

V. Service Delivery

Service Delivery and the Treatment System

General Principles

1. All patients should have access to a comprehensive continuum of services that provides continuity of care, including physical care.
2. All patients in longer-term programs should have a written care plan that should be available to family members, with patients' permission, when possible.
3. The continuum of care should include 24-hour crisis services, acute inpatient care in a medical setting, nonmedical crisis stabilization, acute day hospital treatment, community-based rehabilitation, integrated addiction services, comprehensive services for early psychosis, assertive community treatment programs, consumer-driven services such as club houses, and supported employment programs.
4. All patients should have access to a continuum of housing support, including long-term hospital care, supportive housing in the community, independent housing with supports, or affordable general housing.
5. Services should be accessible in the patients' own language and in their own area.

This section addresses the broader role of mental health services in the provision of care for people with schizophrenia. Whereas the 3 earlier sections focused on assessing and treating individuals with schizophrenia, this section deals with the range of mental health services needed for these individuals. This is a relatively new area for a clinical practice guideline; however, its inclusion within an evidence-based guideline is justified by the increasing body of knowledge in this area. The knowledge comes from the expanding discipline of health services research, which has been defined as follows. "Health Services Research is usually concerned with the relationships between need, demand, supply, use and outcome of health services. The aim of the research is evaluation particularly in terms of structure, process, output and outcome" (222).

Despite the robust evidence for the efficacy of many pharmacologic (223–225) and psychosocial interventions, a relatively limited proportion of schizophrenia patients receive optimum care, particularly for psychosocial treatment (226). The potential benefits of psychosocial intervention are minimized by lack of access to, and availability of, such treatments. Hence, the systemic context within which treatment is delivered acquires prime importance.

The very nature of the needs associated with service delivery and the variations seen in the extent to which aspects of service delivery are available in different jurisdictions means that the standard RCT levels of evidence may be either unavailable or not applicable for practical and ethical reasons. The limitations of the RCT for evaluating what have been called socially complex services have been outlined (227). Socially complex services are characterized by complex, diverse, and nonstandardized staffing arrangements; ambiguous protocols; hard-to-define study samples and unevenly motivated subjects; and dependence on broader social environments. There are difficulties in ensuring precise protocols, equivalent groups (tied to a meaningful target population) and neutral and equivalent trial environments under real-world conditions.

Several service delivery attributes are key to the success of services designed for a whole population. These attributes include, but are not limited to, access, availability, and continuity of care. Chronic disease management systems provide a population-based approach to organizing such services. Five components have been described: the use of evidence-based, planned care; reorganization of practice systems and provider roles; improved patient self-management support; increased access to expertise; and greater availability of clinical information. The challenge is to organize these components into an integrated system of chronic illness care (228).

Access

Access to adequate treatment is especially important at the time of the first episode of the illness. Such treatment is often

delayed for an average of 1 to 2 years (229). Such delay is not only encountered in the process of seeking help; it is more importantly associated with further delays within the health care system (both primary and mental health care) (230–232).

Availability

Most jurisdictions not only have waiting periods for access to treatment, they also lack available effective treatments. This is related to lack of resources, poor allocation of resources, and lack of adequately trained staff to deliver interventions, especially psychosocial treatments. In a Canadian survey of adherence to schizophrenia practice guidelines, most psychiatrists reported that less than one-half of their schizophrenia patients received appropriate psychosocial therapies (233). For many patients, these services did not exist.

Coordination and Continuity of Care

While most patients spend most of their time in the community, some require periodic hospitalizations. Therefore, it is important that hospital care and community care be well coordinated. Attention to patients' physical or medical needs also needs to be coordinated with primary health care. Hence, every patient should have a designated family physician whom he or she visits regularly, and any change in treatment of the primary psychiatric disorders or of other medical disorders should be communicated to all involved professionals.

Patients must not be allowed to fall between various components of the treatment system. The separation of addiction services from other mental health services was formerly frequent in Canada, although this is changing. The available evidence supports the integration of mental health treatment and addictions treatment in the same program. Patients who attend outpatient clinics and do not have ongoing needs for case management should be monitored regularly. Patients treated in outpatient clinics should be reminded of their upcoming appointments, preferably through a written or oral prompt (234). Those whose needs require them to engage in a case-management program should retain contact with the same treatment team, even if the individual case manager moves.

Service Delivery Components

Treatment for schizophrenia is delivered in multiple settings across the continuum of care. This continuum includes both long- and short-stay inpatient units, day clinics or hospitals, outpatient and ambulatory clinics, outreach programs such as assertive community treatment programs, and nonclinical community services. There is considerable variation among and also within regions in the components of each service. A brief description of each component's role and its importance in providing adequate services follows.

