcome data.

Another research strategy that can bear fruit is the single case study involving data assessment before and

after a new system of care is inaugurated. For example, indepth study of the RWJ Foundation demonstrations individually and collectively is recommended.

A major issue discussed above is the need for better measurement of a range of client, family, economic, program, organizational, and system variables. Although a number of instruments exist in many of these areas, the majority lack adequate psychometric evaluation, and for most, training manuals and materials that would permit their use by others do not exist. The development of valid and reliable measurement tools is a long-term, time-consuming job that is not economically feasible for each investigator. In light of this problem, it is recommended that additional centers for services research be established and that some focus be placed on developing and gathering psychometric information on assessment tools that can be used or readily adapted by others. Consumers and family members should be involved in such centers, or be on their boards, to provide input about the outcomes most meaningful to them. The centers would also provide technical assistance to program personnel who wish to conduct services research. This assistance would include furnishing psychometric measures and also advice on research design and methods for effective implementation of projects.

Another area of interest is the relative effectiveness of service systems in other countries, such as England and Canada, which organize and finance mental health services quite differently than the United States does. While comparative studies of the health care system are under way (e.g., Health Care Financing Administration 1989), similar studies are needed of mental health care and costs.

A national sample of people with severe mental illness and their families should be surveyed to establish a baseline for the current state of nationwide mental health and relevant nonmental-health services from their perspective. Examples of possible issues include the types of services they are currently receiving, satisfaction or dissatisfaction with services provided, services they believe they need, access to services, and suggestions for improvements (e.g., new types, modifications of existing ones). It would be useful to have an independent evaluation by research clinicians to determine what services would be optimal.

Organization of Mental Health Care

Services research has tended to focus more on the nature of mental health organizations than on how to improve the organization of care. One current aim of mental health services research involving organizations is to understand how best to create a mix of services to meet the needs of patients, including those with special and multiple problems. Another aim is to understand the effects of recent health policy changes and of alternative service delivery options on the process and outcome of treatment. Making explicit and comprehensible interactions for different organizational levels of care is a challenge facing future researchers (Kiesler et al. 1983).

Despite widespread agreement on the basic elements of services needed by individuals with severe mental illnesses, one of the most striking organizational features of the national mental health care system is its diversity across and within State and local programs (Torrey et al. 1990). Although this diversity may be attributable to the many historical, political, social, scientific, and economic forces

that have influenced the evolution of mental health care systems in the United States, it also reflects society's attempts to respond to the difficulties of meeting the multiple needs of individuals with major and often lifelong illnesses or disability.

To illustrate the dilemma of matching organizational responses to the needs of individuals, the historian Grob (1979) described how the debate over medical versus psychosocial models of care for the mentally ill constitutes a theme throughout the history of mental institutions in America. Because both medical and psychosocial needs are presumed inherent in severe mental illness, this debate continues today: When and how should individuals with severe mental illness be treated in specialty hospitals, general hospitals, community residential, ambulatory, or family settings (Dorwart et al. 1991)? Indeed, a common finding of many studies is that the structure and processes of mental health services are complex, fragmented, confusing, and often dysfunctional from the perspective of the patient and family members; traditionally available services, whether medical or psychosocial, are often mismatched to the needs of many individuals (Torrey 1988).

The service provision problems of the mental health care system today go far beyond a conflict between medical versus psychosocial treatment approaches; problems encompass lack of scientific data and disagreement about what services are needed for whom, how best to organize these services, and who should provide and pay for them.

Significance of Organizational Issues. There is a high degree of consensus among policymakers, providers, patients and their families, and researchers that one of the most serious prob-

lems today in the mental health care system—some would say “nonsystem”—is widespread fragmentation and lack of service coordination. This view, however, is not accompanied by agreement on what policy changes are needed to improve the organization of care (President's Commission on Mental Health 1978), nor does available research suggest clearly from a service system perspective what does and does not work best (Mechanic 1987a). Why should this fragmentation be of concern?

In the broad sense, fragmentation presents a threat to access and continuity of care, to efficiency and cost-effectiveness of services, and to planning, policymaking, and management of programs. This problem has many dimensions. One concerns the different levels of responsibility and roles of Federal Government agencies, State mental health authorities, and county, municipal, or other local jurisdictions. Because mental health services depend so much on large public programs, there is also a need to understand better the governmental structures and policymaking processes that determine how care is provided. Thus, there is a role for the perspectives of political science, public finance, and management studies. Matters that require investigation include the structure of State mental health authorities and strategies for effective change of large-scale organizations.

What can be learned from existing efforts about the most effective ingredients for long-range planning and program implementation? For example, what can such services research reveal about ways to address the problem of sites for community residences? How do States compare with one another on major dimensions of care? Current efforts by the National Association of State Mental Health Program Directors (NASMHPD) Re-

search Institute (funded by the NIMH National Reporting Program) are beginning to explore these questions through the creation of statistical State profiles.

Current Problems and Issues: Fragmentation of Care. Historians and political scientists have noted the origins of mental health care in the diversity of State policies toward the mentally ill in America. Systems have evolved disparately from the era of local care (or neglect) in colonial times to the epoch of 19th-century asylums—the progenitors of modern-day State and county hospitals—to the introduction of scientific-medical treatments in the 1950s and the Federal CMHC initiatives of the 1960s and 1970s (Foley and Sharfstein 1983). Of political necessity, each State developed its own programs and approaches to organizing institutional and community care. The structure, functions, and role of State hospitals and of CMHCs varied widely from one State to another and from urban areas to rural ones. The emphases, the balances that were struck, and the mechanisms—or lack thereof—for coordination of care were as diverse as the local model programs. It is no wonder that such a situation often defied attempts at systematic service systems research.

Today, the topography of the treatment system is still inclined toward peaks and valleys of good and bad care. In some communities, there are cleavages according to what is available in the private sector versus the public sector. How does care delivered by for-profit, nonprofit, and public providers differ? What is the payer mix in a community or State? In many communities there are wide gaps; no services are available for some populations. In still other settings, there are inconsistencies and pitfalls in the poli-

cies that govern eligibility for services. Too often there are few or no research data to guide the policymaker in choosing among competing models of care.

Economists and administrators point to the multiple funding sources—and the funding gaps—for services for severely mentally ill individuals. Care in a single provider agency typically is funded by local contributions, State tax, Federal health and social welfare programs (e.g., Medicare, Medicaid, and social security), private insurance reimbursement, personal and family resources, charitable donations, and various other non-health-care sources of revenue. Eligibility requirements and venues of payment for care present a daunting complexity for administrators as well as for clients and families. As financing has become increasingly complicated, studies of costs and financing of care have become more technical and difficult to do.

Funding services through complicated arrangements, such as prospective payment systems and purchase of service contracting, blur roles and responsibilities for the cost of care among Government, providers, patients, insurers, and regulators. Little rigorous research about the ways in which funding mechanisms influence fragmentation of care or practices of individual providers has been conducted. Changes have been so rapid as to hinder the capacity of service systems researchers to study the impact on access to, quality of, and costs for care in many settings. Learning more about how economic forces shape clinical care and how funding incentives affect provider behavior or client outcomes presents formidable challenges for the future (see the Financing Mental Health Care section).

Patients, clinicians, and family members have long recognized the

clinical features of severe mental illnesses that may contribute to or exacerbate the effects of fragmentation of care. The cardinal features of severe mental illness often include clinical, social, and other special needs. Some examples of clinical characteristics associated with severe mental illness may include acute episodes of disorganized behavior, prolonged periods of withdrawal and isolation, or profound changes in mood or ambivalent and painful interpersonal relationships (McGlashan and Carpenter 1988). These attributes may impede participation in traditional treatment programs. Another concomitant of severe mental illness may be impaired social role functioning (i.e., difficulty in caring for self or others, problems with demands of occupational responsibilities, unpredictable or frightening reactions to stressful situations, or vulnerability to stigmatization and victimization by others) (see the Overcoming Stigma section).

These clinical effects on psychosocial functioning and quality of life are sometimes referred to as the dependency needs of patients, to underscore the need for a wide array of socioeconomic supports. In addition to having medical needs, individuals may require housing and other subsistence, social supports, counseling, transportation, crisis stabilization, and (at times) hospital intervention for acute treatment or safety. These dependency needs are by no means unique to those who suffer from psychiatric disorders. In fact, they are associated with people who have widely different diseases (chronic medical illnesses, major physical handicaps) and statuses: very old, very young children, or victims of economic dislocation (e.g., immigration, homelessness, poverty). Thus, as a long-term condition, major mental illnesses may, like other long-term

illnesses, require services such as income support, vocational rehabilitation, assistance in activities of daily living, structured or supervised accommodations, psychoeducational supports for family, facilitation of nontraditional and self-care treatment options, and access to an appropriate array of acute medical, psychiatric, and preventive care services.

A major obstacle to studying and understanding these service provision problems is that individuals have long-term, intermittent, and changing needs. The ongoing substantial mismatching of services to individuals' needs presents a challenge to mental health services research that calls for creativity, innovation, collaboration, and expanded efforts to evaluate the effectiveness of both organized service systems and individual treatment (National Institute of Mental Health 1988). Some of the problems, progress, and prospects in organizational systems research are described in the next section.

Future Questions and Issues: Integration of Care. A central research issue for the study of service systems is to determine how services can be organized to match client needs most effectively. To what extent are different organizational approaches needed for different subgroups of severely mentally ill persons, such as children, the elderly, multiply disabled, minorities, homeless, and victims of acquired immunodeficiency syndrome (AIDS)? The boundaries of the mental health care system are many and varied, including nursing homes, jails and prisons, homeless shelters, hospital emergency rooms, health maintenance organizations (HMOs), youth service agencies, and private-office-based practitioners. Each setting requires different research approaches and methods of evaluating treatment effec-

tiveness for severely mentally ill individuals. Gaps exist not only in services but also in the data and knowledge from research about the magnitude and nature of the service gaps. A leading premise of many current and proposed reform programs for mental health is that greater centralization of authority and integration of functions and funding would improve the care of severely mentally ill individuals. This section describes proposals for realigning authority and responsibility in mental health care systems and for fostering better integrating mechanisms.

Authority and responsibility. The public mental health system in the United States has evolved to include a significant Federal Government role, a massive State or county role, a decentralized and often uncoordinated local mental health role, and a poorly integrated role for private providers and office-based practitioners. The most familiar scenario revolves around the tension between State hospitals and local CMHCs over their roles in coordinating care. In some locales, a comprehensive array of inpatient and outpatient services is coordinated for an entire catchment area. In other places, the catchment area concept artificially and ineffectively bounds a loosely configured collection of State and local hospitals, community programs, and private providers, with little or no central authority or integration of care.

To address this problem in large urban areas, the RWJ Foundation has initiated a national, nine-city demonstration project to determine how a new centralizing administrative authority might improve financing and organization of care for severely mentally ill people (Shore and Cohen 1990). The new entities differ from State mental health authorities and may be private, nonprofit corpora-

tions or semipublic authorities. The RWJ demonstration project, which is being evaluated in collaboration with NIMH, offers an excellent example of multidisciplinary, multisite service systems research (Goldman et al. 1990). A separate RWJ project in several States aims to demonstrate the effectiveness of new integrative structures and mechanisms for providing services to children and adolescents with serious emotional disturbances (Florida Mental Health Institute 1991).

Changes in the organization of mental health services, such as deinstitutionalization, usually occur incrementally over a period of years, or else they are narrowly driven by specific changes in the law, reimbursement practices, or regulatory policy. Major, comprehensive change occasionally occurs suddenly. In 1988 in Ohio, a concerted effort by the leadership of the State mental health department, the legislature, and citizen groups resulted in legislation (Senate bill 156) to reform the way services are structured and governed (Robinson 1991). Replacing a system of separately funded State hospitals and local boards, the State introduced an inpatient and outpatient services system whose funding is controlled by local community mental health boards with extensive use of contracting for care. Local boards have increased accountability and provided incentives for cost-effective out-of-hospital care. Although the account of how these changes came about is of interest to policymakers, the study of the effect on the costs and process of care and on patient functioning and outcomes poses a challenge for services researchers. From time to time, many States introduce major service systems changes—case management, capitation, new commitment laws—that deserve careful assessment of their use for other States. Seldom, however, have re-

searchers been able to take advantage of such natural experiments in the financing and organization of care because of the time lag in procuring research grants.

