

## Section Editors

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# Functional disorders in the Neurology section of *ICD-11*

## A landmark opportunity

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### ABSTRACT

Functional disorders are one of the most common diagnoses in neurologic practice, but this is not reflected in current classification systems. The 11th revision of the World Health Organization's *International Classification of Diseases (ICD-11)* in 2017 offers an opportunity for these disorders to appear within both neurologic and psychiatric categories for the first time. We discuss the rationale for this proposal and highlight the potential benefits for health professionals and patients. ***Neurology*® 2014;83:2299-2301**

In 2017, the WHO will ask the World Health Assembly to approve the 11th revision of the *International Classification of Diseases (ICD-11)*. One of the many complex issues involved in the task is the question of how to classify functional disorders in patients who present to neurologic services.<sup>1</sup>

Functional neurologic disorders are those such as dissociative (nonepileptic) seizures or functional movement disorders that are genuinely experienced and can be positively identified as being internally inconsistent (e.g., with a positive Hoover sign or tremor entrainment test) or incongruent with recognized disease processes. These disorders are the second commonest reason for an outpatient neurology consultation after headache.<sup>2</sup> Patients with these disorders have been found to be as disabled as and more distressed than outpatients with corresponding disease.<sup>2</sup> Misdiagnosis of these disorders occurs no more than with other neurologic or psychiatric disorders, suggesting that existing diagnostic techniques are reasonably reliable.<sup>3</sup> It is especially important to appreciate that these are not simply unexplained symptoms, but a discrete group of disorders with positive physical diagnostic criteria that have been the subject of numerous epidemiologic and treatment studies and have a range of common supportive features such as vulnerability to other functional disorders such as irritable bowel syndrome and fibromyalgia. There is, however, a gaping discrepancy between the frequency of these disorders and their representation within the general fabric of the specialty of neurology as determined by understanding, research, training, textbooks, and classification. In this article, we propose a system, discussing advantages and disadvantages, for adoption of functional neurologic disorders in the Neurology section of *ICD-11*.

In *ICD-10*, functional neurologic disorders are classified exclusively in the psychiatry section as dissociative (conversion) motor/seizure/sensory disorders (F44.4). *ICD-10* reflected the dominance of psychiatric models of these disorders in the 100 years since Breuer and Freud's conversion hypothesis of 1893. For most of the 20th century, the patient with a functional disorder has often been a *persona non grata* in the neurology service, a patient with a disease to be excluded but not ultimately of interest to the neurologist. The difficulty of differentiating genuine functional disorders of the voluntary motor system from malingering, combined with fears of misdiagnosis, are 2 of the main reasons why these patients have so often occupied a no-man's land between neurology and psychiatry.

In the last 10–20 years, the pendulum has shifted back to a view that both mind and brain, both psychiatry and neurology, have important perspectives to offer these patients.<sup>4</sup> There are multiple arguments why feigning is not a plausible explanation for the vast majority of patients with these disorders.<sup>4</sup> In addition, brain imaging and neurophysiology have offered new insights into the mechanisms of symptoms including differences between functional and feigned symptoms.<sup>4</sup> This shift has also been recognized within psychiatry. In *DSM-5*, new diagnostic criteria for conversion disorder (now also named functional neurologic symptom disorder) have abandoned a requirement for recent psychological stress in recognition

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that this is not identifiable in many patients. Instead, there is a criterion demanding evidence of the positive clinical examination features that neurologists use to make these (and other) diagnoses ([www.dsm5.org](http://www.dsm5.org)).

In *ICD-10*, functional disorders are commonly found within the parent specialties most likely to see the patients. For example, irritable bowel syndrome is classified in the gastrointestinal section and fibromyalgia within the rheumatology section. Neurology has lagged behind in this respect. Gastroenterologists, for example, have been refining their understanding and classification of functional gastrointestinal disorders with international consensus since the mid-1970s.<sup>5</sup> The Rome Foundation classification for functional gastrointestinal disorders is now in its third revision and has been provisionally adopted on a wholesale basis for *ICD-11*.

*ICD-11* offers a new, landmark opportunity to bring functional disorders back within the legitimate domain of neurology. We have proposed a category within the Neurologic section in which all of the functional disorders involving motor and sensory function can be listed and coded (including nonepileptic attacks) (table). We suggest that, like other conditions shared between neurologists and psychiatrists, such as Tourette syndrome and dementia, psychiatry retains a code for functional disorders, preferably matching that found in neurology. Those wishing to make suggestions regarding this topic can do so at <http://apps.who.int/classifications/icd11/>.