Early Psychosis Treatment Services

In some jurisdictions, there are specialized treatment programs available for patients presenting with a first episode of psychosis (235–237). Early-intervention services are being established on the basis of 3 main premises. First, there is a critical, albeit narrow, window of opportunity for influencing the course of psychotic disorders following their onset. Second, adequate, phase-specific treatment delivered within a comprehensive model of care is more likely to improve outcome by reducing the negative consequences of the illness (238,239). Third, delay in treating psychosis is related negatively to outcome (240). Emerging evidence suggests that increasing patient retention in treatment as a result of improved engagement is an important benefit of comprehensive early psychosis treatment services (241). The evidence for the impact of early psychosis treatment services on reducing the delays encountered in treatment is also being investigated and shows modest success (242,243). The evidence for the impact on treatment outcomes is only just emerging but appears to be promising, although still limited (65,241,244) and perhaps even equivocal (245).

Acute Inpatient Care

Despite some alternatives such as home treatment, crisis houses, and acute day hospitals, all jurisdictions still require several acute care beds for treatment of acute episodes of the illness that cannot be managed in other settings. The extent to which such beds will be used, and the number required, will depend on available alternatives and on local social and cultural characteristics (246). Patients will still require admission to hospital in an acute care bed, even if such alternatives are available. The indications for admission include the need to manage high levels of risk for suicide or assaultive behaviour and the need for urgent medical assessment if the patient suffers from severe and comorbid medical conditions.

Episodes of illness requiring treatment in an acute care setting almost invariably occur in the context of crises and therefore are likely to provoke fear and anxiety in the patient and his or her family. Consequently, provision of acute inpatient care requires the most humane and least institutionalized approach, and one that is also culturally sensitive. Such an approach requires taking into consideration patients' and families' needs and acceptance (247,248).

Day Hospitals

Day hospitals have been developed for 3 main purposes: as alternatives to acute inpatient care, as alternatives to outpatient care, and as sources of vocational rehabilitation. Two published, systematic reviews have examined these 3 forms of "day care" (249,250). As alternatives to inpatient care, acute day hospitals were found to be suitable for between one-quarter and one-third of inpatients. For patients who managed

to attend day hospital, symptoms improved more quickly than for those who were admitted as inpatients. In addition, the costs were lower. Day hospital patients used fewer inpatient days than the inpatient group who had not been previously admitted to a day hospital; there were no differences in readmission between the 2 groups. This form of acute day hospital care was seen as a useful service in health systems with limited access to acute inpatient services.

In comparison with outpatient care, day hospital treatment programs offered greater symptom improvement than outpatient clinic care but no additional benefit in clinical or social outcome. When rehabilitation was the goal of day programs, they were found to be less effective than supportive employment programs in getting people back to work.

Home-Based Acute Care

Home-based acute care has been recommended as a preferred treatment where feasible from a risk perspective. The evidence suggests that there are some modest advantages in favour of home-based care that tend to be lost with time. However, patients and relatives report greater satisfaction with home-based care, even after 3 to 4 years (251–254).

Mobile Crisis Service

Mobile crisis services usually comprise a mobile, specialized, multidisciplinary team that provides assessment, crisis intervention, and appropriate referral to ongoing care. The team does not typically initiate and provide ongoing home treatment. Such services appear to be effective in providing services in the least restrictive environment and in avoiding hospitalization (255).

Outpatient and Community Mental Health Services

It is generally agreed that most services should be provided in outpatient settings while the patients are living in the community. However, there is little evidence about what should be the key components of outpatient care. It is generally agreed that active follow-up by a case manager and monitoring of treatment adherence and patient outcomes should be included in what is provided (256). Community mental health teams are regarded as basic building blocks of a community-based mental health service (246). Generic, community-based, multidisciplinary teams have the advantages of improving engagement with services, increasing user satisfaction, increasing met needs, and improving treatment adherence (257–259).

Case Management

Case management is designed to ensure that patients receive individual and tailored treatment programs that meet their needs. Case management has been advocated because patients with schizophrenia may have cognitive, emotional, and organizational deficits, along with poor adherence to treatment

and rehabilitation. The goal of case management is to assist patients to live more independently in the least restrictive setting, according to their needs and capacities.

A comprehensive review has reported 6 models of case management with overlapping characteristics: clinical (260), brokerage, assertive community treatment (ACT), intensive case management (ICM), strengths (261), and rehabilitation models (262,263). In everyday practice, the type of case management is not clear-cut, because most case managers use a blend of brokerage and clinical case management (263).