Change in health care policy continues apace. One indication of this change is a rapidly expanding supply of different kinds of mental health service providers. Many other recent trends or Government initiatives raise issues similar to those addressed by the RWJ demonstrations concerning service system integration and policy coordination, such as the growth of private psychiatric hospitals, the expansion under certificate-of-need deregulation of general hospital psychiatry units, the extension of coverage under HMOs and preferred provider organizations, the spread of purchase-of-service contracting by States, nursing home reform in the Omnibus Budget Reconciliation Act of 1987 that changed Medicaid to reduce the number of psychiatric patients in nursing homes and improve quality of care, and new Federal programs like funding for homeless mentally ill individuals, for people with AIDS, for housing for the handicapped, and for treatment of addictions. Ridgway and Carling (1986) reviewed efforts by States to address issues of the community integration of psychiatrically disabled persons and found residential service development to be a high priority in 45 States. Numerous research issues exist in this growing area of service provision.

Integrating mechanisms. As the mental health care system and treatment options available have multiplied in complexity, so have attempts to integrate and coordinate the service system. These mechanisms extend from client-specific to site-specific and service-system-oriented approaches. Among the most widely recognized are the following: greater involve-

ment of family members in treatment planning; introduction of case managers (variously defined) into the service system to coordinate care, especially for severely mentally ill people living in community-based settings; development of rehabilitation approaches and community support networks, including training in community living, and use of self-help organizations; structural linkage of mental health programs to non-mental-health services as appropriate to client needs, such as social services, housing, criminal justice, public health, general medical care, children's programs, chemical dependency treatment, and vocational training; and fiscal incentives to integrate care, such as capitation plans.

Family and community support systems. Increased emphasis is needed on the ways family members can best be involved with service systems, treatment planning, and policymaking and advocacy processes (Group for Advancement of Psychiatry 1989). In addition to the service agencies within communities and the families and friends of mentally ill people, other potential sources of support for severely mentally ill people and their families are community residents and the social and connective institutions within communities, such as churches, schools, local media, and community residential and recreational groups. Research on these features of communities and their impact is important. Communities have a special role to play in service provision; citizen participation in planning, governing, and supporting service programs is crucial for program success.

The recent emergence of the National Alliance for the Mentally Ill (NAMI) has made such undertakings more possible and productive (Shetler 1986). NIMH has recently funded two centers for research on self-help services that can provide a foundation for

future efforts. In terms of organization, there remains a role for research in assessing the most effective long-term roles and responsibilities for family members in planning, governing, supporting, and monitoring traditional and nontraditional services. At the service system level, the role of families in providing social and financial support for patients must be recognized and examined through focused research. In addition, research is needed on ways in which systems of care can work with, support, and reflect more understanding of families in their roles both as recipients and as providers of care. Community support programs continue to be an important element of comprehensive services for severely mentally ill people. (See the section below on Rehabilitation approaches.)

Case management. With roots in social casework and the CMHC and Community Support Program, case management is not new to mental health services, but interest in case management for severely mentally ill people recently has increased in recognition of the importance of service coordination (Robinson and Bergman 1989). Attention has been heightened by provisions of the Omnibus Budget Reconciliation Act of 1987 and Public Law 99-660, which encourage case management for Medicaid and severely mentally ill or disabled people. In the context of diverse mental health systems, many different models of case management have emerged: broker, rehabilitation, social support, and therapeutic. Most models function primarily to increase client access to appropriate services, to facilitate and monitor specialized care, and to provide responsible and consistent contact between individuals and the service system.

There have been few carefully designed studies of the effectiveness and

cost-benefit tradeoff of different models of case management despite their widespread use by State and local mental health authorities and the opportunity afforded by numerous demonstrations and natural experiments.

Rehabilitation approaches. A base of research relevant to community support programs and rehabilitation services has been developing for more than a decade (Anthony and Blanch 1989). Using largely quasi-experimental designs, researchers have studied components of community support systems, such as outreach, treatment, health care, housing, peer support, crisis intervention, and rehabilitation services. Some of these topics overlap with broad social policies like social welfare, housing, and unemployment. Research on other subjects has evolved to include focused effects of specific models for reducing long-term disability and increasing socialization skills of people with severe mental disorders. Early reports from the study of the federally funded Community Support Program are encouraging; according to Mulkern and Manderscheid (1989), the number of clients served grew from about 4,000 in 1980 to 350,000 in 1984 while the program was meeting its mandate to serve the most severely disabled.

System linkages. Numerous approaches have been tried and evaluated for increasing service systems linkages. Some have been broadly based on reforms in legislation, such as those in Ohio. Others rely on different forms of financing services, as in Dane County, Wisconsin, or Rochester, New York (Marshall 1991). Another group of approaches involves realigning authority through public channels or restructuring local mental health centers. Still other methods rely on case managers and administrative procedures, such as contracting for services, to expand interorganiza-

tional arrangements and sharing of services. Creating innovative services to meet multiple needs, such as a dual-diagnosis hospital unit or a specialty clinic, is another way to link what may otherwise be separate programs.

Model programs for special populations. Many specific model programs could be mentioned that have involved research and evaluation or hold promise. A few recent examples include Dane County studies (Stein and Test 1978), demonstrations for the homeless under Public Law 100-77 (Levine and Rog 1990), and programs for special populations (e.g., prisoners, rural dwellers, elderly, developmentally disabled, or substance abusers).

Research Strategies.

General problems in organizational research. Much of the service systems literature of the CMHC era in the 1960s and 1970s resulted from evaluation research aimed at studying how programs developed, operated, and delivered services. Such research was often conducted in parallel with community-based needs assessment studies. Such "ecologic" investigations examined the relationship of community (population) characteristics (indicators) to services provided by organizations in a community and sought to evaluate access to care. Another line of inquiry involved sociological analysis of organizational characteristics of hospitals or mental health facilities to evaluate their effectiveness in meeting stated objectives.

More recently, important economic studies have focused on the performance of organizations in terms of costs, efficiency, and provider behavior (McGuire 1989). Unfortunately, researchers have given little attention to linking service system characteristics to cost-benefit or clinical outcomes, or to determining the impact

of different organizational and financial arrangements on access to and quality of care. Despite the importance of these questions, numerous conceptual, methodological, and logistical problems need to be resolved if such research is to be carried out. This section highlights only a few of the obstacles.

Methodological problems in organizational research. Because of the potential impact of changes in service systems on clinical and social functioning of individuals, there is a need for data bases that include measurements and frequent observations made during an extended time period (i.e., longitudinal studies). In addition, there is a need to carefully collect much information about both the service systems and the patients to control for various factors that are likely to influence the outcomes of major mental illness. Further work is needed to design ways of conducting research that seeks to measure service system interventions and clinical treatment effects simultaneously. Indeed, developing or adapting valid, reliable, and sensitive measures of service system performance should be a priority in the near future. These measures may then be used in a scientifically sound design and with clinical outcome measures to yield generalizable findings concerning the care of severely mentally ill people.

For some purposes, randomized clinical trials would be desirable. To answer other questions, studies of matched samples in different organizational settings may be a fruitful approach. For generating useful hypotheses and answering certain questions about service operations, existing or new management information systems may yield valuable insights; this avenue should be explored because of its potential for increasing research capacity as well as improving manage-

ment of care. To understand how systems do or do not work, carefully designed case studies, such as in the Rochester capitation experiment or the RWJ nine-city demonstrations may be necessary. Greater attention should be paid to opportunities for evaluating "natural experiments" in States. In all, more attention is needed to support and train investigators for developing, synthesizing, and testing multimethod research strategies (see Research Resources [Mechanic et al., this issue 1992]).

Special problems in organizational research in mental health. A few major, crosscutting issues should be mentioned. One involves the existing and future relationship of the mental health system to the general medical care system on the one hand and to the social service system on the other (Koran et al. 1989). In light of recent advances in medical treatments and psychosocial rehabilitation, it is time that research examined systematically and concurrently the relative contributions of medical, nonmedical, and multimodal treatments for different disorders and conditions. Alternative hypotheses concerning the benefits of mainstreaming the treatment of mental illness with general medical care need to be critically and rigorously reexamined (Wells et al. 1989).

Desire to forge closer ties between organizational and economic research, and between universities and State mental health authorities should be another prominent impetus to service systems research. The foundation for such collaboration was laid with the establishment of NIMH centers on organization and financing of care for severely mentally ill people. For example, demonstration and evaluation projects should be encouraged to include an explicitly economic component in their design (see the Financing Mental Health Care section). Demon-

stration and effectiveness research projects involving public mental health facilities should be required to show ties with local academic research centers so that the requisite methodological technical expertise is obtained and students and trainees get greater exposure to services research.

Summary. Just as a need has been identified for better integration of services to improve the care for severely mentally ill people, so the need for integration in service systems research has been stressed. This integration involves bringing together different disciplines (e.g., economics, sociology, management, social psychology, statistics, and clinical specialties), levels of analysis (patient specific and organization level), methods (clinical trials, comparative case studies, and acute and longitudinal outcomes), and settings (public and private, inpatient and outpatient, and traditional and nontraditional). Such research requires the formulation of broadly meaningful research questions and testable hypotheses that relate service systems to clinical concerns and each of these, in turn, to economic factors. A major challenge lies in relating data from the systems level to care of specific patients. A commonly recognized framework for approaching questions about quality of care specifies three separate elements for analysis: structure, process, and outcome (Donabedian 1988). Few data are available about the interaction of systems with individual patients or about outcomes of care over time.

Judd (1988) has called for increased integration of service and clinical research. Indeed, relatively few studies have successfully evaluated the effectiveness of service systems with clinical outcomes (National Institute of Mental Health 1988). The fragmented

nature of community-based systems of care makes such research extremely difficult. Monitoring total service use for an individual or a cohort of patients for even 1 year—much less for 5 to 10 years—is a formidable task. Such integration is hindered because the methods of providing services, measures of economic and social costs, and measures of the range of relevant outcomes are not clearly defined. Studies often provide only structural measures of capacity and quantitative accounting of predominantly institutional services without showing links to effects on patient care. As a result, program effectiveness or efficiency cannot be evaluated adequately.

One model for such large-scale research efforts is the NIMH Epidemiological Catchment Area series of studies (Robins et al. 1991). Another is the ongoing RWJ Foundation nine-city demonstration of decentralization of services, with an NIMH-funded evaluation and several related research grants. Others are the NIMH-supported State mental health service system research capacity projects, and several Public-Academic Liaison (PAL) projects. More efforts to link clinical and services research are needed, and they should not be limited to what is currently feasible. Researchers should be encouraged to extend their aim in search of what works best for each group of individuals with severe mental illness. Perhaps the greatest challenge is to design longitudinal studies that will lead to improvement in long-term outcomes for services for the mentally ill (Group for Advancement of Psychiatry 1992).

Financing Mental Health Care

This section articulates a set of research priorities for the economics of providing support and care for

those affected by severe mental illness.¹ First, some obstacles that face policymakers in financing mental health care are outlined. Next is discussion of the main areas of research on the economics of mental health. A third section outlines some directions for research that may best contribute to knowledge that would aid policymakers.

Current and Continuing Obstacles.

A number of problems face policymakers who are interested in wisely applying scarce resources to the treatment of a class of illnesses that imposes dramatic costs on society.² Unfortunately, many of these issues posed obstacles to previous generations of policymakers and researchers.

Perhaps one of the most difficult problems concerns the allocation of resources across treatment settings. Since the late 1970s, a consensus has been emerging that most severely mentally ill people can be successfully maintained in the community at a cost comparable to that of caring for such patients in a mental hospital.³ This consensus is in part reflected by the

¹This section does not focus solely on the sick individual, because a number of other parties are affected. Economists refer to this as the "public good" aspect of mental health care.

²These costs include monetary costs related to lost employment; burdens on the health care, criminal justice, and social service systems; and personal costs to friends, families, and neighbors of affected individuals. In addition, the general public is saddened and shamed by the sight of homeless mentally ill individuals and made fearful by the antisocial behavior that some severely mentally ill people exhibit.

