Schizophrenia in adults: Psychosocial management

AUTHOR: Juan Bustillo, MD
SECTION EDITOR: Stephen Marder, MD
DEPUTY EDITOR: Michael Friedman, MD

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INTRODUCTION

Schizophrenia is a psychiatric disorder involving chronic or recurrent psychosis. It is commonly associated with impairments in social and occupational functioning [1]. It is among the most disabling and economically catastrophic medical disorders, ranked by the World Health Organization as one of the top 10 illnesses contributing to the global burden of disease [2].

Antipsychotic medications are first-line treatment for schizophrenia. They have been shown in clinical trials to be effective in reducing symptoms and behaviors associated with the disorder. However, most patients with schizophrenia experience disabling impairment even after benefiting from antipsychotics, including positive and negative symptoms, cognitive deficits, poor social functioning, and episodes of acute symptomatic relapse. Empirically validated psychosocial interventions, added to antipsychotic medication, target one or more of these deficit areas.

This topic addresses psychosocial interventions for schizophrenia. Psychosocial interventions for severe mental illness (not limited to schizophrenia), including assertive community treatment and supported employment, are discussed separately. The epidemiology, pathogenesis, clinical presentation, clinical manifestations, course, diagnosis and pharmacotherapy for schizophrenia are also discussed separately. Common comorbid presentations of schizophrenia are also discussed separately.

- (See "Schizophrenia in adults: Epidemiology and pathogenesis".)
- (See "Schizophrenia in adults: Clinical features, assessment, and diagnosis".)

- (See "Depression in schizophrenia".)
- (See "Anxiety in schizophrenia".)
- (See "Co-occurring schizophrenia and substance use disorder: Epidemiology, pathogenesis, clinical manifestations, course, assessment and diagnosis".)
- (See "Schizophrenia in adults: Maintenance therapy and side effect management".)
- (See "Schizophrenia in adults: Pharmacotherapy with long-acting injectable antipsychotic medication".)

TYPES OF PSYCHOSOCIAL INTERVENTIONS

Following treatment with antipsychotic medication, which is often only partially effective, most individuals with schizophrenia would benefit from systematic rehabilitation. This may include family interventions, social skills training, and/or cognitive-behavioral therapy (CBT), which are discussed in this topic, as well as assertive community treatment and supported employment, which are discussed separately. (See "Assertive community treatment for patients with severe mental illness" and "Supported employment for patients with severe mental illness".)

Psychosocial interventions are indicated for patients with schizophrenia and the characteristics that follow as an adjunct to antipsychotic medication:

- **Family psychoeducational intervention** – For patients who have had a recent psychotic relapse and have significant ongoing contact with family members, we recommend psychoeducational intervention with the patient and family members. (See 'Family-based Interventions' below.)

- **Social skills training** – For individuals with schizophrenia who have deficits in skills needed for everyday activities, we recommend social skills training. (See 'Social skills training' below.)

- **CBT** – For individuals who experience persistent delusions or hallucinations despite adequate trials of antipsychotic medication, we recommend treatment with CBT. (See 'Cognitive-behavioral therapy' below.)

Despite evidence of their effectiveness from randomized trials, the availability of these interventions varies widely, even in developed countries, as does the availability of clinicians trained to provide them.

FAMILY-BASED INTERVENTIONS

The goals of a family intervention for schizophrenia are to:

- Prevent relapse
- Promote medication adherence
- Promote a supportive family environment
- Reduce distress among family members
- Develop an appropriate level of patient autonomy

Theoretical foundation — The level of continuous stress between patients with schizophrenia and their environment has been found to be a robust predictor of relapse [3]. This finding began with the study of "expressed emotion" (EE), an empirically developed concept characterizing families who are rated highly on hostile, critical or over-involved comments. Patients with schizophrenia who had extensive face-to-face contact with "high EE" family members have been found to have a higher risk of relapse, compared with patients with low-EE families, following hospitalization with effective pharmacotherapy. The relationship between high EE and relapse is not specific to schizophrenia, but has been observed in other chronic psychiatric and nonpsychiatric illnesses [4].

