

Furthermore, they were so affectively unstable that even minor changes in their environment frequently led to manic episodes. This fact, combined with the degree of their deterioration of functioning, caused them to have been either hospitalized or placed in mental health facilities for more than 10 years. Of epidemiologic interest may be that their development of a deteriorating illness originally led to diagnoses of schizophrenia that were revised only after several years.

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STEFAN KÖHLER, M.D.
Kiel, Germany

Managed Care

TO THE EDITOR: In their excellent first look into the brave new world of managed care constraints, bargaining power, and professional autonomy, Mark Schlesinger, Ph.D., and colleagues (1) concluded that the current, decentralized delivery system provides few safeguards to ensure that patients and their physicians will be treated equitably (p. 260). More could have been done to illustrate this conclusion, and research needs to be funded that can address consequences that this article was not able to investigate.

The first illustration of inequitable treatment that needs more emphasis is the highly variable prevalence with which hospitals and insurers impose constraints. Over one-third of all respondents reported that their hospital did not impose constraints, while one-quarter of the psychiatrists said that their hospitals sometimes imposed constraints, 13.4% reported frequent constraints, and 6.6% said that their hospitals “always” imposed constraints. Imagine how different life is, and how different the clinical experience is for patients, along this spectrum from “never” to “always.” We need to know much more about which hospitals are which, why they think they must manage as they do, and what are the clinical consequences. Or, to put it more positively, do the chief executive officers and medical directors of the hospitals that never use constraints know a thing or two that those at the hospitals that feel they must frequently or always use constraints should know? Are they now succumbing to a bandwagon of micro-managing?

After showing that young psychiatrists are significantly more likely to experience pressure not to admit severely ill as well as uninsured and Medicaid patients, and that female psychiatrists report significantly more pressure to constrain treatment and plans to admit, the authors reassure us that none of this is reason to believe these professionals “are providing less appropriate care.” Yet the methods and data of the study do not allow them or us to know this for sure. If such were the case, the significance of the article would be greatly diminished. The authors call these constraints “controls” and then assure us that they control nothing of clinical significance. More to the point, we need further research and routine quality assurance measures to determine who is getting hurt by these “external controls,” the most extensive in the Western world. Other countries have held their costs down without them, and we can as well.

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DONALD W. LIGHT, PH.D.
Stratford, N.J.

Neurocognitive Deficits in Schizophrenia

TO THE EDITOR: The article by Michael Foster Green, Ph.D. (1), represents an important area of research within our Clinical Research Center for Schizophrenia & Psychiatric Rehabilitation at which Dr. Green has been working for the past 10 years. Dr. Green's article and his recent studies in this area reflect an interdisciplinary blending of the neurocognitive with the functional and behavioral domains of schizophrenia. We hope that creative new findings can emerge from this type of interdisciplinary work. For example, it is intriguing to consider the direct remediation of neurocognitive deficits through learning-based approaches as a means of improving the “rehabilitation readiness” of persons with schizophrenia.

To his excellent review, I would like to add a methodological point that should be helpful to investigators who wish to follow up on Dr. Green's implications and conclusions. He leaves open the question of the role of psychiatric symptoms in contributing to functional outcomes. On the other hand, some have perpetuated the myth that symptoms do not influence the work performance or instrumental role functioning of individuals with serious mental disorders (2, 3).

Unfortunately, the early work in this area was done in the pre-DSM-III era, when diagnosis and psychopathology assessment were unreliable. In addition, these earlier studies never compared contemporaneously collected psychopathology and functional data, which were the keynote of Green's review of correlations between neurocognitive and functional domains. The earlier studies assessed the initial psychiatric symptoms of subjects and compared them with occupational outcome at a much later point in time, which completely ignores the fact that intervening treatment might have substantially improved symptoms so that positive, functional outcomes could accrue, with significant correlations between these two domains.

More recent studies that have used modern and reliable methods of diagnosis and psychopathology assessment and that have correlated psychiatric symptoms more cross-sectionally with functional status have found significant correlations (4–9). It is also important in this controversy to examine specific types of psychotic symptoms that are more likely to impair functional behaviors (e.g., thought disorder, disorientation, bizarre behavior, and manic behavior would be expected to disrupt an individual's work capacity). One recent meta-analysis of treatment studies of major depression also has highlighted the robust impact of depressive symptoms on work capacity (10).