³The research supporting this contention has been reviewed by several authors (e.g., Kiesler and Sibulkin 1987). Some of the most comprehensive research on this issue has been reported in Weisbrod (1983).

continued expansion of care for severely mentally ill people in settings outside mental institutions. While this consensus has been forming, State mental health budgets have continued to be allocated largely to public institutions. Thus, roughly 63 percent of the budgets of State mental health agencies (National Association of State Mental Health Program Directors 1989) support State mental hospitals.⁴ A consensus has also formed suggesting that this budget share is too large (Mechanic 1987b). The persistence of State mental hospital budget shares remains a problem for even those State policymakers who are firmly committed to support of community services for severely mentally ill individuals.

A second vexing problem that has become more acute is indigence among the mentally ill. The mentally ill are overrepresented among the medically indigent and the uninsured (Frank 1987); patients diagnosed with mental disorders are a main source of uncompensated hospital care. The origins of these problems are many, but among the most significant is the disruption that mental illness imposes on an individual's life. Severely mentally ill people are downwardly mobile, and loss of income and poor prospects for earnings and employment are common. Gaps in private insurance coverage for mental disorders have been well documented (American Psychiatric Association 1989) and contribute to medical

indigence among severely mentally ill people.

The structure and administration of the Medicaid program and the related entitlement programs pose particular problems for financing the care of individuals with severe mental illness. For example, it has been estimated that roughly 50 percent of individuals suffering from persistent and disabling mental disorders are enrolled in the SSI program (Taube et al. 1990). Moreover, there is little incentive for public providers who are deficit funded to help potentially eligible individuals enroll. Finally, gaps in access to other entitlements (e.g., State income support programs that are linked to medical coverage) may contribute importantly to indigence among the mentally ill.

The rise of homelessness among the mentally ill is one highly publicized side effect of the shifting locus of care. Accompanying that phenomenon is a general concern about residential treatment as a component of community treatment programs. The economics of board-and-care homes as well as other forms of residential support for severely mentally ill individuals has received little attention (exceptions include Rubin and Seneca 1989). There is some evidence that the pricing strategies governed by the SSI program may lead to living arrangements in which quality of life is too low and to an inadequate supply of housing for severely mentally ill people. Housing support programs offer important potential for maintaining very disabled individuals in the community. These programs also represent some of the most shameful abuses of mentally ill people and the public resources that are supposed to support them.

Concern about rising health care costs has led to the adoption of policies that do not recognize the unique

characteristics of mentally ill individuals and the treatment techniques that are used to serve them.⁵ Per-case prospective payment for inpatient psychiatric care is a case in point (Frank and Lave 1986; McGuire 1989). The Medicaid program, a major source of financial support for treatment of individuals with severe mental illness, has been under pressure from both State and Federal legislatures to contain expenditure growth.

This concern has had important consequences for treatment of individuals with severe mental illness. Perhaps the most serious has been a lack of willingness to expand the definitions of reimbursable services to accommodate recent innovations in the technology of community treatment. Case management and psychosocial rehabilitation are available only as optional services and therefore are often not covered under Medicaid. When these services are covered, reimbursement levels are usually set so low that providers are unwilling to participate.

State Medicaid programs tend to structure reimbursement in such a manner as to encourage institutional care over community treatment. This occurs in part because institutional payments reflect more closely true costs than does reimbursement of community providers. Also, eligibility is often linked to institutional treatment. This occurs partly because of so-called spend-down provisions and regulations governing eligibility (e.g., those for severely emotionally disturbed children).

⁴This figure may be a bit misleading, because in most States Medicaid expenditures for mental health services are not grouped with other mental health expenses. When Medicaid mental health claims are included in such calculations, the share spent on institutional settings falls somewhat. Estimated percentages of expenditures on State mental hospitals fall to nearly 55 percent.

⁵Another reason why these policies may be ill-founded is that expenditures for mental health care in the United States during the 1970s seemed to grow significantly less than total health care costs (Frank and Kamlet 1985).

Another example is the continued focus on policies that attempt to induce users of mental health care to behave more like consumers in traditional markets. Although these policies may have some appeal in the general health sector (Pauly 1989), they may be counterproductive in the mental health area (McGuire 1989).

Status of Current Research. There has been tremendous growth in the volume of economic analysis of problems in the mental health care system. That most of this research has been supported or initiated by NIMH points to the pivotal role that NIMH has played historically and shows the type of impact that the setting of new research priorities is likely to have on economics and financing research in the future. Research has focused on economic issues linked to the emergence of private markets in the mental health sector. Specific concerns relate to the demand for ambulatory mental health services, mental health coverage under a national health insurance program, regulation of insurance, competition among providers of mental health care and its impact on costs and quality of care, and prospective pricing of mental health services.

The research on these issues has been innovative and in some cases has led to substantial agreement among researchers and policymakers. Research on prospective pricing has resulted in broad consensus. The results on responsiveness to the demand for ambulatory mental health services have also converged over time (Keeler 1988; McGuire 1989). Nevertheless, only a fraction of the research on the economics of mental health care is relevant to policy concerns about severe mental illness. A primary reason for the incongruity between the new focus on severely mentally ill people and past research on the economics of

mental health relates to the role of markets in the sector. Although markets have become very important elements in allocation of mental health care resources, most of the resources devoted to treatment of severely mentally ill people are allocated outside traditional markets. The mechanisms that are used to allocate resources for treatment of severe mental disorders include regulations governing inter-governmental transfers, contracting arrangements between public agencies and private providers, rules governing eligibility for various entitlements, and the structure of the Medicaid program.

Priorities for Financing Research. To propose a set of priorities for research on economic and financing issues related to the treatment of severe mental illness, it is necessary to identify several unique characteristics of the severely mentally ill population. Perhaps the most significant feature is the degree of disability that stems from many severe mental disorders. Contemporary goals for care of severely mentally ill people focus on rehabilitation and maintenance of functioning (Shephard 1984). This focus assumes that severe mental disorders are associated with long-term disabilities in which rehabilitation goals such as social adjustment, independence, and the meeting of basic human needs are central (Wing 1978). Attaining these goals is complicated by the high incidence of poverty among the severely mentally ill population.

A second distinct characteristic of severely mentally ill people is reliance on the public sector for material support and treatment. The number of persons with mental disabilities (other than retardation) who are enrolled in the SSI and SSDI programs rose dramatically during the 1980s. The Social Security Administration (1987; 1991)

reports a growth of 56 percent in the percentage of SSI enrollees with a primary mental disability from 1986 to 1990. Similarly, the number of SSDI enrollees with a mental disability has grown by 67.5 percent from 1984 to 1990 (Lave and Goldman 1990). Publicly owned hospitals and general hospital psychiatric units treat many indigent psychiatric patients. Moreover, publicly supported clinics and rehabilitation and residential programs are virtually the sole source of care for a majority of severely mentally ill patients.⁶ Finally, the Medicaid program is the largest source of Federal support for the care of the severely mentally ill population.

The third major feature of the problem of treating severe mental illness relates to the broad array of human, social, and medical services that constitutes a state-of-the-art treatment package (Stein and Test 1980; Mechanic 1987b). Mentally ill individuals and their families must negotiate a complicated and fragmented set of programs, providers, and government bureaus. Complying with treatment regimens, obtaining and remaining in adequate housing, applying for and maintaining entitlements, and participating in programs such as vocational rehabilitation are all obstacles that frequently confront severely mentally ill people (Schwartz and Goldfinger 1981; Boyer 1987).

These fundamental characteristics point to the need to focus the attention of economic research away from demand-side financing strategies that attempt to use cost sharing to influence consumer behavior. Severely mentally ill individuals are often poor,

⁶A publicly supported program may either be owned by government or receive a substantial portion of support from public funds.

have very intense and complex needs, and function poorly in the role of consumer. Emphasis must be given to research on financing policy that is designed to influence the supply (provider) side of the market (McGuire 1987). These concerns lead here to proposals for three major areas of research, within which fall a number of specific activities.

The first area of research focuses on understanding the set of organizational and financial arrangements that most effectively strengthen consumer interests. Given the complex needs, poor consumer functioning, and fragmented system of care, institutions arise that act on behalf of the severely mentally ill individual. In some cases the family serves as the sick individual's agent, and in others a case manager is relied on to act on the patient's behalf. A variety of other arrangements also exist, such as adult protective services, adult foster care, and involuntary commitment. Little is known about how these arrangements are organized and financed in most public systems of care.

Case management provides a clear example. A great deal has been written on the subject, but very little study has been accorded to the organizational context and the method of payment for specific activities. The payment arrangements may pose barriers (or may facilitate) the coordinating role of the case manager. For instance, some typical goals of case management involve improving access to entitlement programs for severely mentally ill clients, coordinating referrals to specialty treatment programs, and negotiating housing arrangements. Yet one common approach to funding case managers restricts payments for services involving face-to-face interaction with clients. This approach does not reward activities that best further the goals stated above;

instead, it encourages a direct service provision role (usually in the case manager's office). Conflicts between goals and payment method incentives can be resolved by articulating the specific goals and models of case management to be adopted, and then implementing financing methods that reward activities advancing program goals.

A first step in research on the economics of improved coordination would be to carefully describe various financing and organizational arrangements. The relative effectiveness of the different arrangements could then be systematically studied. The Medicaid program provides an excellent laboratory for studying case management; there is a great deal of variation across States in coverage of these services and the specific rules under which these services are to be delivered.

Another issue within this first area of research concerns how, and under what conditions, various strategies are most effective in centralizing responsibility for care of severely mentally ill individuals in a service system. To what extent are financial incentives and organizational structure compatible for efficiently meeting the complex needs of severely mentally ill people under specific political and cultural conditions? What systemwide organizations and incentives best serve the consumer's interests? One approach involves instituting mechanisms for making the dollars follow the patient.

There are opportunities to experiment with these types of innovations within State Medicaid programs and public mental health systems. One such approach is to make case managers independent of agencies and allow them to manage a package of treatment resources jointly with a patient (in essence, a closed-ended voucher). Then patients could seek care from

agencies that offer the most appropriate services to suit their needs. In addition, there would be expert support for this heightened consumer role in the form of the case manager. The result would be an introduction of market discipline within agencies without making the client bear the full burden of playing the consumer role.

The second major area of research relates to the public financing of care for severely mentally ill people: What are the incentives in arrangements for using public dollars to provide treatment for severe mental illness? This broad area of research includes concerns about the terms under which Federal and State governments transfer resources for treatment of severely mentally ill people in local community programs; whether use of privately owned providers of care to deliver publicly financed services is preferable to direct public provision of care; what type of contracts most effectively meet public policy objectives when privately owned providers are used; what types of payment, regulatory, and eligibility policies for the Medicaid program most sensibly balance concerns about access to care and strains on public budgets; the structure of incentives contained in income support programs for severely mentally ill people; and, most global, what combination of State policies to finance care for severely mentally ill people are optimal given the structure of the delivery system, Federal policy constraints, and the nature of the severely mentally ill population.

Some examples may illustrate the specific sorts of issues that could be addressed. There is a consensus that too many public mental health resources are being devoted to treatment in public mental hospitals. One contributing factor is that the traditional method of financing community mental health programs has been

for State governments to transfer resources to local mental health programs for community treatment and then to offer use of the State hospitals as a "free good." Thus, there are no adverse financial consequences to communities that make heavy use of State hospitals (Gaynor and Frank 1989; Taube and Goldman 1989). A number of States have recognized that such a financing system encourages use of State mental hospitals. The response has led to a considerable amount of experimentation with alternative financing arrangements (Wisconsin, Ohio, Texas, Michigan, and Rhode Island have been particularly aggressive in this area). The strategies adopted by States have included making local programs financially responsible for all use of State hospital service, offering communities budget bonuses for decreasing their traditional use of the State hospital and providing new community resources to treat a segment of the severely mentally ill population that is at particularly high risk of hospitalization. Each of these approaches attempts to reward activities or outcomes that are expected to lower the use of State mental hospitals.

A second example comes from a set of research results that suggests that systemwide consequences are often overlooked when mental health financing policy is made. The reason probably is that no research had empirically established key systemwide linkages. Medicaid payment policy during the early 1980s furnished a useful illustration. During that period, a number of State Medicaid programs limited the number of inpatient days they would reimburse. One important consequence of that policy was to dramatically increase the likelihood that a given psychiatric patient would be transferred from a general hospital to a State mental hospital. This conse-

quence suggests that (1) anticipated cost savings from such policies will be higher than actual savings, because there is significant cost shifting from Medicaid to the State hospital, and (2) this cost-containment policy conflicts with public policy aimed at decreasing reliance on public hospitals. (See Frank and Lave [1986] for a more detailed description of the empirical analysis supporting these results.)

