

# Recovery-Oriented Psychopharmacology: Redefining the Goals of Antipsychotic Treatment

Douglas L. Noordsy, M.D.; William C. Torrey, M.D.;  
Shery Mead, M.S.W.; Mary Brunette, M.D.;  
Daniel Potenza, M.D.; and Mary Ellen Copeland, M.S., M.A.

The traditional goals of psychopharmacology stem from the medical model. Rehabilitation interventions attempt to improve aspects of functioning in patients with chronic illnesses that are not responsive to biological intervention. Recovery is a concept emanating from the consumer self-help movement. It describes a move away from the patient role defined by a diagnostic label toward community membership defined by relationships and responsibilities in the community. Comprehensive care for people with psychotic disorders can include attention to each realm. This article provides an overview of the 3 models of care and describes a role for the psychopharmacologist in each as well as his or her unique potential to incorporate all 3. We outline potential synergistic benefits of integrating recovery-, rehabilitation-, and medical-model thinking into the practice of psychopharmacology and explore implications for the goals and outcomes of treatment for people with psychotic disorders.

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The traditional goals of psychopharmacology for people with psychotic disorders stem from the medical model. The biological psychiatry movement in the United States developed as a specific attempt to move psychiatry back into the medical model. This move has resulted in substantial gains in the consistency, efficiency, and effectiveness of psychiatric diagnosis and treatment.

Modern medical practice has evolved to include a wide range of rehabilitative disciplines and self-help movements to complement core biological interventions such as pharmacology. Traditionally, physicians take responsibility for biological treatments, other health professionals take responsibility for rehabilitation treatments, and consumers and other advocates take responsibility for self-help interventions. However, the physician or other prescriber may work closely with rehabilitation and recovery

programs to make referrals, provide supervision or consultation, and coordinate care. Astute physicians recognize clinical situations where rehabilitation and/or recovery interventions are critically valuable to achieving the best outcomes and will incorporate such interventions into their practice. Prominent examples include care of patients with cancer, chronic pain, myocardial infarction, or stroke.

Rehabilitation and recovery programs for individuals with severe and persistent mental illness have often developed separately from or even in reaction to the medical model of psychiatric care. Many psychiatric providers may work in settings where rehabilitation and recovery services are not provided or even available. Services for people with psychotic disorders can be fragmented, and prescribers may serve only essential medical roles in isolation from other treatment efforts.<sup>1</sup>

The distance between medical, rehabilitative, and recovery efforts in psychiatry may limit the effectiveness of interventions. Effective interventions for people with severe and persistent mental illness such as assertive community treatment teams<sup>2</sup> and individual placement and support vocational rehabilitation<sup>3</sup> involve integration of multiple modalities of care from a single point of service. It is particularly important for people with psychotic disorders to have services delivered in an integrated fashion since they often experience cognitive impairments and disorganization. However, little has been written about the psychiatrist's role in working collaboratively with rehabilitation or recovery efforts or how psychiatric prescribers can integrate principles from these models into their practice.<sup>4,5</sup>

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*From the Department of Psychiatry, Dartmouth Medical School, Hanover (Drs. Noordsy, Torrey, Brunette, and Potenza); the Mental Health Center of Greater Manchester, Manchester (Drs. Noordsy, Brunette, and Potenza); West Central Services, Inc., Lebanon (Dr. Torrey); and Stepping Stone Peer Support Center, Claremont (Ms. Mead), N.H. Ms. Copeland is a freelance writer and lecturer in Brattleboro, Vt.*

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*Reprint requests to: Douglas L. Noordsy, M.D., Mental Health Center of Greater Manchester, 1555 Elm St., Manchester, NH 03101 (e-mail: noordsyd@mhcgm.org).*

In this article, we outline 3 models of conceptualizing patient care and describe a role for the psychopharmacologist in each as well as his or her potential to incorporate the 3 models into an integrated approach to the patient. We will outline potential synergistic benefits of integrating recovery-, rehabilitation-, and medical-model thinking into the practice of psychopharmacology and explore implications for the goals and outcomes of treatment for patients with psychotic disorders.