Indications — For patients with schizophrenia who have had a recent psychotic relapse and have significant ongoing contact with family members, including relatives and significant others, we recommend the patient and family members receive a family intervention for six to nine months as augmentation to treatment with antipsychotic medication.

For patients with schizophrenia who have experienced multiple psychotic relapses and reside in a particularly stressful family environment, a more intensive problem-solving family therapy may be helpful [5], although the only controlled trial of the intervention was negative. (See 'Administration' below and 'Efficacy' below.)

Interventions

Family intervention — A family intervention for schizophrenia seeks to establish a collaborative process involving the patient, family and clinician. Patients and family members receive education about the nature, course, and treatment of schizophrenia [5], including the following objectives:

- Present schizophrenia as a brain disorder with genetic, perinatal, and environmental risk factors. (See "Schizophrenia in adults: Epidemiology and pathogenesis", section on 'Pathogenesis'.)

- Correct the erroneous notion that poor parenting causes schizophrenia. Parents left to wonder, "What could I have done wrong to have caused the illness?", need help proceeding from guilt and blame to acceptance and support.

- Appeal to the "common sense" of family members that persons with a chronic, relapsing illness tend to experience exacerbations in response to continuous stress.

- Identify and explain common manifestations of schizophrenia, such as avolition and asociality, which family members may otherwise perceive as "laziness."

- Identify potential targets for further intervention (such as social skills deficits) and establish reasonable expectations for improvement. (See 'Social skills training' below.)

- Explain that delusions, talking to oneself, and other dramatic manifestations of schizophrenia, which a family member might see as "craziness," are, in fact, distressing symptoms of the disorder that are likely to improve with treatment. (See 'Cognitive-behavioral therapy' below and "Schizophrenia in adults: Maintenance therapy and side effect management".)

- Teach how to recognize early warning signs of relapse and develop a plan in collaboration with the patient and family members for what to do when signs become apparent.

- Explain the importance of medication adherence. Emphasize that cognitively impaired individuals may present with overt poor-compliance while patients with limited insight may have covert compliance issues.

- Provide education about the high comorbidity of substance use disorder.

- Foster optimism and actively discourage the development of nihilism. Schizophrenia is a heterogeneous disorder that is not limited to a uniform outcome of progressive deterioration. For the majority of patients, integrated, comprehensive treatment, including pharmacologic and psychosocial interventions, provided early in the illness can significantly improve functioning and as many as 20 percent can be expected to have a full recovery [6]. (See "Schizophrenia in adults: Clinical features, assessment, and diagnosis", section on 'Course of illness'.)

Problem-solving family therapy — For patients with multiple relapses of schizophrenia who reside in a particularly stressful family environment, a more intensive, problem-solving family therapy has been developed [7,8]. Components of this approach include:

- Identify critical, hostile, and over-involved parent-patient interactions, explaining that these interactions are associated with worse outcomes, but taking care to avoid misunderstandings that they are a cause of the disorder.

- Help families and patients to avoid adverse interactions. An example is reframing a family member's critical assessment of a patient who will not clean up after themselves, from "passivity" or "laziness" to "avolition" (ie, a lack of motivation for goal directed behavior), a common symptom of schizophrenia.

- Assign "homework," for example, to encourage the patient to implement simple tasks, while encouraging parents to refrain from being critical or prematurely involved.

- Stressful family dynamics can often be best addressed by finding outside rehabilitative activities or supported employment for the patient. (See 'Social skills training' below and "Supported employment for patients with severe mental illness".)

- An isolated and distressed parent or caregiver can be encouraged to develop hobbies outside of the house without concern that they need to be monitoring the patient at home. This can support the development of a schedule for training for the patient in more independent living skills. A minority of patients who need constant supervision due to safety issues may require attendance at a specialized daycare program.

Administration — A family psychosocial intervention for schizophrenia is typically provided in monthly sessions, which should be continued for six to nine months [9]. These sessions may be for an individual family or for groups of families. They should be in addition to the patient's individual visits with a psychiatrist and other clinicians.

Problem-solving therapy is usually more intensive than a typical family intervention, requiring weekly or biweekly visits for the initial two to three months, sometimes in the home [5]. After this period, typically, a monthly schedule of more supportive maintenance sessions can be adopted.