A third general area of research would address the economics of supported housing and its role within a system of care for the severely mentally ill population. Understanding the linkages among (for example) the supply and quality of board-and-care homes, the level of SSI payments, and housing market forces would be a major step toward dealing with problems of homelessness and inadequate housing among the severely mentally ill population (Rubin and Seneca 1989). Understanding these linkages would require a clear definition of (1) the role of board-and-care homes in the treatment system and (2) mechanisms that link supported housing to clinical services, and a consideration of how to optimally pay for this continuum of care.

For example, SSI payments appear to be set somewhat independently of local market conditions. Thus, the supply of supported housing tends to concentrate in low-rent districts. As a result, patients may be prevented from becoming integrated into their communities, access to care may be diminished (at least in the short run, depending on location of community treatment programs), and quality of housing and care in these settings may be restricted.

Each of these areas requires a wide range of research. Key elements of a research program on the economics of the severely mentally ill population include investments in data collection,

basic research on measuring benefits for use in cost-benefit analysis, development of behavioral models of public providers of mental health care, studies of optimal policy choice, and new efforts to apply simulation techniques for assessing systemwide consequences of financing policies.

A variety of data collection efforts would encourage and facilitate research on financing care for severely mentally ill persons. Perhaps the most critical effort is the development of comprehensive data on the public financing of mental health care. NASMHPD has collected data on expenditures that are under the control of State mental health authorities. These data are very important and have provided the first glimpses at public financing of mental health care. Nevertheless, these data are limited in important ways: They do not usually include most Medicaid expenditures on mental health, and they exclude local government contributions. A data collection effort in this area would focus on the local government or local mental health authority. Expenditures from all public and philanthropic sources would be collected in agreement with the terms under which these dollars were allocated. In addition, key aspects of the organization of service delivery in the public system would be specified (e.g., public provision vs. contracts with nonprofit providers). These data would be useful for examining a number of the issues mentioned above.

A second general area for future research relates to developing behavioral models of public providers. Most hypotheses regarding public provision of mental health care have been arrived at via casual observation (one important exception is the work of Michaels [1980]). Important insights into the consistency of organizational and financing arrangements might

stem from the development of such models. Empirical models would rely on conceptual characterizations of the behavior of public providers.

Cost-benefit analysis has an important place in the evaluation of treatment programs and technologies. The work of Weisbrod (1983) exemplifies the important contribution that careful cost-benefit studies can make. Methodological improvements in measuring benefits would further expand the usefulness of cost-benefit analysis. Specifically, making use of a multiattribute utility theory may allow researchers to make better judgments concerning the effects of treatment programs that have multiple outcomes affecting a variety of parties (patients, families, and neighbors).

Examination of systemwide impacts of major changes in financing policy has been quite limited in the mental health field. This is true despite the recognition that the mental health, human service, and health sectors are interdependent. Simulation technologies can provide useful first approximation of systemwide linkages for policy evaluation. Encouraging the use of such approaches in mental health policy would be likely to greatly improve the consideration of alternative policy scenarios by policymakers.

Legal Issues

Consideration of legal issues related to the provision and regulation of mental health care is a key component of any effort to mount an effective program of research on service systems. Much of what happens in the community to individuals with persistent, disabling mental disorders depends on the legal rules regarding the treatment of patient behavior as "different" from the behavior of other citizens (Morse 1978). What passes as minimally ac-

ceptable care and what can reasonably be expected of mental health professionals in the performance of their roles are also influenced heavily by legal standards (Sales 1983). In short, legal issues set the limits and define the ethos of care that is provided to patients in the community.

Current Knowledge. Getting a firm grasp on the relationships between legal issues and service provision to people with persistent, disabling mental disorders is not a straightforward task, however. This area of inquiry does not seem to have a clear disciplinary home, a consistent paradigm for investigation, or a clearly delimited set of topics that makes up the core of the field. The questions of interest in this area are necessarily multifaceted and often shift with time, and much research in the field is responsive to statutory trends (e.g., changes in commitment laws) and general public policy concerns (e.g., homelessness). Moreover, because of the necessity to consider legal, organizational, and clinical knowledge in formulating research in this area, interdisciplinary collaboration is often considered essential to designing research that can prove informative for policy formation. The field is necessarily broad and complex.

Despite this diversity, research on service provision and the law can generally be considered to be of three types. First, there is research that looks at the effectiveness of particular legal approaches to achieving desired public policy ends. A considerable amount of empirical research has examined the impact of civil commitment strategies (Hiday 1988) and standards for the invocation of the insanity defense (Steadman 1985). Much less work has been done to describe the process and effects of focused legal changes in particular men-

tal health systems (e.g., the effect of consent decrees on the service provision in certain locales). Legal effects are difficult to document empirically because local idiosyncracies often affect measurement and subsequent generalization of findings. Also, the large number of possible intervening variables often leaves results open to different interpretations. The strategy of documenting local changes in a more qualitative and investigative reporting fashion, in conjunction with empirical data collection, seems to hold more promise for understanding the mechanisms at work when particular legal policy changes are put into place.

The second major type of research has been the development of clinically useful strategies for dealing with the legal determinations that are often required of mental health professionals. In particular, there has been work on strategies for assessing the future dangerousness of an individual (e.g., Segal et al. 1988) and the competency of an individual to make particular treatment decisions (e.g., Grisso 1986). This line of research has produced methods for assessment that have some discriminatory power, but it has far to go to account for the many contextual factors that are often related.

Third, research has also attempted to provide empirical tests of some assumptions that underpin particular legal arguments regarding the way the law works. The regularities of clinical practice have been documented to provide policy theorists with a valid view of what can and cannot be expected of mental health professionals operating within certain legal boundaries (e.g., Lidz et al. 1984). The examination of clinical decisionmaking regarding civil commitment and release of patients has been of particular interest (Webster and Menzies 1987). Within this framework, there have

also been numerous studies of the characteristics of clients of the legal and mental health systems (Monahan and Steadman 1983). These investigations inform planners about the characteristics of individuals who may be affected by interventions at particular points in either the legal or the mental health system and provide assessments of the validity of certain assumptions about how legal policy has influenced the flow or type of individuals who are processed and treated in both systems.

Future Research Issues and Strategies. One of the ways legal policy affects service provision for severely, persistently mentally ill individuals is by changing the locus in which service provision is most likely to occur and the range of interventions that might be seen as appropriate. The growth of the asylum movement in the past century is a historic example of a reorientation of service provision going hand in hand with legal policy changes (Rothman 1971). Most recently, the joint impact of the deinstitutionalization movement and the expansion of patient rights has created a radical shift in the type of care that is most commonly provided to the group of patients in question (Mechanic 1989). These influences have created the need for services that might be attractive to homeless mentally ill patients or patients who are living marginally with family members or friends and who now have the right to refuse involvement with mental health care. This shift raises two fundamental issues about which more information is needed in order to fashion informed legal policy on the use of institutionalization.

First, there is a clear need to understand more about the relationship between individuals with persistent mental illness and their families. Families

are often the gatekeepers to both the legal and mental health systems, and the processes by which families access services and accommodate legal changes are underexplored. Studies about family members' views and use of particular types of treatment services or legal regulations could provide significant information on the results of various strategies that rely on family members' involvement in persuading or coercing patients to receive treatment.

Second, it would be extremely helpful if research could clarify how these patients move between the criminal justice and mental health systems. It is clear from the existing research that there is a considerable, and possibly expanding, amount of exchange between these systems (Teplin 1984). Moreover, it appears clear that a large number of persistently mentally ill individuals are being processed at local jails—sites with generally inadequate facilities for managing such people (Steadman et al. 1989). More research on practical methods for screening, referring, or treating patients who are entering the jail system would be worthwhile.

Glaringly absent is any investigation of movement between the criminal justice and mental health systems from the perspective of the client. Most studies have used overall statistics regarding samples of prisoners or mental patients, but there have been few systematic attempts to track the "careers" of patients through both the mental health and the criminal justice systems. Such an investigation could yield valuable information about the parameters and the most common patterns of involvement of patients in both systems (Mulvey et al. 1986). This information is necessary for two purposes: assessing the reasonableness of targeting services for particular points in a patient's involvement in

one or the other system, and isolating subgroups of patients that are at legal risk for multiple (and costly) system involvements.

It is especially important to gather this type of information about the movement of adolescents through different treatment and justice systems. Evidence of lower ages of onset for particular disorders and of the skyrocketing rate of institutional placements of adolescents (Weithorn 1988) argue for a heightened concern about younger patients. An increased burden on systems serving minors can already be seen (Office of Technology Assessment 1986) and can be expected to continue. As a result, the involvement of the family, the effects of early service usage, and the factors that appear related to involvement with the juvenile justice or child welfare system instead of the mental health system all deserve research consideration.

In research on both family involvement and treatment histories, it seems especially important to consider cultural, ethnic, and racial differences adequately. Information is needed about family processes and clinical judgment regularities that might account for the widely differing rates of hospitalization and involuntary commitment across groups (Lindsey and Paul 1989). A continued effort to separate the effects of race and socioeconomic class on these treatment and legal outcomes would also be valuable. The formulation of any reasoned arguments about equity in service provision rests on the generation of such information.

In addition to these basic issues is the possibility that certain legal policy trends may significantly alter the ethos of care and should thus be examined closely. In response to the perceived inadequacy of the existing system for disenfranchised, severely mentally ill patients, a number of

States seem poised to use existing or new statutes to put outpatient commitment or community monitoring systems into effect (Miller 1988). The general strategy is to provide court orders that patients must comply with certain conditions of outpatient treatment or face placement in an institutional setting. From the policy perspective, approaches such as outpatient commitment are probably the most promising avenues out of the dilemma of choosing between ineffective, revolving-door institutionalization and benign neglect in the community.

The idea of outpatient commitment raises a number of fundamental issues regarding patient rights and the efficacy of coerced treatment (Mulvey et al. 1987). It seems important to follow the natural experiments and demonstration programs connected with the implementation of these programs, and to document systems-level changes and patient outcomes. A careful documentation and assessment of the effects of these efforts could go a long way in helping to design a system of community patient monitoring that is both legally and clinically acceptable. It would be unfortunate to miss the opportunity to provide useful empirical information about these efforts while they are still in their formative stages, not yet hampered by organizational inertia.

Two enduring topics: Patient violence and provider coercion. In many ways, this movement toward outpatient commitment reflects a broader, more explicit acceptance of the social control function of mental health care providers (Appelbaum 1988). Although there is periodic concern about the reasonableness of a dangerousness standard for civil commitment, the case can be made that the problems of predicting dangerousness and coercing patients to receive

treatment are not going to go away and can no longer be ignored. If this position is accepted, it seems that research is needed on these two enduring topics.

The process of predicting dangerousness and the limits of clinical accuracy in this regard require continued study largely because this issue is central to arguments about the State's proper use of the *parens patriae* (i.e., responsibility to care for persons unable to care for themselves) and police power (i.e., responsibility to protect the community) with mental patients (Shah 1981). The practices of criminal and civil commitment rest heavily on many untested assumptions about patient violence and the level of skill that professionals have to predict it. Despite continued interest in these questions in the past two decades, research in this area can only now be thought of as moving into a second generation of questions aimed at merging the realities of clinical care and the ideals of legal policy (Monahan 1984).

This area of inquiry is particularly important given the effect of the legal system on individuals with severe, persistent mental disorders. These individuals are more likely to be involved with the civil commitment process and thus have a great stake in whatever policies are considered. Also, investigations of the dangerousness of people with severe, persistent disorders have a certain theoretical appeal. These individuals represent the purest cases of policy interest and thus offer cleaner and more informative evidence of the relationship among violence, mental illness, and clinical practice. Particularly informative would be investigations of the relationship between violence and factors specifically related to mental illness (e.g., the dimensions of delusions) and comparisons between the

violence of normal individuals and the violence of mental patients. Such research would shed light on what it is (if anything) about the violence of patients that might distinguish it from the violence of any other citizens (Morse 1982).

