

# Ethical issues in the treatment of functional neurological disorder

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*“The exact cause of FND is unknown. FND was thought to be a ‘conversion disorder’ by Sigmund Freud because he believed it was a psychological disorder that converted into a neurological one.” (National Institute of Neurological Disorders and Stroke)<sup>1</sup>*

In this PM&R ethics/legal feature, we revisit ethical issues in treating patients with what was commonly called conversion disorder and is now often referred to as functional neurological disorder (FND). There is a long history of tension between psychological and neurological explanations for these illnesses, which are heterogenous, a common cause of neurological disability, more frequently diagnosed in women, and treated by various specialties.<sup>2</sup>

In a qualitative study of patients with functional motor disorders, Nielsen and colleagues elucidate six key themes: (1) the burden of living with functional motor disorder, (2) nobody knew what was wrong, (3) dissatisfaction with psychological explanations, (4) patients feel abandoned, (5) iatrogenic harm, and (6) powerlessness.<sup>3</sup> These feelings of being misunderstood, abandoned, and powerless can complicate treatment of this heterogenous condition and raise ethical issues about our duties to patients who enter rehabilitation settings. In fact, the uncertainties around diagnosis, prognosis, and long-term outcomes open up a host of ethical issues

around communication, resource allocation, and quality of life.

To unpack some of these issues, I sent the following writing prompt to the invited authors:

In a 2012 PM&R ethics/legal feature titled, “Why Can’t I Move, Doc? Ethical Dilemmas in Treating Conversion Disorders” <https://onlinelibrary.wiley.com/doi/full/10.1016/j.pmrj.2012.03.008>,<sup>4</sup> the authors discuss ethical issues such as covert rehabilitation and truth-telling. A recent case discussion at my home institution sparked a discussion about the range of ethical issues that can arise and how clinicians can navigate the nuances. Drawing on case examples, and your own practice, what do you identify as pressing ethical issues in the treatment of functional disorders? What suggestions do you have for mitigating some potential problems?

The first essay by Ivan R. Molton, PhD, a rehabilitation psychologist and professor of rehabilitation medicine at the University of Washington, and Eva Keatley, PhD, a rehabilitation psychologist and an assistant professor of physical medicine & rehabilitation at Johns Hopkins University, focuses on transparency and the larger justice concerns in treatment of people with FND. The second essay, by Abhishek Jaywant, PhD, a clinical neuropsychologist and assistant professor in the

Departments of Psychiatry & Rehabilitation Medicine, Weill Cornell Medicine / New York-Presbyterian Hospital, focuses on disclosure and barriers to disclosure in PM&R practice. The third piece is by Sylvia Josephy-Hernandez, MD, MSc, Ana Maria Rivas-Grajales, MD, MSc, and David L. Perez, MD, MMSc. Drs. Josephy-Hernandez and Rivas-Grajales are fellows in behavioral neurology - neuropsychiatry, and Dr. Perez is a dual-trained neurologist-psychiatrist, associate professor of neurology, and the founding director of the multi-disciplinary Functional Neurological Disorder Unit at the Massachusetts General Hospital, Harvard Medical School.

All three invited essays are in synergy around the need for disclosure, discouraging the concept of “covert” rehabilitation, which was written about in the previous ethics/legal feature. In the almost-decade since that feature appeared, the ubiquity of electronic medical records, social media, and online resources has certainly changed the clinician–patient relationship and how information is communicated, shared, and processed. This is true across specialties and clinical phenomena. And as rehabilitation professionals focused on improving

function and quality of life, the historical, gendered, and social contexts of FND urge us to find ways to empower patients and clinicians alike.

As always, I welcome comments and ideas for ethics/legal features and can be reached at dem9199@med.cornell.edu.

## REFERENCES

1. Functional Neurological Disorder. National Institute of Neurological Disorders and Stroke. August 22, 2021. Accessed November 23, 2021. <https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Functional-Neurologic-Disorder>
2. Espay AJ, Aybek S, Carson A, et al. Current concepts in diagnosis and treatment of functional neurological disorders. *JAMA Neurol.* 2018;75(9):1132-1141.
3. Nielson G, Buszewicz M, Edwards MJ, Stevenson F. A qualitative study of the experiences and perceptions of patients with functional motor disorder. *Disabil Rehabil.* 2020;42(14):2043-2048.
4. Kirschner KL, Smith GR, Antiel RM, Lorish P, Frost F, Kanaan RA. “Why can’t I move, Doc?” ethical dilemmas in treating conversion disorders. *PM R.* 2012 Apr;4(4):296-303.