Efficacy

Family intervention — A meta-analysis of 2981 individuals with schizophrenia or schizoaffective disorder in 32 randomized trials found that a family intervention of at least five sessions reduced the frequency of relapse compared with a control condition (relative risk 0.55, CI 0.5-0.6; number need to treat = 7) [10]. Reductions were also seen in hospital admissions and medication nonadherence. There is less support from clinical trials for shorter family

interventions and family interventions for stable individuals who had not had a recent exacerbation of illness.

Problem-solving family therapy — In the largest randomized trial of problem-solving family therapy for individuals with chronic schizophrenia, 313 patients were assigned to two years of treatment with one of three antipsychotic dosing strategies and either a problem-solving family therapy or a monthly family psychoeducational group. [5]. At treatment end, differences between family intervention treatment groups were not seen.

In the longest and largest study in first-episode schizophrenia, subjects were randomly assigned to five years of treatment with either sustained specialist treatment (n = 65; pharmacotherapy plus individual problem-solving), sustained specialist treatment plus additional parent groups focused on psychoeducation and problem-solving (n = 68), or treatment as usual (n = 65; pharmacotherapy plus general support) [11]. Primary outcomes (eg, rate of relapse) and secondary outcomes (eg, suicide or level of social functioning) were similar between groups. Rates of relapse were low (50 percent) after five years, suggesting that treatment as usual was quite effective. In our clinical experience, we have found that problem-solving family therapy prevents rehospitalization in patients with multiple relapses of schizophrenia who reside in a particularly stressful family environment.

SOCIAL SKILLS TRAINING

Deficits in areas such as social interactions and independent living skills often interfere with the ability of people with schizophrenia to perform everyday activities and to function in the community. As examples, individuals may have difficulties with personal care, cooking, laundry, paying bills, use of public transportation, leisure activities, developing social networks, and dating.

Deficits in these skills are related to the negative symptoms (or "deficit symptoms") of schizophrenia. Negative symptoms rarely respond to pharmacotherapy alone [12], but have been found to respond to social skills training as augmentation of antipsychotic medications [13].

Social skills training for individuals with schizophrenia consists of behavioral training focused on specific situations, problems, and activities. The ultimate goal of this training is the generalization of learned skills to community-based activities with improved functioning.

Theoretical foundation — Two programs stemming from distinct conceptual models have been developed to address social skills deficits of people with schizophrenia, including:

- Basic social skills training utilizes principles from learning theory to improve social functioning by working with patients to remediate problems in activities of daily living, leisure, relationships, or employment [14].

- The social problem-solving model focuses on improving impairments in information processing that are assumed to be the cause of deficits in social skills [15].

Indications — We recommend that individuals with schizophrenia who have deficits in skills needed for everyday activities receive social skills training. If there is a choice among social skills training models available, a reasonable approach is to start with the basic model, and if the patient does not experience an adequate response, advance to the more complex problem-solving intervention. Selection may be constrained by the local availability of only one model.

Intervention — There are two forms of social skills training: the basic model and the social problem-solving model. Although the field has evolved to more integrated, manualized, step-by-step guides [16], we briefly describe both models to illustrate the evolution of this therapeutic approach.

Basic model — In the basic model, complex social repertoires (such as conversation with a peer) are broken down into simpler steps, which can be taught more effectively, practiced in role playing exercises, and applied in natural settings.

While the content of skills training programs may vary with the program or with the needs of individual patients, most include an emphasis on interpersonal skills [14]. Basic training techniques include behaviorally based instruction, role modeling, rehearsal, corrective feedback, and positive reinforcement. Typical steps include:

- Initial training may start with conversation between therapist and patient with immediate feedback to the patient on specific, problematic interpersonal behaviors.

- The conversation may be videotaped; the therapist would then review the tape with the patient, pointing out problematic behaviors and suggesting desired alternatives.

- After several sessions with the same therapist, the patient may be encouraged to interact with other staff and patients.

- Eventually these skills may be practiced in the patient's own environment to implement the learned skills more generally. Programs that start as clinic-based can be adapted to targeted areas such as the patient's work place and social settings.