Two related refinements in this area of inquiry appear to be needed to move investigations ahead. First, there must be consideration of violence and prediction for different subgroups of patients. Merely looking at patient violence in general will inevitably lead to vague theories of patient violence and broad, less effective legal policy. Second, there must be consideration of different types of violence. Assuming that violence is a unitary phenomenon also limits the possibility of finding powerful relationships.

Regarding the first of these refinements, it should be mentioned that deciding on ways to group patient types more distinctly is not a straightforward task, and relying on diagnostic categories for such distinctions is probably of limited use in this instance. Investigations of the relationship between particular diagnoses and the level of patient violence seems to be of little value unless there is some theoretical reason for believing that the link between the diagnostic distinction in question and violence should be particularly strong. For example, knowing that particular subtypes of schizophrenia may be more or less related to violent behavior may not be very useful without having some theoretical rationale to account for these differences. Although investigation of different diagnostic groups is useful for other purposes, it may hold little promise for understanding patient violence.

Instead, taxonomies of patient "types" that are more broadly rooted and multidimensional should probably be developed. Patient clustering

based on variables more related to theories of violence and to the ecological niche of the patient (such as treatment history, living arrangements, or cognitive style) could prove more useful for the development of powerful and practical theory in this area. Also, investigating what case-type distinctions (possibly but not necessarily related to diagnosis) clinicians think might be related to violence and whether these case types in fact differ in level of violent behavior seems to have implications for the design of service criteria and regulatory policy.

Regarding the second refinement of looking at more differentiated definitions of violence, it should be noted that the distinctions of most interest might be the ones dictated by policy relevance. One approach with considerable promise would be to examine patient-family violence and public violence separately, because each type implies different strategies for clinical intervention and regulatory policy. There seems to be increasing awareness in the field that treatment and control of patient violence as a unitary phenomenon has limited payoff (Monahan 1988) and that considering patient violence with family members as a distinct research focus may be a fruitful approach.

In this light, it is also worth considering how much and what type of attention should be given to inpatient violence. Because inpatient violence can be researched much more easily and cheaply than patient violence in the community, perhaps inpatient studies may become attractive to researchers for their mere practicality. The payoff of the research on inpatient violence, however, may be limited. It seems questionable whether a series of studies regarding the characteristics of ward assaulters versus non-assaulters will yield much useful in-

formation for policy development or patient management.

This is not to say that research on inpatient violence is useless, but certain caveats should be kept in mind. First, careful consideration should be given to the mechanisms chosen for investigation; highest investigative priority should be placed on interactive processes that are likely to underlie patient violence both in the community and on an inpatient ward. Second, inpatient studies would be most useful if the variables investigated are translatable into elements of a clinical or legal intervention. It follows that there should be preliminary research on mechanisms of person-situation interactions that might underline the display of violence in both the community and the hospital.

For example, it might be revealing to investigate the role of patients' feelings about having limited control over their setting. Such an investigation could provide valuable insights into the dynamics of these violent encounters and might be useful in developing cognitively based interventions. Looking at the relationship between inpatient assaults and number of previous arrests, on the other hand, would not necessarily produce information with the same theoretical weight. The former implies a theory of patient violence that might be transferable across settings and have clinical implications; the latter merely finds an association that may or may not be part of a useful framework.

The general topic of coercion is the second issue stemming from the position that the social control role of mental health care providers must be addressed directly rather than ignored. The core of commitment law, the emerging interest in outpatient commitment, and the continuing debate about the right of patients to refuse medications all rest on numerous as-

sumptions about the process of coercing patients into treatment. Unfortunately, very little appears to be known about coercion of individuals with severe, persistent mental disorders.

There is a clear gap in knowledge about what strategies for coercing patients into treatment are used by clinicians, how patients experience this coercion, and how effective coerced treatment really is. Further, although the interplay between a patient's competency and the suitability of differing levels of pressure to comply with treatment has been recognized theoretically as an issue, there has been no clear study of it. Systematic investigation of these basic topics could advance the debate on the ethics and use of different civil commitment strategies and the types of social control functions that might be appropriate for mental health professionals.

At this point in the development of research on this topic, it would probably be most advantageous to pursue work that clarifies the concept of coercion and documents its dimensions in terms of legal proceedings that affect individuals with severe, persistent disorders. Collaboration among clinicians, empirical researchers, and philosophers could provide much needed clarification of the concepts of psychological pressure and coercion as practiced in the mental health delivery system. Basic descriptive fieldwork regarding the practices commonly used to get individuals into hospitals or to comply with treatment recommendations would also be useful. This defining of the theoretical dimensions and practical contexts of coercion could lay the groundwork for more systematic efforts to determine whether the use of psychological or legal pressures with patients is detrimental or helpful to the provision of services.

Unexplored topics. There is a dearth of research on the potential use of the law as a mechanism to promote innovative service systems or as a barrier to effective care. Although legal changes often set the limits of what service systems can accomplish, what can be done to promote favorable legal contexts for service delivery is a topic that is rarely explored systematically. Three issues in particular seem especially worthy of more investigation.

First, the effects of confidentiality on service delivery and coordinated research efforts should receive more attention. Restrictions on agencies regarding the sharing of patient information have become commonplace, with the ostensibly laudable goal of providing the patient with increased control over the flow of potentially stigmatizing or inaccurate information. The effect that such controls have had on limiting the coordination or consistency of care should also be recognized and systematically examined, however, if a reasoned approach to balancing competing interests is to be pursued.

Second, the issue of how to use the law creatively to promote long-term planning for the well-being and care of individuals with persistent, severe disorders should also be examined. One of the major concerns of families who take care of adult mentally disabled relatives is how to provide the necessities of care after the parents or responsible siblings become disabled or die. Several States have addressed this issue by establishing organizations that help in planning, serve as trustees for managing transferred assets, and provide some degree of case management or care. Investigations of the attractiveness of such models to family members, the feasibility of certain regulatory strategies for guaranteeing the fiscal soundness of these

organizations, and their effects on the provision of public sector care are topics that could yield valuable information for providers.

Third, ways to use the law creatively to provide safe, affordable housing for individuals with severe, persistent disorders should be addressed more aggressively. A variety of programs in different locales have made creative use of financing packages to establish or renovate housing. Methods that maximize use of tax laws and investment strategies for combining resources of foundations, housing authorities, and developers have been pursued with some success by entrepreneurial service providers. Unfortunately, information about these efforts is scattered and generally unavailable to the social service community. Systematically studying and disseminating information about these projects could be a catalyst to spark more innovative efforts in other locales.

Summary of Priorities for Immediate Action. There are many worthwhile research topics regarding legal policy in relation to individuals with severe, persistent, disabling mental disorders. Immediate action would probably be most fruitful, however, if it focused on the following subjects: the family's relationship with individuals who have severe, persistent, disabling mental disorders and the views of family members and patients about legal proceedings in which they have been or might be involved; the movement of patients between the criminal justice and mental health systems, examined from the perspective of the patient's treatment and criminal history; patient, family, and clinician impressions of the use of outpatient commitment and other coercive strategies to increase patient compliance with treatment in the community, and any

indication of the relative effectiveness of such efforts; and the broad range of available strategies for using the law to promote coordinated care or safe housing.

Such research will require ongoing interdisciplinary collaboration if it is to be sensitive to the nuances of these issues. A high priority would thus be to encourage settings in which such collaboration can occur and to build interdisciplinary training components into research projects. Pursuing the above issues with an interdisciplinary emphasis could move the field a long way toward policy that is as well informed as it is well intentioned.

Overcoming Stigma

This section presents an agenda for research about stigma. In the past, such research has focused heavily on gathering information about people's attitudes toward mental illness and mentally ill people. It is proposed here that research on stigma be reconceptualized to focus primarily on identifying effective strategies for winning community acceptance of mentally ill people.

For the past three decades, the fundamental policy objective of the American public mental health system has been to shift from an institutionally based system of care for severely mentally ill people to a community-based system. The underlying vision of community mental health is of mentally ill people living freely as an integrated and accepted part of the community. Obviously, this society is far from achieving this vision, and stigma is one of the key causes of failure.

"Stigma" is defined generally as a mark of disgrace or shame. With regard to mental illness, it refers to a tendency to regard people who are or have been mentally ill as unpredict-

able, unreliable, incompetent, and prone to bizarre behavior and violence. Typically, it results in fear of, discomfort with, and a desire to avoid people identified as mentally ill.

The specific consequences of stigma are many and devastating. They include community resistance to the development of community residences and other services for mentally ill people; loss of friends and social supports by both mentally ill people and their families; blame of mentally ill people or their families for their problems; damaged self-esteem; reluctance to accept help or even to acknowledge mental illness; failure by many professionals to develop working alliances with mentally ill people and their families; failure to develop helping techniques acceptable to mentally ill people and their families; discrimination in housing, education, work, loans, health insurance, and driver's licenses; constant reinforcement of myths about mental illness by the media; underfunding of research and services related to severe mental illness; and general exclusion of mentally ill people from the social mainstream.

In short, even though the number of people physically isolated in institutions has been substantially reduced, the powerful social isolation of mentally ill people in the community must be confronted if the goals of community mental health are to be achieved.

Stigma is widely recognized, of course, as a pervasive problem for mentally ill people and their families, but there are two probable reasons why relatively little effort has been organized to overcome stigma and improve community acceptance of people with mental illness. First is the common belief that to solve the problems engendered by deinstitutionalization, more services must be provided in the community; dealing with stigma just does not seem as important as

developing direct services. The second reason is probably that the task seems so overwhelming. Stigma has been set in Western consciousness for so long that it is hard to imagine how a program could produce widespread changes in attitudes and behavior.

Both of these reasons for not tackling the problem of stigma require response. Services that will be widely accepted by mentally ill people and their families cannot be developed otherwise. Not only will services be jeopardized by community resistance, but they will continue to be rejected by large numbers of people until the internal shame and stigmatizing impact of many professional service structures have been addressed.

The task of overcoming stigma need not be seen as overwhelming. Stigma generally is thought of as a set of attitudes and behaviors deeply embedded in social history. If stigma is understood instead as specific failures to accept specific people in specific ways, it is possible to begin thinking about attacking stigma problem by problem. For example, what is necessary for mentally ill people to get jobs? What will make it possible to have friends? What is required to get a halfway house accepted?

A variety of strategies is needed to overcome the consequences of stigma, as well as to reduce stigma itself. These strategies would attempt to win community acceptance of mentally ill people and their families in the most significant ways. A research agenda should focus on the development of such strategies.

Current State of Research on Stigma. Research about stigma and its relevance to the community mental health movement goes back as far as the 1940s, when treatment in the community first was seen as a viable alternative to long-term hospitalization

(Rabkin et al. 1980). The studies all tend to confirm that there are powerful negative attitudes toward mental illness and that people seek social distance from mentally ill persons. In general, the public identifies all mental illness with mental illnesses severe enough to require hospitalization rather than seeing it as a broad range of disorders with various levels of disrupted functioning (Bhugra 1989). Consequently, all mentally ill people, virtually as a matter of definition, are believed to be unpredictable and disabled. In addition, there is a strong tie in public consciousness between mental illness and dangerousness.

A number of studies have looked at variations in attitudes and beliefs about mental illness. Although not conclusive, they suggest that educated people are more accepting than less educated people, that women's behavior is more benign even though their attitudes are no different, and that people who are personally acquainted with mentally ill people tend to be more tolerant. Several studies of professionals indicate that although their knowledge is greater than that of the general public, their attitudes are similar to those of their socioeconomic group. Nonprofessional mental health workers apparently are as uninformed as the general public. Little information is available about ethnic and cultural differences in attitudes.

There have also been a number of studies about whether negative attitudes are a reaction to the behavior of mentally ill people or to the label attached to them (e.g., Link et al. 1987). Although it is obvious that both factors play a role, this debate seems likely to continue. Further, even though it is commonly believed that stigmatizing attitudes begin in childhood, there appears to be no research on children's attitudes.

In addition to studies about attitudes, there have been studies about behavior and about the relationship between attitudes and behavior. The literature indicates that there are frequent discrepancies between expressed attitudes and behavior. For example, some employers with sharply negative attitudes about mental illness will hire a former patient under certain circumstances. In general, situational factors may affect action more than attitudes do.

