Older Patients With Schizophrenia: Challenges in the Coming Decades

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The number and proportion of older adults with schizophrenia will increase considerably in the coming decades. Although a vast literature on schizophrenia among younger adults exists, much less is known about late-life schizophrenia and its treatment. The authors describe two potential scenarios for 2011, the year that the first baby boomers will turn 65. To ensure that the more favorable scenario becomes a reality, the authors suggest four goals: decrease medical comorbidity and mortality among younger patients with schizophrenia and improve their access to health care so that they can live longer and more productive lives; improve our understanding of the neurobiological and psychosocial factors underlying late-life schizophrenia, as well as the health care and social service needs of such patients; develop more effective and safer pharmacologic, psychosocial, and cognitive behavioral treatments; and improve rehabilitation of older people with schizophrenia. Specific strategies to foster these goals include establishing a consortium for studies of late-life schizophrenia; conducting multicenter studies of treatment effectiveness; and forming interdisciplinary collaborations among researchers, clinicians, government and industry representatives, and patient advocacy groups. (Psychiatric Services 50:1178-1183, 1999)

Schizophrenia is often thought of as a disorder affecting adolescents and young adults, but the coming decades will bring about an unprecedented increase in the number and proportion of elderly Americans with this disorder. The first members of the baby-boom generation turn 65 in the year 2011, which will begin a rapid increase in the number of elderly persons within the general population (1). Also, development of additional treatment options may reduce mortality from this disorder. For example, up to 13 percent of people with schizophrenia commit suicide (2), but treatment with clozapine has been reported to decrease the suicide risk among patients unresponsive to traditional neuroleptics (3). Unfortunately, relatively little research has been done on late-life schizophrenia. In 1996 Jeste (4) found that only about 6 percent of the schizophrenia studies in current issues of leading psychiatric journals focused on older patients.

What is late-life schizophrenia? The phrase “late-life schizophrenia” refers to older patients who first manifested schizophrenia in early adulthood, as well as to those whose symptoms first appeared in later life (6). According to the Epidemiologic Catchment Area (ECA) studies (7), the lifetime prevalence of schizophrenia among people age 65 years and older is only .3 percent, and the one-year prevalence is .2 percent.

We believe that several methodologic aspects of the ECA studies may have caused an underestimation of the prevalence of schizophrenia among the elderly population. These studies used DSM-III criteria (8), which did not permit the diagnosis of late-onset schizophrenia and did not include negative symptoms, and they undersampled areas with higher rates of mentally ill elderly persons such as public housing (9). The reliance on retrospective self-reports in the ECA studies also has obvious limitations for older patients with schizophrenia. Thus the true current prevalence of schizophrenia in the elderly population is unknown, but it is probably higher than the ECA figures suggest.

Early-onset schizophrenia Kraepelin’s original conception of dementia praecox was that this disorder was typified by onset in adolescence or young adulthood, with a...
progressive decline in functioning thereafter (10). Consistent with this view, Davidson and associates (11) reported that more than 60 percent of their sample of chronically institutionalized patients with schizophrenia had diagnosable dementia. However, chronic institutionalization is atypical for most elderly patients with schizophrenia and is experienced by only the most severely ill sector of the population with schizophrenia (12). The decline pictured by Kraepelin appears to characterize the outcome for about 20 percent of patients, while another 20 to 30 percent experience marked improvement or even recovery (13–15).

A related issue is the notion of “schizophrenic burnout.” It involves a deficit state, with a disappearance of positive symptoms, such as delusions and hallucinations, and an increase in negative symptoms, such as social withdrawal, affective flattening, and avolition. This pattern may describe the course seen in a small minority of patients, but a majority of older patients with schizophrenia continue to have both positive and negative symptoms, and another minority have substantial improvement in both types of symptoms (16–18).