- As examples:

- A person with affective flattening, poverty of speech, and poor social interaction is encouraged to role play with the therapist. They start a conversation and the therapist provides feedback to foster increased eye-contact, and appropriate hand gesticulation, nodding, and asking follow-up questions.

- A paranoid person, with intense responses to others and intimidating eye contact, is encouraged to look down at times, pause before responding, and lower their voice.

Social problem-solving model — The social problem-solving model targets behavioral or symptom domains needing changes. The module is based on a conceptualization of social problems in patients with schizophrenia as based, in part, on deficits in receiving, processing and sending skills [15]:

- Receiving skills refer to those necessary to appropriately identify social cues.

- Processing skills deal with the context-appropriate interpretation of information and the generation of the various potential responses.

- Sending skills correspond to the behaviors targeted by the basic skills model.

The patient is evaluated for problem behaviors and if present the patient is assigned to a relevant module addressing an area for improvement, including:

- Medication and symptom management
- Recreational activities
- Basic conversation
- Self-care

In each module, an emphasis is placed on learning receiving, processing and sending skills. Each module is taught, typically in a classroom setting. (See 'Administration' below.)

A refined version of this model, the social cognition skills training [17], focuses on addressing five different modules: 1) emotion processing, 2) social perception, 3) how emotions color our social interpretations, 4) understanding others' emotions, and 5) understanding others' intentions.

Administration — Social skills training is generally conducted several times a week (either in training sessions or as patient practice) for three to six months. After the completion of the program, "booster" sessions are used in order to maintain gains and facilitate further generalization. Social skills training can be administered as monotherapy or in combination with

cognitive psychotherapeutic approaches in the context of cognitive remediation or cognitive-behavioral therapy [13].

Clinicians typically need specific training to effectively deliver social-skills training to patients. However, the availability of training manuals, instructional videos, and patient workbooks can aid the implementation of these programs in various community settings [16].

Efficacy — Meta-analyses of clinical trials have found social skills training to be an effective intervention for patients with schizophrenia:

- A 2008 meta-analysis of 22 randomized trials compared social skills training (irrespective of the model) with other interventions or treatment as usual [13]. Analyses of trials that included the measures found that social skills training led to improvement in interpersonal and everyday life skills (a moderate effect size of 0.52; 95% CI 0.34-0.71), community functioning, and negative symptoms. Evidence is weak or mixed in support of social skills training for other symptoms of schizophrenia, including relapse.

- A 2014 meta-analysis of 48 controlled trials of psychosocial interventions for schizophrenia [18]; social skills training was found to result in modest reductions in negative symptoms (g = 0.27) compared with other interventions or treatment as usual.

A systematic review found evidence of skills retention for up to one year following training; more studies for longer periods are needed [9]. Though there has been a general perception that programs that include the practice of trained skills in the community are more effective than those that are exclusively clinic based and rely on homework assignments for generalization [9], this view is no longer firmly supported. In a 2017 randomized clinical trial with 139 outpatients with psychotic disorders, a social cognition skills training program was not more effective when delivered in a community compared with when delivered in a clinic setting [17].

There are no trials comparing the effectiveness of different models of social skills training.

COGNITIVE REMEDIATION

Cognitive remediation attempts to improve the learning process by targeting more fundamental cognitive impairments, such as attention or planning. The assumption is that if the underlying cognitive impairment can be improved initially, this learning will support more complex cognitive processes, and the patient can then benefit from social skills training, generalizing from its lessons to improve interactions in the community.

Indications — We recommend that individuals with schizophrenia who experience persistent subjective cognitive deficits (difficulty concentrating or remembering) coupled with scholastic and/or vocational difficulties receive cognitive remediation as an adjunct to antipsychotic medication.

Administration — This approach begins with having the patient repeatedly practice a simple information processing task on a computer, such as speed of response to various stimuli to improve vigilance [19,20]. Once the person reaches a specified performance threshold, they will move on to a more complex computer-based task, such as a test of working memory. Eventually, other higher-order tasks as such planning and social recognition are addressed. Posit Science is a self-contained computer software program for providing cognitive remediation in an outpatient treatment setting or to be used by a patient at home [21].