Because fear of dangerousness is a key element of negative reactions to mentally ill people, a number of studies have focused on just how dangerous mentally ill people are compared with everyone else. Before 1960, studies tended to show that mentally ill people who had been hospitalized were less likely to be violent or to be arrested than the general public. More recent studies show higher arrest rates among former mental patients, but such rates are highly correlated with arrest records before hospitalization (Rabkin et al. 1980).

A number of studies have focused on mechanisms through which stigmatizing attitudes and beliefs are acquired and reinforced. It is no surprise that the media are frequently cited for perpetrating stigma (Wahl and Roth 1982).

In the literature on ways to change public attitudes and behavior, researchers stress the dissemination of information to the public, and some stress contact between the public and mentally ill people. There appears to have been very little study of the effectiveness of various strategies.

What, then, is the overall state of research, and what new directions need to be pursued? Research tends to be focused more on attitudes than on behavior. More needs to be known about how people act toward the mentally ill and their families and why

they act as they do (Flynn 1987; Wahl and Harman 1989). It is particularly important to explore the stigmatizing behavior of professionals. In general, it may prove useful to learn more about people who are accepting and helpful and who do not focus on negative attitudes and behavior.

Research has focused almost exclusively on attitudes and behavior of the non-mentally ill toward the mentally ill. Research needs to look at how the perceptions and attitudes of the mentally ill toward the world they live in affect their behavior. It would be particularly useful to understand more about how mental health services are experienced by mentally ill people and their families and how this experience relates to their rejection of help. It is also important to learn more about the impact of ethnic and cultural differences on the attitudes and behavior of mentally ill people and their families.

Research about dangerousness has produced different findings at different times. It would be useful to have clear information about violence, dangerousness, and arrests. This information should distinguish between family and nonfamily violence; it should clarify the prevalence of dangerous acts and different types of violence as well as the prevalence of arrests for different kinds of acts, distinguishing, for example, between property crimes and loitering. In addition, research related to other common fears (e.g., about loss of property values near community residences or child molesting) would be helpful.

Research about the origins and mechanisms of transmission of stigma appears to be very limited. The media are not the only source of stigma; it is carried by language and reinforced in schools. Research is needed on other sources of stigma. Some attention to

the origins of stigma in childhood might prove useful.

Little research has focused on strategies for change and their effectiveness. Indeed, it seems that research related to stigma has frequently been disconnected from the goal of community mental health—to win acceptance of mentally ill people and their families in the open community. A reconceptualization of the goals of research about stigma seems essential; emphasis should be placed on research related to the development of effective strategies for overcoming the problems created by stigma and for winning community acceptance.

An Agenda for Research on Stigma. Research on stigma should be related to the goals of community mental health and geared to helping mentally ill people live decent lives in the community. It is known that stigma impedes efforts to achieve the goals of community mental health in many ways. Research should focus on ways to overcome these impediments and on strategies to win community acceptance. To this end, research should be aimed at two fundamental objectives: the generation of hypotheses about effective strategies and the evaluation of their effectiveness.

Given these two objectives, five major areas of research seem critical: evaluation of global strategies to overcome stigma, evaluation of targeted strategies to overcome stigma, exploration of the origins and mechanisms of the transmission of stigma, exploration of the experience and impact of stigma, and further study of attitudes and behavior.

Global strategies. Global strategies to overcome stigma are those designed to have a widespread impact on attitudes and behavior among the general public. Such strategies have worked for the physically handi-

capped, and many believe that they can work for people with mental illnesses.

Generally, global strategies focus on getting information to the public in ways that can compete with typical media presentations of mental illness. Access to the media is essential, but it is also important to build constituencies of people who will speak out within their communities and offer alternative views of mental illness.

Although everyone agrees that it is critical to counter the perception of mentally ill people as violent and helpless, there are a number of interesting debates about what the messages should say.

Should, for example, the definition of mental illness be narrowed and the biological roots of severe mental illnesses be stressed to increase the perception of mental problems as illnesses and thus reduce blame? Conversely, should a broad definition of mental illness be used and the range and variety of mental illnesses be emphasized to counter the identification of mentally ill people as severely dysfunctional?

Similarly, there is a debate about how accurate and detailed information for the public should be. Should simplified images be offered to counter the simplified images carried by the media, or should realistic portrayals of the range of mental illness be provided? This question becomes particularly important with regard to efforts to convey that there are effective treatments for mental illnesses and that mentally ill people can be good employees.

There is a similar fundamental question about the possible need to work throughout the field of mental health to make sure that there is a consistent message to counter stigma. For example, while efforts are made to counter the perception of mentally ill people

as dangerous, are these actions undermined by asking that violent criminals be given psychiatric examinations and by supporting the not-guilty-by-reason-of-insanity plea?

Recently, a debate has emerged about whether the term "stigma" should be dropped so as to attack the problems usually associated with it as a form of discrimination. All these questions are excellent examples of researchable issues related to messages to help overcome stigma.

In addition to these questions, research needs to be conducted about mechanisms for delivering the message. For example, how can the media be used to give a positive visibility to, or at least an unfrightening and realistic view of, mentally ill people?

It is also necessary to focus on the effectiveness of constituency organizations as mechanisms for changing public attitudes. Self-help organizations, particularly, ought to help break down stigma by demonstrating the competence of those presumed to be incompetent and by confronting internal stigma. Other advocacy groups should also be able to carry the message to the public. Whether and how they can do so are critical questions for research.

Targeted strategies. Targeted strategies to overcome stigma focus on specific problems related to stigma, such as community resistance to halfway houses, discrimination in housing, difficulty getting work, loss of friends, social isolation, stigmatization by professionals, rejection of help by mentally ill people and their families, internalized shame, discrimination in health insurance, underfunding of research and services related to severe mental illness, and inaccurate, damaging, or offensive media presentations.

A targeted strategy, then, is an effort to overcome one such problem.

For example, a number of strategies have been developed to deal with community resistance to halfway houses, ranging from getting legislation passed that restricts the community's authority to working in a conciliatory fashion to win support. Similarly, approaches have been developed to help people get work, ranging from helping people prepare for interviews to persuading employers to hire mentally ill people. Problems with the media have been targeted with such strategies as media watches and efforts to educate journalists.

It is important to emphasize that one kind of targeted strategy to win community acceptance involves political and legal action. Those in the mental health field have become accustomed to thinking about overcoming stigma as a process of persuasion. If they think instead in terms of winning community acceptance, it becomes clear that strategies for change must include political and legal action. It may not be possible to legislate positive attitudes toward people with mental illnesses, but it is possible to legislate fair housing, job opportunities for the disabled, and the like.

In general, notions about what constitutes a strategy to overcome stigma must be broadened. If the problems of community acceptance are identified, it will be possible to design strategies to overcome problems, such as those listed at the beginning of this section. Research can then be focused on the effectiveness of these particular strategies. It may well be that, for the moment, this kind of research will be the most productive in advancing the goals of community mental health.

Origins and mechanisms of transmission. Current research has focused on the media as the primary mechanisms through which stigma is transmitted to the culture at large. In

fact, however, stigma is carried by our language, which constantly identifies "crazy" with "stupid" and conveys much false information about "nuts," "schizos," and similar terms.

In addition, it is quite clear that basic attitudes about mental illness are acquired at a very young age. Young children are afraid of "crazy" people and often make fun of emotionally disturbed classmates. Strategies need to be developed in the schools to head off stigmatizing before it becomes ingrained. To develop effective programs, researchers need more knowledge about the development of stigma in childhood.

In general, it seems that improved understanding of the origins of stigma and the mechanisms through which it is transmitted would help in formulating strategies to overcome or prevent stigma. Research to generate hypotheses for strategies in this area should be a focus of investigating stigma.

Experience and impact of stigma. There has been much speculation about the impact of stigma on mentally ill people and their families. Only recently have there been organized efforts to ask them about their experience. These few efforts have generated much information about stigmatization by professionals and mental health programs and about the reasons people who need help reject it. This is a critical area for further research.

In addition, it is important to explore further the experiences of mentally ill people seeking jobs, housing, and friends, and to draw from their experiences to develop strategies for winning more tolerant actions in the community.

Attitudes and behavior. Although the bulk of research about stigma has focused on attitudes and behavior of the public and various subgroups, much more research is necessary to

track changes over time; to target groups who can be helpful; to understand ethnic, cultural, and class differences; and to generate hypotheses about what will create accepting attitudes and actions. Several areas of research seem particularly worth pursuing, including different reactions to specific situations, such as supporting community residences, hiring, being friendly, giving health insurance, and supporting research; different reactions to different mental illnesses and level 3 of functioning; the changing attitudes of people exposed to the opportunity for receiving mental health services, such as people who work in settings with employee assistance programs; reasons for positive reactions to mentally ill people in various contexts; reasons for shifts in attitudes and behavior from negative to positive or vice versa; and the attitudes and behavior of mentally ill people and their families, including ethnic and cultural variations.

The focus of all such research efforts should be the generation of hypotheses about possible strategies to build positive attitudes and actions toward mentally ill people and their families among the general public, service providers, and mentally ill people and their families.

Research Strategies. Research about stigma is unquestionably difficult to carry out in ways that will produce findings that can be used to develop strategies for change. A number of research approaches, however, should be encouraged.

First, the applicability of market and advertising research to the problem of stigma should be explored. Getting people to buy a product entails the creation of positive attitudes and actions. Market and advertising research appears to provide effective guidance to America's industries; per-

haps it could advance mental health as well.

Second, there are a number of opportunities for natural experiments. Massachusetts and California have mounted major antistigma campaigns; their impact should be studied. Similarly, NIMH's Depression Awareness Recognition and Treatment program should be extensively evaluated. There is also much unrecognized antistigma work in the day-to-day efforts to develop adequate services for mentally ill people. Setting up community residences, developing jobs for mentally ill individuals, building constituent organizations, advocating service funding, and publicizing positive aspects of mental illness all involve de facto, targeted, antistigma projects. They offer a great laboratory for the study of targeted antistigma strategies.

Third, impressionistic studies can often be very useful for generating hypotheses. Given the fundamental goal of stigma research to generate strategies to overcome stigma, it seems that some "soft" research should be encouraged.

Fourth, the complexity of issues about stigma often requires multivariate designs and sophisticated statistical analyses, neither of which (according to Rabkin et al. [1980]) is common to stigma research; both should be encouraged.

Fifth, according to Otto Wahl (personal communication 1989), research on stigma has used inconsistent measures. Some studies measure rejection, and some look at attitudes or images. Consistent language and consistent measures are needed for research to be more meaningful.

Conclusion. Stigma is a major impediment to realizing the goals of community mental health. Overcoming stigma is, therefore, an essential

element of the Nation's effort to mount an effective community mental health system. Research about stigma should be geared to the task of building an effective system of care, and for this reason the highest priority should be given to evaluating the effectiveness of strategies to overcome stigma and to generating hypotheses about what will work.

There are two fundamental approaches to overcoming stigma: global efforts to gain widespread changes in attitudes and behavior, and targeted efforts to overcome specific problems. These problems include lack of housing, work, and friends; discrimination in many areas; reluctance to seek or accept help; isolation of family members who must be a primary source of support for their mentally ill relatives; and lack of financial support for research, services, and basic care.

Clearly, nothing else is as important as finding ways to counter the general tendency to identify mental illness with violence, incompetence, and unreliability. Given the immediate need to respond to the central problems noted above, however, the focus of research about stigma should be constructed around the relevance of such research to solving these problems. What must be clear is that research about stigma is not simply a matter of curiosity; it is a vital component of the effort to enable severely mentally ill people to lead decent lives in the community.

Human Resource Development (HRD)

The mission of a mental health delivery system is inextricably tied to its human resources. Because mental health systems are highly staff intensive, the work force is the most valued asset. HRD is a set of activities for

ensuring that the work force is large enough and trained well enough so that the system can fulfill its mission. HRD activities are typically divided into four functional areas: planning and evaluation, work force management, training and education, and sanctions and regulations. These functions influence the mix of skills necessary for service delivery, the supply and distribution of personnel, and use of the work force. They ultimately play a role in the success or failure of an agency's programs.