The reasons for the recovery seen in some patients in later life are not fully clear. One possibility is changing role expectations—patients who were unable to meet the challenges of young adulthood may have less difficulty meeting role expectations associated with later life, which are typically less challenging. However, we do not believe that this is the main reason for recovery. Neurobiological changes associated with later life that may foster a decrease in psychotic symptoms have been documented; an example is reduction in dopamine activity (19).

The rates of full remission remain uncertain, but there are clear examples of people with schizophrenia who show remarkable recovery after many years of chronic dysfunction. A recently publicized example of recovery is that of John Nash, a Nobel-prize-winning mathematician who developed schizophrenia in his late twenties (18). Dr. Nash’s symptoms remitted after decades of severe illness, whereupon he returned to a productive academic career in mathematics.

Patient characteristics that are associated with better outcome include good premorbid adjustment, acute onset of symptoms, short duration of an ongoing episode, and a paucity of negative symptoms (20,21). According to Wyatt (22), early intervention with antipsychotic medications during patients’ first psychotic episode may also lead to a better long-term outcome.

Late-onset schizophrenia

The historical tendency to view schizophrenia as having an onset restricted to adolescence or young adulthood was formalized in criteria put forth by Feighner and colleagues (23) and in DSM-III criteria (8), which did not permit diagnosis of schizophrenia if symptoms developed after age 40 or 45, respectively. However, a number of reports challenged this notion (24–28). DSM-III-R (29) permitted diagnosis of schizophrenia late-onset type after age 45, and DSM-IV (30) includes no age-of-onset restriction for diagnosis of schizophrenia.

It has been suggested that late-onset schizophrenia is a neurodegenerative condition (31), results from acquired brain lesions (32), or is secondary to sensory deficits and inter-

The lifetime prevalence of schizophrenia across all age groups is only about 1 percent, yet it accounts for the largest proportion of mental health care expenditures.

In investigations conducted at the Clinical Research Center for the Study of Late-Life Psychoses at the University of California, San Diego, patients with late-onset schizophrenia (those whose age at onset of schizophrenia was 45 years or older) were compared with patients of a similar age who had earlier onset of schizophrenia (16). Similarities between the groups included the severity of positive symptoms, chronicity of course, level of uncorrected sensory impairment, family history of schizophrenia, early childhood maladjustment, increased mortality relative to the general population, qualitative response to neuroleptic medications, overall pattern of neurocognitive impairment, and presence or absence of gross structural brain abnormalities seen via neuroimaging. Similar to early-onset patients, patients with late-onset schizophrenia also had an elevated number of minor physical anomalies compared with normal subjects, suggesting subtle aberrations in their early development (36).

Several differences between early- and late-onset patients were also observed in these studies (16). Patients with late-onset schizophrenia were more likely to be women and to have the paranoid subtype of the disorder. They had less severe negative symptoms, better premorbid functioning in early adulthood, and less impairment in the specific neurocognitive areas of learning and abstraction or cognitive flexibility, and they required lower dosages of neuroleptic medications for management of their psychotic symptoms. Quantitative analyses of MRI scans in a subsample of patients showed larger thalami in the late-onset group than in the early-onset group (37).

The similarities observed between patients with early- and late-onset schizophrenia suggest that the latter is “true” schizophrenia, in that the two groups were similar in terms of apparent genetic risk, positive symp-
Chotic medications is 29 percent (46), low dosages of conventional antipsychotics may lead to tardive dyskinesia (46). The cumulative motor system side effects such as tardive dyskinesia (48–51). On the other hand, large-scale studies evaluating the relative effectiveness and safety of these newer atypical antipsychotics for older patients with schizophrenia are lacking.

Current thinking about schizophrenia in older adults is often quite pessimistic and is unduly influenced by work among institutionalized patients.

Another potential barrier to the use of atypical antipsychotic medications by elderly patients is their cost compared with traditional neuroleptics (52). Pharmacoeconomic analyses involving primarily younger patients suggest that use of atypical antipsychotic medications may be associated with a reduction in the total dollar cost of the disorder, but, again, data are lacking to evaluate the overall cost-benefit ratio of using these medications with older patients (53,54).