Once these cognitive skills have improved to an adequate level, the person participates in one of the more traditional social-skills training approaches, such as the basic model or the social problem-solving model. (See 'Social skills training' above.)

Efficacy — A 2011 meta-analysis of 2104 participants from 40 clinical trials (each of which studied samples comprised of at least 70 percent patients with schizophrenia, and otherwise patients with other serious mental illnesses) found cognitive remediation for persons with schizophrenia led to an overall moderate, positive effect with an effect size of 0.45 (95% CI 0.31-0.59). Analyses of trials including these measures found moderate improvements in global cognition (effect size of 0.45; CI 0.31-0.59) and functioning (effect size of 0.37; CI 0.11-0.635) compared with other interventions or to a passive control condition [20]. Interventions that integrated cognitive remediation with treatment based on the social problem-solving model have shown evidence of efficacy with some evidence for generalization to community settings. A 2014 meta-analysis comparing cognitive remediation with other structured psychosocial interventions found no advantages for positive or negative symptoms [18].

COGNITIVE-BEHAVIORAL THERAPY

Cognitive-behavioral therapy (CBT) for schizophrenia combines cognitive approaches with social skills training, a behavioral intervention. (See 'Social skills training' above.)

CBT is used to treat medication-resistant psychosis in patients with schizophrenia. Its principal aims are to reduce the intensity of delusions and hallucinations (and related distress) and to promote active participation of the individuals in reducing their risk of relapse and their social

disability. Other target symptoms of CBT include the patient's preoccupation with the delusions and hallucinations, and the impact of symptoms on their behavior.

Theoretical foundation — CBT for schizophrenia presumes that a patient with the disorder can, with the help of a therapist, engage in a logical examination of maladaptive aspects of their symptoms. Despite active psychosis, most patients with schizophrenia have the verbal and cognitive capacities to participate in CBT. CBT begins with the patient's interpretation of symptoms, from which the patient and therapist work collaboratively to develop more rational and adaptive behaviors.

Indications — People with schizophrenia often have some degree of persistent psychosis even when pharmacotherapy has been optimized. We recommend that patients who experience persistent delusions or hallucinations despite adequate trials of antipsychotic medication receive adjunctive CBT. Adequate trials of antipsychotics include use of clozapine for treatment-resistant psychosis, though some patients refuse clozapine due to the risk of agranulocytosis or the inconvenience of repeated blood tests for monitoring. (See "Schizophrenia in adults: Guidelines for prescribing clozapine" and "Second-generation antipsychotic medications: Pharmacology, administration, and side effects".)

Cognitive approaches — Cognitive approaches to patients with schizophrenia focus on exploring the subjective nature of their symptoms, gently challenging their underlying assumptions, and generating alternative interpretations [22].

The experience and meaning of the beliefs and percepts is initially explored, with the aim of constructing a model of events that makes sense to the individual based on their own personal history and perspective. This initial framework allows the therapist to know the language and context the individual uses to describe their symptoms.

Focused work can then begin on specific delusions and hallucinations by identifying them and collaboratively reviewing with the patient the presence or absence of evidence supporting their validity. This reality testing is followed by generating alternative responses to the delusions or hallucinations. As examples:

- A patient who reports hearing a derogatory voice telling her that she is worthless can be encouraged to look to see if someone is speaking, or to ask a companion if they hear anything. The patient and clinician then review the findings. Based on the absence of supportive evidence, they can then develop alternative interpretations of the voice, such as that the patient may have misinterpreted an inner experience or misattributed the sensation to an outside source.

- A patient with a delusional belief that he has a device implanted in his body, which is sending signals externally, can be encouraged to evaluate evidence for and against the possibility of its existence. As examples, the clinician might ask:
  - When was the device implanted?
  - Where were you at that time? Were you taken to a hospital with surgical facilities?
  - Was your family living with you? How could they have missed you being gone for that long?
  - Where was the device implanted? Can you show me a scar on the overlying skin?