## On the need for transparency and justice in FND

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A 25-year-old woman undergoes a microvascular decompression procedure for trigeminal neuralgia, comes out of anesthesia, and reports that she cannot always move her right leg. An urgent workup is performed, revealing no identifiable organic cause for this symptom. Upon further evaluation, the neurology service recognizes the intermittent monoplegia as a symptom of functional neurological disorder (FND). The fellow reluctantly gives the distressed patient this diagnosis, states that it is caused by anxiety, and transfers her to inpatient rehabilitation. When she arrives on the rehabilitation floor she is frustrated, frightened, and reluctant to meet with the team, stating, “I know you think it’s all in my head, but this was caused by the surgery!”

## DECEPTION, BENEFICENCE, AND AUTONOMY

For most of the long history of FND, deception was considered an essential part of intervention. This approach likely originated with Freudian notions that “conversion” symptoms were symbolic representations of repressed trauma and that full knowledge of this fact, too fast, would be psychologically devastating. Conveniently, this also meant that providers could avoid discussion of a diagnosis that caused them personal discomfort. The classic debate has therefore centered on the ethics of obfuscation and covert rehabilitation versus truth-telling. Protecting patients from a supposedly dangerous reality was seen as consistent

with the principle of nonmaleficence but contrary to the principle of autonomy.

Fortunately, this ethical conflict is just an illusion, rising out of tradition and misinformation, and has a very simple solution. Tell them! As a provider with the appropriate expertise, when FND is identified based on positive signs<sup>1</sup> and the lack of concordance with known neurologic disease, share your diagnosis. Do not withhold this critical information. Do so in a way that is compassionate, informed, and does not focus on trauma or psychological causation. Include good evidence-based information, and wherever possible, refer your patient to multidisciplinary rehabilitation programs that can address functional symptoms. Practice your explanation of this condition as you would any other, and be prepared to convey that FND represents a medical mystery, a disruption in motor planning, or the classic “software rather than hardware” problem.<sup>2</sup> You can share your diagnosis with confidence - after appropriate evaluation, rates of missed disease in patients with functional symptoms are very low, ranging from 1%-4%, and not higher than in patients with medically explained neurologic conditions.<sup>3</sup> In terms of beneficence, there is no demonstrated protective effect in lying to our patients about this diagnosis and every reason to believe that early diagnosis and collaboration is associated with better outcomes.<sup>2</sup> Of course, patients can accept or reject medical diagnoses, FND included, and can feel angry or frustrated when they hear a diagnosis they do not understand or disagree with. Restricting their right to have a full understanding of their condition *for their own good* is a clear form of hard paternalism - actions by a physician intended to benefit a patient but contrary to informed consent and voluntary choice.<sup>4</sup>

Can we now close the book on deception in FND? Not quite. Sharing the diagnostic label is an essential step but does not completely address the issue. For one thing, the evidence-base for treating FND is still developing. As a result, we do not know what parts of treatments are active versus placebo. This may create tension for providers who value transparency about the evidence behind interventions they recommend. However, observe that physician surveys invariably report frequent use of treatments for which the active mechanism of effect is unclear.<sup>5</sup> Generally, these include active or “impure placebos” - medications with pharmacological effects but without proven impact in the application for which they are being prescribed. Subtherapeutic doses of known agents and off-label uses are examples, and the mixture of active and (likely) placebo elements in FND treatment may be seen in the same way. These treatments can help many FND patients, even if the evidence base is yet emerging.

The age-old conflict between autonomy and beneficence also plays out in the medical record. Especially

in the context of the OpenNotes Initiative, millions of American patients have direct and instant access to visit notes. As a result, providers treating FND patients may hesitate to document important clinical features of this condition. Absent information may include important psychosocial predictors like disability identity, solicitous family support, secondary gain, or concern about factitious symptoms. Providers may use coded terms meant to convey the FND label without owning it - “functional overlay” or “non-physiologic gait.” On the one hand, providers may filter their documentation in this way to minimize potential for damage to the therapeutic relationship and to thereby support ongoing engagement with medical care. On the other hand, the medical record serves as a place for providers to communicate honestly and to coordinate treatment efforts. Creative omission to preserve a relationship is a small example of the autonomy/beneficence conflict. Addressing it is a balancing act particular to the specific patient-provider relationship, based on what has been directly discussed. Generally, when autonomy and beneficence are in conflict, the patient’s right to know must come first.