### **MEDICAL-MODEL CARE FOR PEOPLE WITH PSYCHOTIC DISORDERS**

The theoretical basis of the medical model is that psychotic disorders are brain diseases (Table 1). Symptoms are identified during an assessment phase using history and collateral reports. Physical examinations, laboratory testing, and imaging are used to rule out general medical etiologies, evaluate for medical sequelae of psychotic disorders (such as polydipsia), and document anatomic abnormalities. These signs and symptoms are then compared to standardized diagnostic schemes such as DSM-IV<sup>6</sup> to generate a diagnosis of best fit. The diagnosis is then used to predict a treatment most likely to reverse the presenting psychotic syndrome. Physicians can find themselves treating aspects of a syndrome that became apparent during the workup that were not part of the presenting complaint. This is particularly true in the treatment of people with psychotic disorders who may lack insight into their disorder.

Treatment of psychotic disorders centers around biological interventions and is diagnostically driven. Algorithms have recently become available to guide medical-model care for people with psychotic disorders.<sup>7,8</sup> The goal of medical-model care is to reverse symptoms without producing side effects. Medical-model research aims to narrow down from diagnostic syndrome to etiology, identifying the cause of psychotic disorders in order to develop cures for them. A prototype from general medicine is Parkinson's disease, in which the identification of the etiology of the disorder has led to specific medical treatment to reverse the cause. Despite this understanding, current medical treatment of Parkinson's disease is imperfect. Challenges in treatment include delivering dopamine to targeted areas of the brain to avoid producing side effects and prevention of progression of the disease. Similarly, we can expect that even when the etiology of psychotic disorders is clearly understood, it may be some time before medical-model treatments that approach cure will be available.

Our role as psychopharmacologists in the medical model includes developing an accurate diagnosis and prognosis, ruling out general medical illnesses or other conditions that could be mimicking a psychotic disorder, and prescribing effective medication to manage the full

**Table 1. Medical-Model Care for People With Psychotic Disorders**

Theoretical basis	Psychotic disorders are brain diseases
Assessment	Identify symptoms Elicit history of illness Identify physiologic abnormalities Generate diagnosis using standardized diagnostic criteria Document disability
Treatment	Biological interventions Diagnostically driven
Goal	Reverse symptoms
Research	Narrow down from diagnosis to etiology Identify cause and develop cure
Prototype	Parkinson's disease

range of presenting symptoms. We identify and treat comorbid conditions including depression, anxiety, substance abuse, and cognitive impairments. Ideally, the psychopharmacologist should also coordinate with the primary care provider to develop behavioral interventions that support the management and prevention of medical illness, to maximize treatment adherence, to manage drug interactions between psychiatric and general medical prescriptions, and to manage medical sequelae of psychiatric treatments (i.e., neuroleptic malignant syndrome). This coordination may be difficult to achieve in some practice settings.

### **REHABILITATIVE CARE FOR PEOPLE WITH PSYCHOTIC DISORDERS**

Rehabilitation interventions attempt to improve aspects of functioning in patients with chronic illnesses that are not responsive to biological intervention. They are professional services, but are not typically developed or delivered by physicians. The theoretical basis of the rehabilitation model is that psychotic disorders produce chronic functional impairments for which there are no known medical cures but which are amenable to change (Table 2). Rehabilitation treatment is strengths driven. Clinicians help patients to build on their existing abilities and interests to overcome deficits. This process is much like a physical therapist developing an exercise regimen that is within a patient's current ability, but challenges the patient to build endurance and develop new strengths in related muscle groups.