Despite the importance of the role of human resources in the mental health system, empirical research in HRD is quite limited. The literature is characterized by speculative and anecdotal information that is interesting but less than useful in understanding the preparation, recruitment, retention, and satisfaction of the system's work force. Much of the current HRD literature consists of descriptions of the roles of particular professions in specific institutions or facilities, and model programs for preparing professionals for work in the system. Typically, the programs described are innovative ones that are responsive to specific needs in particular contexts. Empirical data are necessary to understand the principles of HRD that may be applied across a number of settings within different disciplines.

This section summarizes the HRD literature in the mental health field, identifies the major concerns for current work, and suggests possible strategies for systems-level research.

Summary of Current Research. The HRD literature in the mental health field reflects the predominant concerns of the work force. This literature can be divided into six categories: human resource information and planning, professional education, effective staff development, evolving roles in

the mental health professions, performance and productivity standards, and staff retention.

Human resource information and planning. Human resource data are important for estimating current and future work force needs, improving program efficiency, and assessing the outcome of services. Several studies have focused on trends in the number and type of mental health professionals employed in different treatment settings (Perls et al. 1980; Winslow 1982; Thompson and Bass 1984). Some studies have attempted to differentiate between types of CMHCs (e.g., rural and urban, private and public) (Siegel et al. 1983; Thompson and Bass 1984; Leaf et al. 1985), but no clear standards for optimal staff mix in CMHCs have emerged from this research.

The relationship between staff characteristics and job function has been studied (Siegel et al. 1983; Jerrell and Di Pasquale 1984; Windle et al. 1988) to determine the relationship between professional disciplines and characteristics of staff caseloads (Jerrell and Di Pasquale 1984; Taube et al. 1984; Aiken et al. 1985; Knesper et al. 1985; Flaskerud 1986; Peterson and Cox 1988; Windle et al. 1988). This research sought to determine who is serving the target populations and explain differences among professional groups that serve various populations. The results demonstrate that medical professionals, including physicians and nurses, tend to maintain a higher percentage of severely mentally ill clients among their caseloads (Flaskerud 1986; Peterson and Cox 1988; Windle et al. 1988) than other mental health professionals do. The reasons for these differences have not been explained.

The economic impact of various staffing patterns also has received attention (Madelian et al. 1980; Frank

and Taube 1987). These studies suggest that hiring decisions in mental health facilities are not necessarily based on cost minimization.

Professional education and training. Education and professional training have received considerable attention in recent HRD literature, but most of the information presented is descriptive. Reported research focuses on identifying problematic areas in professional training programs (Skolin 1989), assessing training needs of human service professionals, and preferred formats for training (Brown and Bakker 1988). Generally, these studies indicate a consensus among providers regarding the training needs of students and the continuing education needs of practitioners. Educators and practitioners also agree about issues and problems related to field instruction.

A limited number of studies have considered the benefits of training nonprofessionals to provide adjunctive services. There are some suggestions that nonprofessionals can effect beneficial client change if provided with training and ongoing supervision; (Katkin et al. 1971; Brook et al. 1989), but other studies are less positive (Stephenson et al. 1973).

Staff development. Research in staff development has focused on identifying the managerial training needs of clinicians who assume supervisory responsibility (Silverman 1982, 1984; Talbot 1988; Paradis et al. 1989). Available data indicate that most health care professionals who assume managerial responsibilities do not feel prepared for their new tasks (Paradis et al. 1989). Middle managers who have received formal preparation rate themselves as better prepared to assume this new role than their untrained counterparts do (Talbot 1988). The value that providers attach to such professional development activi-

ties is highlighted in a study of burn-out among human service professionals (Peen et al. 1988). Human service workers who were given opportunities for professional development were significantly more satisfied with their work than those who did not have these opportunities.

Roles of mental health professionals. There has been some inquiry into the roles of professionals in the mental health system (Adelson and Leader 1980; Shindler and Berren 1981; Silverman 1984; Peen et al. 1988). This inquiry has included study of the relationships between professionals of different disciplines. For example, investigations of the roles of social workers show that the actual functions of these providers often differ from the ideal role as defined by the profession (Ishiyama et al. 1962; Adelson and Leader 1980; Shindler and Berren 1981; Wallace et al. 1985; Wooff and Goldberg 1988). One of the few studies of the conflict between psychiatrists and psychologists suggests that disagreement on competency to perform certain tasks lies at the basis of the rivalry (Shindler and Berren 1981).

The literature indicates that psychiatrists have assumed a wider range of roles in the mental health system in recent years and that they now divide their time among a variety of treatment settings (Hosick 1989). Studies document that administrators and other mental health professionals value the role of the psychiatrist in the public sector (Ishiyama et al. 1962; Shindler and Berren 1981; Faulkner et al. 1987), but the high cost of psychiatric services is considered a serious disadvantage (Faulkner et al. 1987).

Psychiatric nurses are expanding their sphere of influence in mental health settings. Most of the literature detailing this movement is speculative, but at least one study attempts to

show that the lack of a strong professional identity limits the role of the nurse in psychiatric settings (Wooff and Goldberg 1988).

The clergy continue to be a force among the mental health professions, whether in the formal mental health system or through their natural community base, the churches and synagogues. Although their presence is important, at least one study shows that their counseling activities still are limited (Mollica et al. 1986). Clinical chaplaincy in many psychiatric hospitals and general hospitals provides an important service that is more than adjunctive to the core professions. Also, local parish clergy are a part of the informal network of resources that may be useful to both clientele and mental health professionals. Within the mental health system, however, the role of the clergy still is limited and unclear (Bruce and Bruce 1989).

Performance and productivity standards. Measuring the performance and evaluating the productivity of mental health professionals are relatively new practices about which little has been written. One study documents an increase in the use of group and family therapy after performance standards for clinicians were implemented (Quinn 1984). Other researchers suggest that adopting a private practice model will improve the productivity of service providers as measured by increased revenues (Winslow 1982). This is an area that will clearly require further investigation as revenue sources become scarce and the public demand for accountability increases.

Recruitment and retention. The recruitment and retention of psychiatrists are major issues in the mental health industry today. The number of psychiatrists in public sector employment has been declining for almost

two decades (Knesper 1981; Harbin et al. 1982; Oliver and Rabiner 1982; Mollica et al. 1986) and the number of psychiatrists in CMHC leadership positions has shown an even greater decline (Perls et al. 1980; Quinn 1984). Medical schools also are experiencing problems recruiting faculty and fellows (Hosick 1989). These shortages appear to be most acute in rural areas where CMHCs have fewer affiliations with training institutions (Perls et al. 1980).

The reasons for the shortage are varied. One reason is the widespread use of less costly providers who perform many of the functions once reserved for psychiatrists (Blum and Redlich 1980). These substitute personnel often have limited the role of the psychiatrist to that of medication management (Faulkner et al. 1987). Programs that have succeeded in retaining psychiatrists define clear clinical roles for psychiatrists and involve them in the routine treatment of all patients, not just in a few problem cases (Harbin et al. 1982; Beigel 1984). Other factors that influence a psychiatrist's decision to work in a given delivery system include academic affiliations, the potential for supervising psychiatric residents, and programmatic creativity and flexibility (Harbin et al. 1982).

Studies of job satisfaction among mental health professionals document factors that affect the satisfaction of providers, including nurses (Melick 1985; Power and Sharp 1988; Wooff and Goldberg 1988), employees of residential facilities (Holburn and Forrester 1984), and professionals in community mental health (Buffum and Ritro 1984; Peen et al. 1988). The results of these studies vary, but clearly defined roles and performance expectations are consistently associated with job satisfaction.

Major Research Concerns. This review underscores the need for more empirical research on several issues of concern to providers, administrators, and policymakers in the mental health field. Research in these areas can provide an important basis for policy development, planning, and implementation of programming in the public sector of mental health service delivery. Following is a discussion of the major research concerns of HRD in mental health.

Projecting human resource needs. The major factors affecting the supply and distribution of professionals trained to provide mental health services must be identified, and the impact of these factors, individually and collectively, must be assessed. Forecasting models that relate the need for mental health professionals to specific services and clientele should be developed to identify potential shortages or oversupplies for given geographic areas.

Staffing patterns. The staffing patterns for providing specified services to particular client groups need to be identified. Presumably, various configurations of staff are appropriate for various treatment and rehabilitation modalities for specific client groups. Models determining the nature of these configurations in given settings need to be developed and tested in relationship to the quality and appropriateness of care, use of services, access to services, client outcome, efficiency, and cost of delivery.

Research on the effect of various staffing patterns can be divided into several components. First, the effectiveness of certain categories of professional and paraprofessional workers in specific contexts is an important issue. Second, the impact of configurations of staff members who form teams for treatment needs examination: What combination or combina-

tions of professions work best? Consistent with both of these issues is an investigation of the effects of matching clients and providers with respect to gender, culture-ethnicity, and age. Third, the effect of consumers and family members serving as providers deserves attention.

Performance and productivity. Research is needed to assess the impact of incentive programs and productivity standards on the performance and satisfaction of employees. Anecdotal evidence suggests that setting productivity standards and monitoring provider performance alters the types of services delivered (e.g., group vs. individual treatment). Systematic studies are needed to assess how these changes affect the quality and appropriateness of care.

Productivity programs typically employ financial incentives to alter provider behavior in the desired direction; two important issues are involved. First, there is a need to determine whether financial incentives are the most effective motivator for all types of staff; the relative effectiveness of nonfinancial incentives for certain categories of professionals and paraprofessionals requires additional investigation. Second, studies are needed to assess the impact of introducing income-maximizing behavior, via incentive programs, on the attitudes and values of providers of mental health services as well as on client outcomes.

Professionalism. The core mental health professions of psychiatry, clinical psychology, clinical social work, and psychiatric nursing have been undergoing changes since the beginning of the community mental health movement 25 years ago. Each profession has attempted to identify its unique competencies, define its roles and responsibilities, and improve its own professional standing. In some

instances, professional boundaries have shifted as a result, and lack of consensus on these changes may have created confusion.

Research must assess what impact external regulations (e.g., licensure requirements, professional standards, and reimbursement mechanisms) and the emergence of new classes of providers have had on the core professions. It is important to know how changes in the supply and use of available workers, the cost of services, and the range and quality of programs offered will vary with changes in the regulatory environment. Of particular concern is the role of licensure as a means of rationing, which can alter the cultural, racial, and gender mix of the mental health work force. In turn, the relationship between these variables and client outcomes needs to be explored.

Conditions of employment. The effects of the conditions of employment (e.g., policies and procedures, organizational structure, compensation, career opportunities, professional development) on staff satisfaction, retention, recruitment, productivity, and innovation require investigation. There is sufficient anecdotal evidence of excessive turnover in public sector mental health to warrant investigation. Preliminary research efforts must validate or invalidate the assumptions of high staff turnover. Research must then assess the impact of staff turnover on client outcome measures to determine the true cost of turnover more accurately. Presumably, turnover is related to the conditions of employment. Research must identify what conditions increase worker satisfaction and whether "satisfiers" and "dissatisfiers" are the same for all categories of professionals and paraprofessionals.

Staff development is a process that ensures a well-trained, proficient

work force through job-related continuing education, skill development opportunities, maintenance of credentials, and peer review. Further research is needed to determine whether staff development improves satisfaction with work as well as to assess the impact of such development on turnover and client outcomes.

Preservice education and training. The role of preservice education is to provide students with the skills, knowledge, and attitudes necessary to enter a given profession. State mental health agencies have traditionally had a role in this process by providing field experiences to students and by employing graduates. In recent years, greater attention has been paid to the number of collaborations between mental health agencies and academic programs. Diminishing resources within the two environments as well as rapid changes in state-of-the-art service delivery are two major factors contributing to a renewed interest in the collaboration between States and universities.

Research efforts must take several directions. First, there is a need to evaluate the success or failure of collaborative strategies to effect meaningful and lasting changes in the quality and relevance of training programs. Indicators of success would include the development and revision of university curriculums that reflect new technologies and recent research; the development of high-quality field placements for students in communities and State facilities; and joint research efforts. Second, studies must assess the outcome of collaborative relationships in terms of the public sector's ability to recruit and retain mental health professionals. Third, existing and new programs must be evaluated to identify the structures and processes of mutually beneficial and successful collaborations. The

impact of such collaboration on eventual client outcomes also warrants attention.

An important issue in mental health is training clinicians to become effective managers and administrators. The effectiveness of available tools for assessing training needs and the outcome of training programs require study. The outcomes of less costly, experiential training programs supplemented by formal skills training and packaged training materials must also be evaluated.