In the absence of supporting evidence, the clinician and patient would generate alternative explanations for the symptoms, such as the patient's misinterpretation of a somatic sensation in the area of the implant or as a strong emotion (the feeling of worthlessness).

Patients who strongly resist reevaluating delusional beliefs can nevertheless be encouraged to identify ways to reduce related distress while continuing to hold the belief. In the prior example, this may involve learning to live with an implanted device or learning to control its signaling.

Administration — CBT can be provided in either an individual or group format. The frequency and duration of therapy can vary but typically consists of weekly or biweekly sessions for four to nine months. Patients who are able to reframe the delusions and hallucinations and develop some psychological distance from these experiences can then be seen less frequently using a more supportive psychotherapeutic approach.

Efficacy — CBT has been shown to be effective for stable long-standing, chronic schizophrenia [9,23]. As examples:

- In a meta-analysis of over 30 trials comparing CBT to other evidence-based psychosocial interventions for schizophrenia, CBT reduced symptoms of schizophrenia including reductions in positive, negative, and overall symptoms with small effect sizes (eg, -0.13 to -0.33) [23]. The analyses sought to control for sources of bias, including of outcome assessments. Earlier meta-analyses were mostly positive, some with larger effect sizes [18,24-26].
- A meta-analysis of 33 studies with a total of 1142 participants with schizophrenia and positive symptoms reported response rates to CBT by degree of improvement [27]. On average, 44.5 percent of patients reached a 20 percent (minimally improved), and 13.2 percent of the patients a 50 percent (much improved) reduction of overall symptoms.

Minimal and much improvement in positive symptoms were seen in 52.9 and 24.8 percent of patients, respectively.

- Another trial included 144 subjects with schizophrenia and reported that after 12 months, individuals treated with CBT, as compared with treatment as usual, had lower rates of hospitalization (15.3 versus 26.4) and relapse (18.1 versus 34.7 [28]). Additionally, greater improvements were noted for the CBT group as compared with control in positive symptoms, negative symptoms, global psychopathology, performance of independent functions and prosocial activities.

However, not all trials report clear differences between treatment with CBT plus usual treatment versus usual treatment only. For example:

- In a review of two trials including 184 subjects with psychosis (mainly schizophrenia) and violence, CBT plus standard care, as compared with standard care appeared to result in little difference in the frequency of physical violence at treatment end (odds ratio 1.04, 95% CI 0.53-2.00) or follow-up (relative risk 0.86, 95% CI 0.44-1.68) [29]. However, the certainty of the evidence in this review was noted to be very low and the conclusion was that more evidence is needed to firmly establish the effects.

The efficacy of CBT for schizophrenia has not been determined in patients with recent-onset schizophrenia or those experiencing an acute exacerbation of psychotic symptoms. The advantages of CBT may be most apparent for patients who have persistent positive symptoms after receiving adequate trials of different antipsychotic medications.

Metacognitive training — Metacognitive training (MCT) for psychosis is a variant of CBT for psychosis that focuses on cognitive biases thought to underlie delusions. By increasing awareness of cognitive biases (eg, jumping to conclusions, overconfidence in judgments), it aims to plant doubt into delusional beliefs. MCT involves a brief intervention (8 to 10 modules) available for either individual or group format. The treatment format is accessible for less experienced facilitators thus increasing its availability in communities.

In a meta-analysis including 40 trials and 1816 participants, individuals with schizophrenia spectrum and related psychotic disorders were treated with MCT for psychosis [30]. Treatment with MCT led to improvements in the following symptoms: a large effect size on delusions (g = 0.69, 95% CI 0.45-0.93), moderate effects on positive symptoms (g = 0.5, 95% CI 0.34-0.67) and functioning (g = 0.41, 95% CI 0.12-0.69), and small effects on hallucinations (g = 0.26, 95% CI 0.11-0.4) and negative symptoms (g = 0.23, 95% CI 0.1-0.37). These improvements were maintained for up to one year, indicating that MCT may merit further consideration as part of the standard treatment for individuals with persistent delusions.

An analysis of data from follow-up assessment after a clinical trial suggests that the effects of CBT persisted at least three years. The trial randomly assigned 150 patients with schizophrenia to receive MCT or neuropsychological training. After six months, the CBT group reported reduced delusional thinking [31]. Follow-up assessment found these effects to be sustained three years later [32].