Assessment includes identifying strengths, eliciting historic interests and abilities, identifying physiologic capacities, documenting functional capacity, and generating a plan for developing new strengths. Rehabilitation treatments that have been demonstrated to be effective in the treatment of people with psychotic disorders include clini-

**Table 2. Rehabilitation-Model Care for People With Psychotic Disorders**

Theoretical basis
Psychotic disorders produce chronic functional impairments for which there are no known cures
Assessment
Identify strengths
Elicit historic interests and abilities
Identify physiologic capacities
Document functional capacity
Treatment
Strengths driven
Vocational rehabilitation
Social skills training
Lifestyle changes, including grooming, housing, diet, exercise, and substance abuse
Goal
Maximize function
Reintegration into society
Research
Identify effective methods of increasing functional capacity
Prototype
Cardiac rehabilitation

cal case management,<sup>9</sup> vocational rehabilitation,<sup>3</sup> social skills training,<sup>10</sup> and integrated substance abuse treatment.<sup>11</sup> Rehabilitation interventions may also focus on other aspects of lifestyle change such as improving diet or grooming, engaging in regular exercise, developing a supportive social network, and increasing community integration.

The goal of rehabilitation treatment for people with psychotic disorders is the maximization of function and integration into society despite residual symptoms. Research in the rehabilitation field focuses on development of effective methods of increasing the functional capacity of individuals with psychotic disorders. A prototype in general medicine is cardiac rehabilitation in which the medical and rehabilitation fields work closely to maximize the patient's functional outcomes.

The role of the psychopharmacologist in the rehabilitation model is less clear. Some practice settings may be very remote from rehabilitation providers while others may be in the same building or on the same clinical team with rehabilitation professionals. It would not be considered acceptable for a modern cardiologist to care for patients suffering from myocardial infarction without consideration of cardiac rehabilitation. If rehabilitation personnel were not integrated into the cardiologist's practice, we would expect that the doctor would refer the patients to nearby resources or educate the patients in basic rehabilitation exercises that they could carry out on their own. Similarly, the emerging research demonstrating the effectiveness of specific rehabilitation interventions for people with psychotic disorders is so compelling that it is establishing a standard of care that requires incorporation of these interventions into the modern management of these patients.<sup>3,9-11</sup> The level of incorporation will vary by practice and the need for rehabilitation will vary by patient, but all psychopharmacologists should communicate at least a

basic understanding of available rehabilitation technologies to their patients with psychotic disorders.

At minimum, psychopharmacology can be approached with the rehabilitation goal of maximizing patient function in mind. Medications generally demonstrate increasing symptom suppression and increasing side effects with increasing dosage. In psychotic disorders, only suppression of positive and disorganization symptoms have been demonstrated to be related to escalating antipsychotic medication dose and even that relationship flattens off above doses that achieve full dopamine-2 receptor occupancy.<sup>12,13</sup> Recent studies have demonstrated that higher levels of conventional antipsychotics are associated with worsening negative symptom ratings.<sup>14</sup> Negative symptoms are more highly associated with functional outcomes of people with psychotic disorders than are positive symptoms.<sup>15</sup> Side effects such as extrapyramidal symptoms (EPS), sedation, and cognitive impairment may also affect functional ability. Therefore, careful ongoing titration of medication dosage is necessary to balance effects in multiple symptom and side effect domains in order to achieve optimal functional outcomes.

To complement rehabilitation, medications with a benign side effect profile should be considered first. Patients can readily be trained in strategies for limiting the impact of potential side effects (i.e., anticipating interference with the satiety response with serotonin-blocking antipsychotics and shifting to cognitive limits on consumption to avoid weight gain). Patients should be assessed carefully for negative symptoms and cognitive impairments that may not have been obvious initially. Psychopharmacologists can also readily validate rehabilitative treatments as essential care and offer referral to available rehabilitation resources if such resources are not provided in their own practice.

Rehabilitation settings offer rich data to the psychopharmacologist about the effectiveness of medication trials. We know that precise psychopharmacology relies on making adjustments based on individual response after assessment has guided us to the treatments most likely to be effective. Information about patients' ability to concentrate, their stress tolerance, energy, motivation, and behaviors in rehabilitation settings and natural environments provides a tremendous complement to office-based observations. Psychopharmacologists who develop a relationship with rehabilitation professionals that allows for the regular sharing of information about their patients' clinical status will find that they have a broader range of data at their fingertips for use in evaluating pharmacologic decision points. They can also keep the rehabilitation team apprised of changes in medical-model care that may impact patients' functioning.