**Table** *ICD-11 proposed changes for functional disorders of the nervous system*

<b>Level 1</b>
Diseases of the nervous system
<b>Level 2</b>
Functional disorders of the nervous system
Defined as the presence of involuntary symptoms of motor or sensory dysfunction that can be positively identified as being internally inconsistent (e.g., with a positive Hoover sign or tremor entrainment test) or incongruent with recognized disease processes
<b>Level 3</b>
Functional disorders of the cranial nerves, e.g., visual loss, diplopia (convergence spasm), facial spasm, aphonia, deafness
Nonepileptic seizures
Functional paralysis or weakness
Functional sensory disorders
Functional movement disorders, e.g., tremor, jerks, dystonia, parkinsonism
Functional cognitive disorders, e.g., isolated retrograde amnesia
Functional gait disorders

The inclusion of functional disorders in *ICD-11* Neurology has the potential for a major positive shift in attitudes and patient care by the following means:

1. Encourage neurologists to take clinical responsibility for functional disorders and make positive diagnoses rather than diagnoses of exclusion.
2. Establish functional disorders as a core element of neurologic training and curriculae.
3. Encourage neurologists to undertake research in functional disorders (where currently they may believe it is not a legitimate area of neurologic endeavor).
4. Enable patients with functional neurologic disorders to more easily access neurology-based treatments, such as specialist neurologic physiotherapy, which may benefit them.
5. Promote better collaborative working between neurology and psychiatry.
6. Provide more accurate data to health care providers regarding the service costs of functional neurologic disorders.
7. Allow neurologists constrained by *ICD* coded billing systems to make functional neurologic diagnoses. We are aware that in many health care systems in the world, neurologists or hospitals are only paid if they make an *ICD* diagnosis within their own specialty. In some cases, this means that neurologists are discouraged from making explicit diagnosis of functional disorders because this would mean using a psychiatric code for which they would not receive payment. So instead of writing “functional leg weakness” a neurologist might write “leg weakness” on a letter or use the term “encephalopathy” or “abnormal involuntary movements” to describe a nonepileptic attack. An open and transparent discussion of the diagnosis is the first step of treatment. A change in coding could clearly help here.
8. Enable the more widespread use of a diagnostic label that may be more acceptable and constructive in patient encounters.

Conversely, the absence of functional neurologic disorders from *ICD-11* Neurology or their inclusion in attenuated form (such as within a “symptoms and signs” category) will miss many of these opportunities. In such a situation the understandable response of a neurology trainee getting to grips with his specialty might be, “If they are not legitimate disorders within my specialty in *ICD-11*, why should I regard them as such?”

We are aware that the debate here is not straightforward. Some might argue that “allowing functional disorders into neurology” is giving in to those who stigmatize mental illness. We would argue first that such a change is theoretically justified as these are

disorders of brain and mind. Second, neurologic skills are the foundation of the diagnosis and initial steps of treatment—these patients are already the territory of neurology. Another concern may be that emphasis on a neurologic categorization, while popular with patients, will hinder rehabilitative treatment, which may pivot on whether patient beliefs about the presence of irreversible damage can be changed. This could happen, but only if the condition is not properly explained or understood by the patient as a genuine potentially reversible disorder (e.g., as on [www.neurosymptoms.org](http://www.neurosymptoms.org)). Neurologic classification does not hinder attempts at rehabilitation for diseases like multiple sclerosis or Parkinson disease.

The process of classification may appear arcane or irrelevant to many neurologists. We suggest that, on the contrary, classifications can shape attitudes and practice in a profound way. It is time for functional neurologic disorders to be classified in a way that reflects their disability and prevalence in neurologic practice in addition to their place at the interface between neurology and psychiatry.

#### AUTHOR CONTRIBUTIONS

J.S. drafted and revised the manuscript. A.C., M.H., D.B., and R.S. revised the manuscript.

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#### DISCLOSURE

J. Stone has been or is involved in the Topic Advisory Group for revision of the *ICD-10* chapter on diseases of the nervous system established by the WHO as an advisor; he runs a free self-help Web site for patients, [neurosymptoms.org](http://neurosymptoms.org), mentioned in the article. M. Hallett has been or is involved in the Topic Advisory Group for revision of the *ICD-10* chapter on diseases of the nervous system established by the WHO as an advisor. A. Carson reports no disclosures relevant to the manuscript. D. Bergen has been or is involved in the Topic Advisory Group for revision of the *ICD-10* chapter on diseases of the nervous system established by the WHO as a member. R. Shakir has been or is involved in the Topic Advisory Group for revision of the *ICD-10* chapter on diseases of the nervous system established by the WHO as chair. The statements in this article represent the views of the authors and not the official views of the Topic Advisory Group or the WHO. Go to [Neurology.org](http://Neurology.org) for full disclosures.

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