The expected state of affairs in 2011
Current trends suggest a possibility of two scenarios for older patients with schizophrenia in 2011, when the first members of the baby-boom generation turn 65.

The dream scenario
Development of better antipsychotic compounds with improved efficacy and side effect profiles will reduce the need for costly inpatient treatment. Treatment advances, including refinement of psychotherapeutic, nonpharmacologic interventions, will facilitate an age-appropriate level of normal daily functioning as well as an improved quality of life for both patients and their caregivers. Improved access to health care and to the necessary community support services along with reduced social stigma will enable patients to join the mainstream of society in a productive fashion.

The nightmare scenario
In the absence of more effective, safer, and affordable treatments, noncompliance with treatment will continue to be a problem. The result will be an unacceptably high relapse rate, with a need for institutionalization. Meanwhile, managed care companies may make it harder to hospitalize patients. A continued lack of insurance coverage for mental illnesses and further erosion of Medicare will lead to a decrease in the number of older persons with schizophrenia in the health care system. Unfortunately, this decrease will be achieved through increased mortality and perhaps an increase in patients in the criminal justice system (42). Neglect of research into psychotherapeutic and other treatments will foster continued ostracism of elderly persons with schizophrenia from the rest of the society.

Analyzing the challenges
Current actions can largely determine whether the dream or nightmare scenario characterizes the state of affairs in 2011 and beyond. The following discussion is an analysis of the strengths, weaknesses, opportunities, and threats of the situation.

Strengths

Demographic imperative. The number and proportion of people over age 65 with schizophrenia will increase.

Implications of societal costs.
The dream scenario is not necessarily the more costly scenario. We can spend the money on research and training now or spend more on institutionalization a few years from now.

High potential for success. The expertise to meet this challenge exists today. Cooperative efforts by the government and the private sector and by mental health professionals are necessary for making significant gains in the understanding and treatment of late-life schizophrenia.

Success of atypical antipsychotics. The recent advent of atypical antipsychotics with superior therapeutic effects and fewer side effects has been a significant leap forward in the treatment of schizophrenia. A fringe benefit of this development has been the pharmaceutical industry's increasing interest in antipsychotics. Neuroleptics have not traditionally yielded large profit margins for drug companies, so they were reluctant to spend research dollars on their refinement. The success of atypical antipsychotics has fostered a positive mindset within the pharmaceutical industry toward developing new and better antipsychotic medications.

Survivors. Elderly patients with schizophrenia can be viewed as survivors. In this light they can teach the general community much about coping with the challenges presented by a chronic illness.

Weaknesses

Double social stigma. A double social stigma exists in relation to schizophrenia and aging. Lack of a political voice in this patient group and a bias in our society toward youth and health result in societal neglect of the needs of aging people with schizophrenia. Ignorance about the problem extends to many health care providers, mental health care workers, researchers, and public policy makers (4,55).

Lack of clinical data. More data are needed to guide rational clinical practice with aging patients who have schizophrenia. Few studies have focused on the effectiveness of interventions (4,55).

Pessimistic attitudes. Current thinking about schizophrenia in older adults is often quite pessimistic and is unduly influenced by work among institutionalized patients, even though the large majority of patients live in the community and not in state hospitals or nursing homes (12,25).

Increased substance abuse. In the future cohort of elderly people, including those with schizophrenia, more people are likely to have a history of substance abuse (57).

Research difficulties. Conducting research among older persons with schizophrenia is often challenging because of cognitive impairment, sensory deficits, medical comorbidity, polypharmacy, biological and psychosocial heterogeneity, and a frequent lack of caregivers. Also, the potential impact of this disorder on decision making and other cognitive skills, particularly in an age group at risk for cognitive decline, complicates ethical issues regarding informed consent (58,59).