Psychopharmacologists may integrate rehabilitation professionals into their practice or practice in rehabilitation settings to achieve the highest degree of collaboration and seamless integration of services. Psychopharmacolo-

gists can also integrate their practice into natural environments by making home or community visits. These visits allow them to take advantage of direct observation of patient performance in these settings and maximize awareness of the life circumstances in which clients' attempts to manage illness are embedded.

In these practice settings, psychopharmacologists can be fully integrated with the rehabilitation team. Their roles include assuring access to a full array of rehabilitative treatments and providing medical and behavioral expertise to the treatment team. They can serve as team leaders who model integration of services and mutual respect for the diverse professional backgrounds of team members. Medication evaluations should generally occur with a member of the rehabilitation team present to maximize the input of information from rehabilitation settings into psychiatric care and vice versa.

### THE RECOVERY MODEL IN CARE FOR PEOPLE WITH PSYCHOTIC DISORDERS

Recovery is a concept emanating from the consumer self-help movement.<sup>16</sup> It describes an individual's attempt to move away from a patient role and expectations of sick or institutionalized behaviors defined by a diagnostic label toward community membership defined by social connections and responsibilities in the community and expectations of maximizing wellness (Table 3). Promotion of recovery has traditionally come from consumers and self-help groups, not professionals. Although the recovery approach developed in reaction to dissatisfaction with medical services in some instances, it need not be viewed as hostile to medical- or rehabilitative-model care. In fact, it can be quite complementary.<sup>17</sup>

The theoretical basis of the recovery model is that patients with psychotic disorders can redefine themselves through natural life roles in the community and move beyond their disability. It also involves patients taking central responsibility for their health and treatment outcomes. This process is described by patients as being associated with improved motivation for illness self-management, improved life satisfaction, and better functional outcomes.<sup>16-18</sup>

Assessment of patients from the recovery perspective involves evaluating their sense of ownership of their life and their ability to work beyond their illness. Do they have an internal or external locus of control? Are they entrenched in sick roles or institutionalized behaviors? Do they view their life as hopeless with no chance of succeeding in functional life roles? What are their current life roles and social networks?<sup>19</sup> Assisting patients to participate in their own assessment of personally relevant consequences of their illness (however they define it) and the roles they have developed because of it can be tremendously valuable in helping them to begin their recovery process.

**Table 3. Recovery in the Care of People With Psychotic Disorders**

Theoretical basis	People with psychotic disorders can redefine themselves through life roles and relationships rather than through disability
Assessment	Consumer assessment of personally relevant consequences of illness Professional assessment of consumer's ownership of life and illness, sick roles, and institutionalization
Treatment	Consumer-driven change process Clinician as consultant, facilitator Mutual-help and self-help interventions Encourage growth and consider possibilities, hopes, and dreams Motivational interviewing Address consequences of importance to the consumer Shift from patient role to meaningful life roles Shift from illness to wellness focus
Goal	A meaningful life
Research	Attempt to measure recovery process Correlate progress in recovery with health outcomes Professional interventions to facilitate progress in recovery
Prototype	Cancer support groups Alcoholism

Treatment from the recovery perspective involves interventions that assist the patient to take control of his or her life, heal identifications of self through illness, and develop a sense of direction. The personally relevant consequences identified above are also addressed through medical, rehabilitative, psychological, and self-help interventions. This work can involve helping a patient to reestablish connections to an estranged family member or a child who was removed from the patient's custody, teaching relaxation techniques to manage distress, or adjusting medications to manage sexual side effects or improve sleep. Mutual-help interventions such as peer counseling can be helpful in managing symptoms and building a support network.<sup>17</sup>

As recovery is a consumer-driven change process that must come from each individual to be personally relevant, the clinician serves as a consultant or facilitator. Recovery involves travel into uncharted waters. Clinicians establish a base of honesty and empowerment by acknowledging their need to explore and learn in a partnership with the patient. Treatment involves believing in patients' ability to grow and assisting them to consider possibilities and rekindle hopes and dreams. The motivational interviewing techniques described by Miller and Rollnick<sup>20</sup> can be very useful in helping patients to identify barriers to achieving their goals and to develop motivation for change. The goal of the recovery process is achieving a meaningful life. This involves a shift in self-concept from patient role to other meaningful life roles and a cognitive shift from illness focus to wellness focus.