MULTIMODAL INTERVENTIONS

Clinical trials in patients with first-episode psychosis have found that multimodal psychosocial interventions in combination with lower-dose, evidence-based pharmacotherapy have resulted in improved clinical outcomes compared with usual care [33-36].

As an example, a clinical trial found that implementation of a model multimodal program was feasible and effective in 34 nonacademic community clinics in the United States, funded largely by existing reimbursement mechanisms [37]. Four hundred and four patients with a first-psychotic episode were randomly assigned to receive usual care or treatment with evidence-based pharmacotherapy, family education about illness management, resilience-focused individual therapy, and supported employment and education. After two years of treatment, patients in the multimodal group had greater improvements in quality of life, participation in work and school, and psychotic symptoms compared with patients receiving usual care.

Such team-based, multimodal programs can be easier to implement in countries with a national health care system, due to their integrated staffing, financing, and delivery of care.

SOCIETY GUIDELINE LINKS

Links to society and government-sponsored guidelines from selected countries and regions around the world are provided separately. (See "Society guideline links: Psychotic disorders".)

INFORMATION FOR PATIENTS

UpToDate offers two types of patient education materials, "The Basics" and "Beyond the Basics." The Basics patient education pieces are written in plain language, at the 5th to 6th grade reading level, and they answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials. Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are written at the 10th to 12th grade reading

level and are best for patients who want in-depth information and are comfortable with some medical jargon.

Here are the patient education articles that are relevant to this topic. We encourage you to print or e-mail these topics to your patients. (You can also locate patient education articles on a variety of subjects by searching on "patient info" and the keyword(s) of interest.)

- Basics topics (see "Patient education: Schizophrenia (The Basics)" and "Patient education: Schizoaffective disorder (The Basics)")

SUMMARY AND RECOMMENDATIONS

- Family-based interventions, cognitive-behavioral therapy (CBT), and social-skills training are used to augment antipsychotic medication in the treatment of schizophrenia. Other psychosocial interventions used for schizophrenia and other severe mental illnesses include assertive community treatment and supported employment, which are described separately. (See 'Types of psychosocial interventions' above and "Assertive community treatment for patients with severe mental illness" and "Supported employment for patients with severe mental illness".)

- For individuals with schizophrenia who have had a recent psychotic relapse, have significant ongoing contact with family members and have not previously received the intervention, we recommend that the patient and family members receive a family psychoeducational intervention (**Grade 1B**). The intervention is typically provided in monthly sessions with an individual family or a group of families for six to nine months as augmentation to antipsychotic medication and other treatment. (See 'Family-based Interventions' above.)

- For individuals with schizophrenia who have experienced multiple psychotic relapses, and reside in a particularly stressful family environment, we suggest treatment with a more intensive problem-solving family therapy over other family psychoeducational interventions (**Grade 2C**). (See 'Problem-solving family therapy' above.)

- For individuals who experience persistent delusions or hallucinations despite adequate trials of antipsychotic medication, we recommend adjunctive treatment with CBT over medication alone (**Grade 1B**). (See 'Cognitive-behavioral therapy' above.)

  Adequate trials of antipsychotics include use of clozapine for treatment-resistant psychosis in patients willing to take the medication and undergo repeated blood testing. (See

"Schizophrenia in adults: Guidelines for prescribing clozapine" and "Schizophrenia in adults: Maintenance therapy and side effect management".)

- For individuals with schizophrenia who have deficits in skills needed for everyday activities, we recommend social skills training as an adjunct to antipsychotic medication over medication alone (**Grade 1B**). Social skills training is generally conducted several times a week (either in training sessions with a clinician or in patient practice sessions) for three to six months. Manuals and other materials are available to support training and provision [16]. (See 'Social skills training' above.)

- For individuals with schizophrenia who experience persistent subjective cognitive deficits (difficulty concentrating or remembering) coupled with scholastic and/or vocational difficulties, we recommend cognitive remediation (**Grade 1B**) as an adjunct to antipsychotic medication over medication alone.

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