Opportunities

Collaboration. We can produce a unique model of collaboration among advocates for mental health and aging, including scientists, professional organizations, government agencies such as the National Institutes of Health and the Department of Veterans Affairs, advocacy groups for the mentally ill and elderly populations such as the National Alliance for the Mentally Ill and the American Association of Retired Persons, the pharmaceutical industry, private foundations, and others.

Prevention. The means for primary prevention of schizophrenia are not on the immediate horizon, but much may be learned about factors associated with delayed onset and remission of the illness in old age.

Advances. Unprecedented advances are taking place in changing our traditional understanding of the aging process. These advances are occurring at a basic science level as well as a clinical science level, challenging the notion of inevitability of age-related declines (60,61).

Threats

Competition for funds. An increasing number of special-interest groups are competing aggressively for dollars in an era when politicians are hesitant to be seen as increasing public expenditures.

Lack of collaboration. There has been a lack of sufficient collaboration among many of the groups that need to work together for the necessary initiatives.

The pervasiveness of traditional ideas. The influence of traditional thinking about schizophrenia remains pervasive. For example, the Kraepelinian notion of dementia praecox retards efforts for rehabilitation in late-life schizophrenia.

Specific goals and suggested strategies

Goals

Four specific goals can be identified.

♦ In the short term we should attempt to increase the number of older people with schizophrenia in the population by decreasing medical comorbidity and mortality among younger patients and improving patients' access to health care.

♦ We should continue to seek to improve our understanding of the neurobiological and psychosocial factors underlying late-life schizophrenia, as well as of the health care and social service needs of such patients.

♦ We should develop more effective and safer pharmacologic, psychosocial, and cognitive-behavioral treatments.

♦ Rehabilitation efforts for older people with schizophrenia should be expanded and improved, with better social support services and greater help for patients' caregivers.

Strategies

Several steps will be necessary to meet the above goals, including development of age-appropriate diagnostic criteria, expansion of the research infrastructure to explore the interaction of schizophrenic neuropathology and psychosocial deficits with the normative aging changes, and translation of such research into clinical practice and public policy. Specific strategies to foster the occurrence of these steps include:

♦ A consortium for studies of older adults with schizophrenia should be formed. Pooling resources will decrease the cost of research and make
the collection and dispersion of knowledge obtained more efficient. ♦ Greater emphasis should be placed on multicenter cooperative studies of treatment effectiveness, particularly research that directly translates into clinical care of elderly patients (62).

♦ Interdisciplinary collaboration among researchers, clinicians, government and industry representatives, and advocacy groups for patients and elderly persons should be encouraged.

Conclusions
The challenges presented by the upcoming increase in the number and proportion of older patients will force us to pay closer attention to the longitudinal course of schizophrenia and the interaction of neurocognitive deficits, psychiatric symptoms, and their treatment with the psychosocial and physical changes associated with normal aging. This challenge may serve as a catalyst in turning the field and our society away from the myopic and pessimistic perspective that has characterized much of the research and thinking about late-life schizophrenia.

Research focused on late-onset schizophrenia may provide unique insights into the factors differentiating vulnerability to schizophrenia from its phenotypic expression. For example, involvement of the thalamus in the expression of schizophrenic symptoms has been suspected for at least 40 years (63), but its precise role remains unclear. Recent findings of a larger thalamic volume among patients with late-onset schizophrenia (37) could reflect a protective factor (responsible for the later onset), a pathological factor (responsible for the expression of schizophrenic symptoms has been suspected for at least 40 years), or an epiphenomenon of pathological factor (responsible for a later-onset schizophrenia has generated recent interest in the possibility of estrogen replacement as an alternative form of antipsychotic therapy for older women (64).

If the current state of affairs continues, older patients with schizophrenia will continue to have high comorbidity and mortality and may require institutionalization at a considerable financial and emotional cost. By cooperating and uniting our efforts to understand schizophrenia and its treatment in late life, as well as by using our combined political muscle to ensure that the needed changes are made in the allocation of research dollars and mental health coverage, a greater number of persons with schizophrenia will live longer and more productive lives. ♦

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