Research on recovery is in its infancy. Efforts are beginning to operationalize the recovery concept to allow for

meaningful and reliable measurement,<sup>21</sup> define and evaluate interventions designed to facilitate progress in recovery,<sup>18,22,23</sup> and correlate progress in recovery with health outcomes.<sup>24</sup> There remains a pressing need to identify and learn from people who have moved out of the mental health system and have become invisible to standard research methods.

The prototype for recovery in general medicine is cancer treatment in which support groups that help patients reestablish an identity beyond their illness and provide mutual support have been associated with improved outcomes. Recovery has also been a central concept in the treatment of alcoholism and other addictions.

The role of the psychopharmacologist in the recovery model has not been defined. However, a review of the consumer literature on recovery and a series of focus groups with patients conducted by one of the authors (W.C.T.) led to the conclusion that recovery is facilitated by services that (1) promote hopefulness, (2) develop skills and knowledge to take personal responsibility for health, and (3) support efforts to get on with life beyond illness.<sup>21</sup> By attending to these 3 areas, psychopharmacologists can incorporate facilitation of recovery into their daily practice.

There are a variety of simple things we psychopharmacologists can do to promote hope among patients with psychotic disorders regardless of the practice setting. For example, provide clear prognosis informed by longitudinal outcome studies.<sup>25</sup> Illustrate the potential for positive outcomes from medical, rehabilitation, and recovery efforts using examples from clinical experience. Emphasize wellness over illness when discussing the patient's condition and progress in treatment. Attend to power imbalances inherent in doctor-patient relationships that may leave some patients feeling hopeless in determining the outcome of their treatment. Acknowledge our actual lack of power in the treatment relationship, as without the patient's participation we really can do very little. Emphasize the patients' power to take charge of their life through illness self-management and lifestyle changes, thereby making their illness less powerful. Create an environment of mutual respect as fellow human beings in which the patients' goals and aspirations are accepted nonjudgmentally and integrated into treatment planning. Encourage and fully evaluate treatment proposals that originate with the patient. Hold the patient's right to receive the best possible care as important as our own family's. Beware of complacency. Whenever we find ourselves deciding, "this is the best this patient can do," we must be wary that we may be the limiting factor. Prescribe hopefully, using the best available treatments, and persevere until optimal outcomes are achieved. Identify potential treatment advances that may alter the patient's prognosis. When patients ask whether they will need to be on their medication for the rest of their life, we acknowledge that for all we know there could be a cure for schizophrenia within their lifetime given the pace

of advances in understanding of brain disorders. It is most realistic to describe the medication, rehabilitation, and recovery treatment that we believe will serve patients best for the foreseeable future while pointing out that treatment could change dramatically in our lifetimes.

Psychopharmacologists have a vital role in helping patients with psychotic disorders develop the skills and knowledge they need to take personal responsibility for their health outcomes. In any practice setting, we can attend to responsibility for illness management and expect active involvement in treatment planning. From our initial contact, we can establish real dialogue about treatment parameters (i.e., these are my areas of expertise, what are your areas of expertise, these are my boundaries, the law requires me to take these coercive actions in these circumstances, we can work together to avoid those circumstances) so the patient feels empowered to participate actively. We can communicate the belief that each individual has the potential to acquire recovery skills.<sup>26</sup> We can educate our patients about the impact of relapsing on their prognosis and about available treatment options. Most importantly, we can practice shared decision making.<sup>27</sup>