Assertive Community Treatment. ACT combines a team-based and outreach approach to case management. ACT teams have a high staff-to-patient ratio (that is, 1:10) and some teams are on call 24 hours, 7 days weekly. Staff members operate in both clinical settings and patients' community environments. They provide a specialized approach to treatment of patients with psychotic disorders who are more clearly disabled (264). ACT programs are now available in most jurisdictions and have been shown to be effective in reducing hospital readmission rates and improving housing and occupational functioning, as well as quality of life and service satisfaction (265). These programs do not lead to any differential improvement in clinical state and do not change the overall costs of care (266,267).

A criticism of the ACT approach is that it may reduce self-determination by supporting "treatment guardianship." Reducing or withdrawing from ACT programs is an important and controversial issue. This area of ACT interventions requires further research to identify the patient characteristics that predict a favourable outcome following withdrawal, as well as the critical components that need to be in place for transfers to be successful.

Intensive Case Management. The ICM model was designed to meet the needs of high service users who were not being adequately engaged by brokerage and clinical case management practices (268). Similar to the ACT model, ICM employs a low patient-to-staff ratio, provides assertive outreach in the community, and assists with daily living skills. One difference between ICM and ACT models is that caseloads are not shared between clinicians in ICM. However, researchers refer quite often in the literature to ICM models as having shared caseloads. Mueser and others prefer to include ICM studies with studies of ACT programs (263).

Case Management Outcome Results. Research results on case management outcomes are mixed. One Cochrane review (269) found that, in comparison with standard care, case management increased hospital admissions and length of stay, which resulted in increased costs. However, case management increased the number of patients in contact with service and, hence, with medication. The general practice is to

use case management for patients who have complex service needs. ACT and ICM are more often used for hard-to-engage or treatment-resistant patients. In a recent study assessing the satisfaction with standard or intensive case management, patients were equally satisfied by both approaches (270).

Residential Care

A continuum of housing support is required for persons with schizophrenia. An appropriate continuum will not only provide the most choice for individuals with schizophrenia, it will also support early discharge from hospital. Estimates exist of residential needs for all patients with severe and persistent mental illness when they are not acutely ill, based on an overall prevalence of 171 patients per 100 000 population. The estimated residential care needs (including hospitalization) are as follows: 20/100 000 for long-stay hospital units, 20/100 000 for nursing homes, 40/100 000 for group homes, 40/100 000 for private hostels or foster families, and 51/100 000 for supervised apartments (271). There is

evidence that individuals with schizophrenia have an increasing desire to manage living situations that are as independent as possible (272) and to choose options that avoid the more institutional feel of shared accommodation. Evidence from one RCT found that an integrated housing program (with on-site support staff) was found to be superior to mobile team supports in providing housing stability for those patients who are at risk for homelessness (273). Family members may voice preferences that their relative live in housing with more supervision (274). However, the best housing outcome occurs when there is a match between patients' perspectives and those of their families.

Patients with long-standing illness who have severe and long-term disabilities fare better when treated in community-based residential care facilities (for example, group homes), compared with those treated in large institutions (275–277). Patients with less severe disabilities but who are unable to live independently should be housed in community-based housing with graded supervision depending on their needs.

Table 8 Recommendations		
Recommendations	Evidence	Evidence Level
Admission to acute care inpatient beds		
Acute inpatient care is indicated for patients at high risk for suicide or assaultive behaviour and for those with complex psychiatric and medical comorbidities.	Randomized controlled studies of alternatives to inpatient care consistently demonstrate a need for inpatient care.	B
Services for patients presenting with a first episode of psychosis should be available on an urgent basis.	Naturalistic studies demonstrate negative clinical outcomes prior to treatment; studies show correlations between duration of untreated psychosis and poor longer-term outcomes.	B
Continuous care should be available in a comprehensive treatment program for up to 3 years following the first episode.	Consistent application of evidenced-based care including pharmacotherapy, family therapy, and patient education yields superior outcomes.	A
Specialized treatment services should be available for patients with a first episode of psychosis.	Preliminary randomized controlled studies have provided some evidence of superior outcomes for specialized services, in addition to evidence from uncontrolled studies.	B to C
ACT programs should be available to selected patients who have a history of repeated admissions, are hard to engage in usual clinical settings or are homeless.	Numerous RCTs have demonstrated some benefits from ACTs.	A
Case management		
Case management service should be available for those patients who have difficulty accessing the full range of services in the community.	Case management and ACTs can reduce the symptoms and the number and length of psychiatric hospitalizations.	B
Day hospitals		
Acute day hospital care is an alternative to full-time hospitalization for acute crises and as a step-up service for those who are doing poorly in outpatient care.	Day hospital admissions result in improved symptoms and treatment satisfaction; day hospitals cost less than inpatient care.	B

