The Nosology of Schizophrenia
Toward *DSM-5* and *ICD-11*

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KEYWORDS

• Schizophrenia • *DSM-5* • *ICD-11* • Nosology • Classification • Psychosis

KEY POINTS

- Based on the absence of clear boundaries around schizophrenia, the multiplicity of implicated etiologic factors, and pathophysiologic mechanisms, schizophrenia is likely a conglomerate of multiple disorders.
- Dissection of schizophrenia's heterogeneity is proving difficult, with the dimensions/endophenotypes approach coupled with illness staging currently the most promising approach toward resolving this disease admixture.
- An etiopathophysiologic nosology of schizophrenia and related psychotic disorders is currently elusive, so the hope is that the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) (*DSM-5*) and the *International Classification of Disease, Eleventh Revision* (*ICD-11*) will provide a more useful platform than the current *DSM-IV* and *ICD-10* in integrating emerging genetic and other neurobiologic information about these conditions that ultimately may serve as a bridge between the clinically useful psychopathologic nosology of today and an etiopathophysiologic classification of tomorrow.
- Proposed changes in DSM-5 include elimination of the classic subtypes, addition of unique psychopathological dimensions, elimination of special treatment of "Schneiderian" first-rank symptoms, better delineation of schizoaffective disorder, and addition of a new category of "attenuated psychosis syndrome" for further study.

OVERVIEW

The present nosologic system (ie, system of classification of disease) for psychiatric disorders originated in efforts during the late nineteenth and early to mid-twentieth century, culminating in a section related to mental disorders (section V) in the *ICD-6*[1] in 1949 and the first edition of the *DSM-1*[2] in the United States in1952. Schizophrenia and related psychotic disorders comprised one of the major sections in both manuals. In subsequent revisions (*ICD-7, ICD-8, ICD-9*, *ICD-10*, *DSM-II, DSM-III*, and *DSM-IV*), changes have been made in specific diagnostic criteria, but the basic

Disclosure statement: Rajiv Tandon is a member of the *DSM-5* Work Group on Schizophrenia and Related Disorders and the World Psychiatric Association Pharmacopsychiatry Section. The opinions expressed in the article are those of the author alone and do not purport to represent any of the organizations that the author belongs to.
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Psychiatr Clin N Am 35 (2012) 557–569
http://dx.doi.org/10.1016/j.psc.2012.06.001 **psych.theclinics.com**
0193-953X/12/$ – see front matter Published by Elsevier Inc.

structure has been retained. Differences in criteria between the *DSM* and *ICD* systems have narrowed with considerable similarity between *DSM-IV*[3] and section V of *ICD-10*.[4] The process of revising both *DSM-IV* and *ICD-10* is under way, with *DSM-5* likely released in 2013 and *ICD-11* expected to be finalized by 2016. Current versions of both *ICD-10* and *DSM-IV* are marked by considerable complexity, variable validity, and limitations in clinical and research utility; the revisions under way seek to address these limitations.

Schizophrenia has been studied as a specific disease entity for the past century with the assumption that it is caused by a distinct pathologic process whose nature continues to be unknown. Its precise core definition, boundaries, pathogenesis, and cause remain undefined.[5,6] Since its demarcation as dementia praecox by Kraepelin and Robertson[7] and schizophrenia by Bleuler and Zinkin,[8] its definitions have varied and its boundaries have expanded and receded. Thus, it is instructive to examine its origins and varying definitions over the past 150 years (**Fig. 1**).

Concept of Schizophrenia from the Nineteenth Century to DSM-IV and ICD-10

Although there are descriptions of insanity from ancient times, the concept of schizophrenia is of relatively recent origin. In the mid to late nineteenth century, European psychiatrists began describing a range of mental disorders affecting young adults that were associated with deterioration and chronicity. Morel termed them, *démence precoce*,[9] Clouston called them *adolescent insanity*,[10] Kahlbaum described *katatonia*,[11] and Hecker described *hebephrenia*.[12] The current construct of schizophrenia derives from Kraepelin's formulation of dementia praecox in the late nineteenth century and his elaboration of this concept in the early part of the twentieth century.[7,13] Until that time, there were two broad prevailing views about the nature of major psychiatric illness. Based on his study of persons with mental disorders in large psychiatric hospitals, Griesinger postulated that there was only one basic form of psychosis with diverse manifestations attributable to endogenous and environmental factors (einheitspsychose).[14] In contrast to this concept of a unitary psychosis, others suggested that there were several distinct disorders (catatonia, hebephrenia, folie circulaire, dementia paranoides, and melancholia, among other disorders). Kraepelin's genius was in identifying two distinct patterns of illness course around which the many different conditions could be grouped. He was influenced by the then-recent success in defining the etiopathophysiology of general paresis of insanity (neurosyphilis or tertiary syphilis)—its distinctive course and outcome among patients in psychiatric hospitals led to its delineation, identification of the causative spirochete, and the diagnostic Wassermann test and later to definitive treatment with penicillin. Kraepelin, therefore, believed that course and outcome could similarly best distinguish other psychiatric disease entities. Based on a study of several hundred cases of hospitalized patients,[15] Kraepelin delineated two distinct disorders: (1) dementia praecox, combining catatonia, hebephrenia, and paranoid states, and (2) manic-depressive insanity, combining folie circulaire and melancholia. Kraepelin[7,13] identified schizophrenia on the basis of its onset (in adolescence or early adulthood), course (deteriorating), and outcome (démence or mental dullness). He distinguished dementia praecox from manic-depressive insanity on the basis of the chronicity and poor outcome of the former contrasted with the episodicity and good outcome of the latter. Kraepelin acknowledged the enormous diversity of clinical expression subsumed under the rubric of dementia praecox but surmised some shared etiopathogenetic process. Bleuler[8] renamed this condition "the group of schizophrenias" because he believed it was comprised of several diseases with the splitting of different psychic functions the common defining characteristic. They identified a set of basic or