Shared decision making is the process of laying out all treatment options, describing the advantages and disadvantages of each, identifying the prescriber's recommendations and rationale for reaching them, and then trusting patients to choose their treatment as informed consumers. Shared decision making is more than informed consent. It involves exposing the subtle coercion and dependency inherent in doctor-patient relationships that are expedient in the short-term, but hinder patients' development of responsibility and self-control. It means investing in patient education and development of decision-making abilities rather than relying on compliance as the primary means of ensuring good outcomes. When judgment is impaired, shared decision making is threatened. However, even the most impaired patients who may have a guardian making ultimate treatment decisions can be encouraged to understand and participate in treatment decisions to the best of their ability. Finding areas to give patients control, such as choosing the time of administration or frequency of dosing and helping them gain knowledge about their diagnosis, medications, and rehabilitation will give a greater sense of responsibility for the outcome of treatment. The greater the patients' responsibility for treatment decisions and understanding of treatment options, the greater their investment in the chosen treatment will be.

Many illness management skills in patients can be developed readily in any treatment setting by simply modeling and expecting appropriate participation in treatment planning. A module of skills training for illness management in manual format is available for in-depth application in rehabilitation settings.<sup>28</sup> Illness management skills include assertiveness training, establishing medication routines, recognizing early warning signs, use of p.r.n.

medication, and knowing how to negotiate medication changes. Patients can also develop a personal crisis care plan or other form of advanced directives to guide their care at times when their judgment is impaired by illness.<sup>17</sup>

Psychopharmacologists also have an active role to play in supporting patients' efforts to move on in their lives. As medical authorities, we are often asked to determine when a patient can leave a protective treatment setting or return to work. Our opinion may contribute to decisions about driving privileges, access to children, or access to rehabilitation programs. In any practice setting, we can respect patients' choices and avoid inhibiting recovery by overemphasizing the patient role or assuming disability. We must be careful to avoid limiting our view of our patients by assuming all goals or choices are influenced by psychopathology. We can encourage responsible risk-taking when appropriate to help people develop their full potential. We need to be mindful of the potential for our statements to set up expectations in the patients' or families' minds that can become barriers to change. We should also include consideration of potential impact on the rehabilitation and recovery processes whenever medication choices are made.

It is important to avoid unnecessary treatments and to examine routinely whether each patient needs the current level of care or is ready to move on. Involuntary constraints should also be routinely examined and gradually tapered while training the patient in skills necessary to avoid needing such constraints in the future (e.g., budgeting skills to avoid need for payee, illness management skills to avoid involuntary hospitalization).<sup>29</sup> Entitlements and treatment programs can be discussed from their inception as platforms for growth to support return to community-integrated life roles to set up expectations of recovery rather than disability and dependency. Entitlements are complicated by sharp delineations between disability and loss of benefits and may require advocacy with policy makers to ensure that benefit structures support rather than inhibit progress in recovery.

### **THE PSYCHOPHARMACOLOGIST'S ROLE IN INTEGRATION OF THE MODELS**

It is critical for us to do the work of integrating diverse models of care into a clear practice approach rather than leaving our patients to struggle with the incongruous messages that they will undoubtedly receive from disjointed care. Delivering psychopharmacology services that integrate rehabilitation and recovery principles will likely enhance therapeutic alliance, patient investment in care, treatment adherence, and the relevance of treatment services to the patients' needs. We expect that this will result in greater treatment effectiveness. Care for patients who become effective at managing their own illness and are well-integrated into community social networks should be less costly. Patient quality of life will be improved by having

self-defined constructive life roles, supportive relationships, and feelings of self-efficacy and self-determination.

As psychopharmacologists, we can set a tone of integration of medical, rehabilitation, and recovery approaches in our practice setting. We can bring our academic discipline to a careful consideration of methods in each of the approaches, as well as a willingness to consider creative innovations and include patients as collaborators in developing best practice recommendations. We can have access to all 3 arenas if we assume it is relevant to the success of our work, keep ourselves informed, incorporate proportionate attention to rehabilitation and recovery into our literature and teaching, and assert the importance of our contribution to comprehensive care of patients with psychotic disorders.