Another factor that can help to explain the low correlations between symptom severity and functional status or outcomes is the restricted range in symptoms that is often an unmentioned but important element in the subject population being studied. Many of the studies have been conducted with state hospital or Veterans Administration medical center patients who are almost all “chronic” and “treatment refractory” in terms of symptom stability and severity. Even when the studies are conducted with individuals from community support programs and community mental health centers, symptom levels may be restricted by the nature of the “seriously mentally ill” population drawn from these locales.

In a 1992 unpublished study, my colleagues and I purposefully recruited individuals with a wide variety of disorders from a wide variety of treatment and residential locations and incorporated a normal comparison group in the study. When we used this broad array of subjects with varying symptoms, the cumulative severity of symptoms turned out to be the most important predictor of employability or sustained employment.

In understanding determinants and "rate limiting" factors of functional outcomes in the work and social domains of life for persons with schizophrenia and other disabling mental disorders, we should not seek unidimensional factors such as neurocognition alone but instead begin to appreciate the multifactorial and interactive nature of relationships among psychopathology, psychiatric treatments, work history and allied behavioral assets, neurocognition, social support, reinforcement, and disincentives (unpublished 1996 study of M. Bell).

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ROBERT PAUL LIBERMAN, M.D.
Los Angeles, Calif.

Dr. Green Replies

TO THE EDITOR: I thank my colleague Dr. Liberman for his comments on my article, which provide me with an opportunity to clarify several points.

Describing as a "myth" the idea that psychiatric symptoms are not associated with functional outcome, Liberman suggests that my review leaves this question open. That is not entirely accurate. In fact, on the basis of the review, I concluded that negative symptoms were "probably related" to social problem solving and "possibly related" to community outcome (the review specifies operational definitions of these categories of relationships). It is true that my review failed to find a clear relationship between *psychotic* symptoms and functional outcome. Liberman cites seven published studies in support of his assertion that psychiatric symptoms relate to functional status. Although none of these seven studies appeared in my tables (for reasons clearly explicated in the review), my discussion of community outcomes did include the findings of the study by Breier et al. Five of the remaining six studies Dr. Liberman cites do not include any data that bear on the question of psychotic symptoms and functional outcome in schizophrenia.

Nevertheless, Liberman is correct to suggest that my review was not a comprehensive study of the topic. Nor was it intended to be one. The sample of studies in my review was restricted to those that included neurocognitive measures as predictors or correlates of functional outcome. The rationale for the selection of studies was that the review was designed to address the specific question of neurocognition and functional outcome. A subgroup of these studies happened to include symptom assessments, making it possible for me to directly compare psychiatric symptom assessments and neurocognitive assessments as correlates of functional outcome.

Liberman suggests that some of the difficulty in finding relationships between psychiatric symptoms and outcome may be the intervening time between assessment of symptoms and assessment of outcome. I essentially agree with this point. Psychotic symptoms are typically episodic, in contrast to the enduring and stable quality of some neurocognitive deficits. The variability in symptoms might well obscure their correlations with measures obtained at another point in time. Indeed, Liberman cites his own research with Massel et al. as evidence of concurrent association between symptoms and functional status. My review was limited to prospective designs in the community outcome domain but cited two additional cross-sectional studies. Temporal proximity of the assessments, however, cannot fully account for my conclusions across outcome domains. The studies in my review were roughly evenly divided between cross-sectional and longitudinal studies, and psychotic symptoms were not associated with functional outcomes in either type of design.

I fully agree with Dr. Liberman that in the search for rate-limiting factors in schizophrenia outcome, we should not rely excessively on single factors. Nonetheless, the central conclusion of the review remains: If you want to know how well a patient will succeed in terms of community outcome, social problem solving, or skill acquisition, you are better off basing your estimates on assessments of verbal memory than on ratings of psychotic symptoms.

MICHAEL FOSTER GREEN, PH.D.
Los Angeles, Calif.

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