Shifting locus of care. The downsizing of State-operated psychiatric hospitals and the further development of a community-based system of care have several implications for the mental health work force. A decrease in the size of a State's inpatient population must be accompanied by a decrease in the size of hospital staffs. States must ensure that qualified professionals and paraprofessionals are given opportunities to remain in public sector employment. The roles of community care providers are also changing as outpatient programs shift their focus from office-based therapies to rehabilitation-oriented outreach programs.

Studies are needed to identify variables that will have the greatest impact on a State's personnel redeployment and to identify the issues of greatest concern to those facing redeployment. This information can then be used to develop and test model redeployment programs. Information must be collected on the retraining needs of personnel shifting from hospital-based employment to community programs. A management issue that must be addressed is how to make such a transition without losing productivity or compromising the quality of care.

The shifting locus of care to community mental health staffs also re-

quires study. The growing opposition by mental health professionals to such a shift is a major concern to officials and administrators at the State and local levels. Research must focus on how to identify effective incentives for professionals to work with severely mentally ill people and other target populations in naturalistic and non-traditional settings. The question has been raised whether professionals view the loss of more traditional office-based practice as a loss of status within the professional community. New ways of conferring status on mental health professionals who assume nontraditional roles may need to be developed.

Research Priorities. The most urgent HRD issue in mental health today is the modification of the roles, skills, and values of the core mental health professionals in public sector employment. Community treatment programs will not be successful if the available work force, professional organizations, and academic programs are not supportive of and receptive to changes in how services are delivered to seriously impaired people. Research must, therefore, focus on ways to motivate staffs to work with seriously impaired clients. Cost-efficient incentive systems are needed to change the attitudes and practice patterns of the core mental health professionals.

Another research priority is the development of training materials for practicing professionals who serve severely mentally ill people. It is not enough to change the attitudes of professionals; they must be given new tools to work with. Again, incentive systems are needed to ensure that providers stay abreast of current research and that they develop their skills.

Another priority is the development of effective collaborations between

State mental health agencies and academic programs. Studies are needed to assess the outcome in terms of revised curriculums, high-quality field placements, and the ability of public agencies to attract and retain graduates of these programs.

Another area of concern that requires immediate attention is the anticipated redeployment of the work force from hospital-based settings to community programs and (within community programs) from office-based practice settings to the client's natural environment. The variables that affect the success of redeployment programs must be identified, and model programs must be developed and evaluated.

Finally, there is a need to further develop the HRD capacity of States and localities to facilitate work force planning. Current data collection techniques are necessary, but in themselves they are insufficient for planning purposes. Forecasting models are needed to identify potential imbalances in supply at both the national and the State level. States must have the technology to use these models and have the capacity to develop strategies that respond to changes in the work force.

Research Strategies. A number of promising research strategies emerge in the present discussion. Collaborative research could involve academic and public sector service delivery contexts. Collaboration could be further encouraged between service delivery contexts and professional associations (American Psychiatric Association, American Psychological Association, National Association of Social Workers, American Nursing Association). Emphasis could be placed on integrating research into the public sector service delivery system, which would probably be best accomplished

through academic linkages. Recommendations for such integration for the discipline of social work are discussed in a report by the NIMH-supported Task Force on Social Work Research (1991).

Evaluation research could be increased in the workplace. For example, what types of orientation programs are most useful in reaching greater stability of staff, which is reflected by less turnover and greater satisfaction ratings? Another example is the use of peer support in teams that work with severely mentally ill people.

Research dissemination strategies must vary with the product of the research. Monographs supplemented by meetings with key staff in State agencies are an effective way of disseminating information about new programs, such as incentive programs for professional staffs. Bringing State agency leaders together on a regional or national basis to discuss the outcomes of different programs would also promote the sharing of information. A national HRD clearinghouse or regional clearinghouses could eliminate costly duplication of effort and help States to find easily needed information.

Dissemination

The research process, as well as the translation of research into practice, depends on the timely and effective dissemination of findings to the broad range of users, including policymakers, providers, administrators, consumers, and researchers. Experience has shown that researchers are generally successful in disseminating their findings to other researchers through presentations at national meetings and publication in scientific journals. The weak links in the dissemination process are generally found to be between

researchers and the ultimate users of research findings—the policymakers, providers, administrators, and consumers. The Panel recommends that these concerns be addressed at two levels: increased funding of research to improve the design and effectiveness of existing dissemination mechanisms and the establishment of an NIMH dissemination program specifically for mental health services research.

There has been little recent research in the mental health field regarding the effectiveness of existing or innovative dissemination mechanisms. However, the critical importance of achieving timely and effective transfer of research information requires that special attention be given to research on effective dissemination. There are many options to consider: information retrieval systems, newsletters, national meetings, consensus conferences, continuing education, and journals, among others. In addition, there are questions regarding factors that affect individual motivation to seek out and use new information, and which can be potentially influenced to encourage its use. This area of research needs to be addressed within the mental health field, building on what is known about effective dissemination in other fields.

The timely dissemination of research findings using techniques designed to meet the interests and needs of different users requires a programmatic effort. NIMH has a variety of dissemination mechanisms, but it is not evident that these are meeting the special needs of clinical and mental health services research to assess their effectiveness. This review should lead to specific recommendations for the mission, organization, and funding of a program for dissemination of new research to the broad range of users.

Summary of Recommendations

The Service Systems Research Panel has found that opportunities exist now, as at no time in the recent past, to make rapid and significant advances in the understanding of policy alternatives as well as in the capability to manage the mental health service system effectively, by making substantial new investments in services research. The potential benefits to the Nation extend beyond meeting its commitment to care for the needy; the proposed research could ensure that the productive potential of the mentally disabled is achieved, that unnecessary health care costs are avoided, and that those with severe mental illness have the opportunity to take an active role in improving their lives.

The proposed goal for the research program is to make possible a national community-based system of care for severely mentally ill people that can intervene early to effectively and efficiently apply proven treatments to reduce symptoms and disabilities associated with severe mental illness. This system would have to be accessible to all, provide comprehensive services, and use treatments that have been demonstrated to provide the best patient outcomes possible. The recommendations for research listed below have been given the highest priority by the Panel; many other important issues are identified in the other sections of this report.

Who are the severely mentally ill people in the community and elsewhere? What are their needs for care? What barriers do they face in gaining access to appropriate services? Answers to these questions begin to define who should be eligible for public services and how to ensure that those who need services get them. Two is-

ssues that merit special priority are as follows:

- Development of national recommendations on criteria to be used by Federal, State, and local systems to determine eligibility for publicly supported services. Criteria should be based on research findings and should be sensitive to the long-term service needs of mentally ill individuals, their changing disability status, and their potential for increasing levels of self-sufficiency and independence.

- Research about the preferences of severely mentally ill individuals and their families for service access and provider arrangements. Barriers to the use of appropriate services should be examined.

What treatment, rehabilitation, and support services are needed in the community? How should services be organized and provided to ensure the best client outcomes? The evaluation of organizational and financial models of care, both existing and new, in terms of impact on client outcomes and costs can provide important information to communities that are trying to improve their mental health systems. Three issues deserve priority:

- Evaluations of local service systems and program models to determine which are most effective in ensuring the coordination and integration of mental health services and non-mental-health services to severely mentally ill people. How well these models meet the needs of special population groups (e.g., minorities, alcohol and other drug abusers, the homeless, women, and patients refractory to treatment) needs to be determined.

- Periodic national surveys of mentally ill people and their families to examine trends in the use of mental health services, sources of care, insur-

ance coverage, and attitudes toward mental health care.

- Development and testing of instruments for measuring client mental health status, problem severity, and functional status outcomes.

How should organizations providing financial support and services to the severely mentally ill population at national, State, and local levels be coordinated and integrated to best meet client needs? Community systems of care are subject to changing State and national policies; research should provide the information necessary to ensure that these policies are supportive of community systems and that community systems have the management tools to make effective use of new policies. Four issues merit priority:

- Multidisciplinary studies of the relationship of the organization of State and local governments to the effectiveness of their public mental health service systems, with special consideration of accessibility of community services, integration of hospital and community care, coordination of treatment, rehabilitation and social services, adequacy of housing and income support, integration of private providers into the public system, and the cost of the public system.
- Timely evaluation of innovations in State and local policies, laws, and system organization. Evaluations should provide information that will aid others in adopting and improving the innovation.
- Studies on the impact of alternative organizational and contractual relationships between public agencies and private providers and their effects on outcomes of care for people who are severely mentally ill.
- Research to improve methods to measure and evaluate service system performance, and methods for gov-

ernment regulation and public monitoring of services.

How can services be financed to ensure access to needed care? To what extent should financing systems include income support and housing support in addition to payment for health and mental health services? Financing mechanisms are the key to making resources (i.e., services, income, housing) available and encouraging efficient use of them. Three issues merit priority:

- Studies to evaluate the extent to which specific public financing mechanisms provide appropriate incentives for achieving public policy goals.
- Research to determine which types of organizational and financing arrangements lead to the best coordination of services to mentally ill individuals and at the same time encourage efficiency.
- Research to determine how entitlement and income support mechanisms can be more effectively structured to ensure that minimum care requirements are met.

How can the legal system interact with the service system to ensure adequate care for severely mentally ill people? Many severely mentally ill individuals come into contact with the legal system, yet coordination between the legal and service systems appears to be minimal. Four issues merit priority:

- Research on individual and family perspectives about legal actions in which they might become involved or have been involved (e.g., guardianship, violation of the law), and examination of the effects of those actions on mentally ill individuals.
- Studies of the movement of severely mentally ill individuals between the criminal justice and men-

tal health systems and the relationship of such movement to type of treatment and criminal activity, and the appropriateness of assigning severely mentally ill people to the criminal justice system.

- Research into patient, family, and clinician perspectives on the role of outpatient commitment and other coercive strategies aimed at increasing patient compliance; assessment of the contribution of specific coercive strategies to changes in client outcomes.
- Studies to evaluate the effectiveness of using the law to promote coordinated care and adequate housing.

What can be done to reduce the stigma of mental illness and mental health care and increase community acceptance of mentally ill people? Although progress has been made, stigma remains a substantial barrier to seeking care and impedes service provision. Three issues merit priority:

- Research on the effectiveness of programs to improve community acceptance of mentally ill people, assist mentally ill individuals in accepting their need for help, and reduce stigmatizing behavior among professionals.
- Efforts to generate and rigorously test potentially effective strategies to improve community acceptance of mentally ill individuals and community readiness to support public care for them and their families.
- Development of information to respond to myths about the incidence of violent and criminal behavior among the mentally ill population.

What are the personnel requirements to provide adequate care for severely mentally ill people? Well-trained and highly motivated people are critical to the development and operation of an effective mental health system. Four issues merit priority:

- Research into strategies whereby the public mental health sector can better attract and motivate staff.

- Efforts to assess the types of continuing training required to ensure that the work force has up-to-date skills.

- Innovative models for improving collaboration between the public mental health sector and universities to provide better professional training.

- Research and demonstrations to evaluate programs for redeploying trained mental health personnel to meet the new needs for care in different settings.

What data sources are required to provide timely information for public policymakers and to accelerate progress in mental health services research? Timely and reliable information gathering and dissemination are central to effective public policymaking and providing a basis for new research. Three issues merit priority:

- Efforts to strengthen the NIMH National Reporting Program and promote the recommendations of the Panel on the NIMH National Reporting System.

- The development and dissemination of timely data reports on trends in mental health services to policymakers, researchers, and providers.

- Research using data collected under the National Reporting System for program evaluation and policy analysis.

The Federal investment through NIMH in systems and services research needs to be substantially increased to develop the information needed by Federal and State policymakers and by the managers of programs and providers for services to severely mentally ill people. The Federal investment in fiscal year 1990 came to \$24.9 million. (Service sys-

tems research \$7.3 million, research demonstrations \$12.4 million, research centers [excluding clinical research] \$4.5 million, and State capacity \$0.7 million.) It is recommended that this amount be increased to \$50 million in fiscal year 1993 and further increased in each of the succeeding 5 years. Only with this level of investment will it be possible to ensure that the mental health system will have the information it needs to effectively meet the needs of severely mentally ill people and to control costs.

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