### **REDEFINING THE GOALS OF ANTIPSYCHOTIC THERAPY**

Developments in the medical, rehabilitative, and recovery arenas over the past decade have changed the face of treatment for people with psychotic disorders dramatically. The new generation of antipsychotic medications has demonstrated a broad range of beneficial effects that may have an impact on the rehabilitation and recovery arenas. We frequently observe that the improvements in negative,<sup>30</sup> cognitive,<sup>31,32</sup> and affective<sup>33</sup> symptoms associated with atypical, but not with conventional, antipsychotic treatment can lead to accelerated progress in the rehabilitation and recovery process.<sup>34</sup> This progress may then reinforce improvements in negative, cognitive, and affective symptoms. Such an interaction could lead to a synergistic spiral of improvements in symptoms and functioning consistent with the progressive improvements in outcomes observed up to 12 months beyond the initiation of atypical antipsychotic medication.<sup>35,36</sup>

A decade ago, the goals of antipsychotic medication therapy centered around suppressing psychosis: reducing hallucinations, delusions, disorganization, and agitation. Our challenges were convincing patients to stay on medication, managing stigmatizing and debilitating side effects, preventing relapse, and containing patients with treatment-refractory psychosis.

Today's goals are maximizing function and community integration for all patients. This includes managing symptoms in all 5 dimensions of psychotic disorders: (1) positive symptoms, (2) negative symptoms, (3) disorganization symptoms, (4) affective symptoms, and (5) cognitive symptoms. It also includes avoiding side effects that can limit functioning such as extrapyramidal reactions, tardive dyskinesia, and cognitive impairment. We now aim to manage treatment-refractory psychosis actively rather than viewing nonresponders as requiring extensive institutionalization. Today's challenges are recognizing and treating refractory symptoms in each of the symptom clusters, managing

awakenings or profound reactions to the return of emotional capacity when they occur,<sup>37</sup> managing appetite and weight through behavioral interventions and lifestyle changes,<sup>38</sup> and assuring access to effective treatment for all patients with psychotic disorders. Incorporating rehabilitation and recovery goals into treatment of patients with psychotic disorders will also create the challenge of modifying the skill set needed by professionals to be successful clinicians.

We believe that a reexamination of our expectations for the outcomes of treatment of psychotic disorders is needed at this juncture to incorporate the substantial advances in our field and to ensure that we do not unknowingly contribute to artificial ceilings that block patient recovery. We assert that psychotic disorders should have no more impact on the lives of people who develop them than diabetes or other chronic medical conditions, including the areas of medication treatment, development of sound illness management skills, and certain lifestyle modifications. The individual should be able to function indistinguishably in the community with infrequent exacerbations, minimal long-term sequelae, and average life expectancy.

Some patients may achieve this goal readily with recovery-oriented psychopharmacology services. Others may require education and supportive therapy to acquire a sense of responsibility for their illness and the skills to manage it well. Others will need rehabilitative interventions, skills training, and coaching to overcome residual symptoms and resume life roles. Some may need extended supports in the community and extensive facilitation of recovery to overcome years of institutionalization.

Regardless of setting, our patients will benefit from a shift in our treatment goals. As prescribers, it is our obligation to approach each patient with the care and respect that this higher standard demands. Modern treatment goals require educating every patient about available treatment options, using shared decision making, and assisting each patient to get access to the very best treatment. These goals require examining our assumptions about outcomes of psychotic disorders and recognizing that evolving approaches are changing the potential for patients to move beyond disability. As a field, psychopharmacology can no longer be willing to settle for less. Beliefs that people with psychotic disorders can never get any better than a certain level or can not function in certain life roles must be recognized as emanating from stigma and be challenged in our communities and in our daily practice. Incorporating recovery principles into the practice of psychopharmacology will help us to meet this challenge and enhance our patients' opportunities to achieve functional recovery from their psychotic disorders.

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