## JUSTICE

When it comes to treating functional syndromes, providers may also have concerns about *distributive justice*, or ensuring fair, equitable, and appropriate distribution of limited healthcare resources. Some providers may see patients with unexplained symptoms as a poor use of those resources. Patients with FND present frequently in emergency departments or are referred for exhaustive and expensive workup including magnetic resonance imaging, genetic testing, and video electroencephalogram. Providers may feel an obligation to reserve those resources for patients “who really need it.”

In a study by Gelauff et al., individuals diagnosed with functional weakness were told they had nothing medically wrong but were discharged and not provided with a diagnosis. Among those patients, 80% had symptoms at long-term follow-up with increasing rates of unemployment. By contrast, comprehensive interdisciplinary clinics show significant improvements in 40%-60% of patients with functional motor symptoms.<sup>6</sup> Despite clearly benefitting from treatment, FND patients are often perceived to be taking limited resources away from “real” rehabilitation patients.

It is important to remember that much of the heavy resource utilization seen in FND is not generated by the patients but rather from provider discomfort within a fragmented medical system. Negative diagnostic workup begets further workup, sending the signal to the patient that their condition is mysterious, rare, and dangerous. Patients are bounced between specialists who

feel that *other* specialists must have the requisite expertise to help - from neurology to psychiatry to rehab medicine and back again. As a result, patients with FND routinely wait 7-10 years for an accurate diagnosis and absorb considerable resources in the journey. Timely diagnosis using positive signs, with clear and honest communication and treatment planning, is the best way to minimize inappropriate medical engagement and to support distributive justice in patients with FND.

The principle of justice also requires equal treatment. As clinicians, we are loathe to admit it, but our competency is affected by how we feel about our patients. Patients with FND push our buttons and trigger barely conscious biases that influence our willingness to engage in collaborative medicine. It is virtually impossible to completely shake the sexist and stigmatizing labels that were until recently used to describe patients with FND. Providers may think a patient with FND is intentionally malingering or is “incurable” (they are neither), is “histrionic” (when attention seeking is rarely the only reinforcer), or must have a personality disorder (the majority do not). It is thus important to reflect on and recognize our own attitudes regarding

FND patients, which trickle in through popular media, clinical, and personal experiences. Like all biases, these create information filters that confirm our beliefs in a broken feedback loop. In the case of FND, these heuristics can mean that we fail to uphold the same ethical principles that come so readily when caring for individuals with other disabling disorders.

## REFERENCES

1. Tremolizzo L, Susani E, Riva MA, Cesana G, Ferrarese C, Appollonio I. Positive signs of functional weakness. *J Neurol Sci.* 2014;340(1–2):13-18.
2. Stone J, Burton C, Carson A. Recognising and explaining functional neurological disorder. *BMJ.* 2020;371:m3745.
3. Gelauff JM, Carson A, Ludwig L, Tijssen MAJ, Stone J. The prognosis of functional limb weakness: a 14-year case-control study. *Brain.* 2019;142(7):2137-2148.
4. Varkey B. Principles of clinical ethics and their application to practice. *Med Princ Pract.* 2021;30(1):17-28.
5. Harris CS, Raz A. Deliberate use of placebos in clinical practice: what we really know. *J Med Ethics.* 2012;38(7):406-407.
6. Czarniecki K, Thompson JM, Seime R, Geda YE, Duffy JR, Ahlskog JE. Functional movement disorders: successful treatment with a physical therapy rehabilitation protocol. *Parkinsonism Relat Disord.* 2012;18(3):247-251.

# An illness in need of diagnostic disclosure

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When a patient with a suspected or confirmed functional neurological disorder (FND) presents to the rehabilitation setting, ethical questions around disclosure inevitably arise. How can we be certain that a patient does in fact have FND? When we are reasonably certain that we are looking at FND, should we disclose the diagnosis to the patient? Do we need to disclose to effectively treat the patient? Through caring for patients and nuanced discussions with my colleagues, I have become convinced that in rehabilitation settings, we need to disclose the diagnosis and educate patients about FND much more than we do.

## ADVANTAGES OF DISCLOSURE

Disclosure in the context of FND is often framed as a conflicting choice between beneficence and autonomy, but these are not mutually exclusive. The advantages of providing a diagnosis of FND are the same as in

other areas of medicine. A diagnosis provides a patient with clarity regarding symptoms that are often confusing and distressing. It empowers a patient (and his or her providers) to collaboratively address a tangible problem with specific treatment targets and interventions. A thoughtfully and empathically conveyed diagnosis therefore promotes *both* patient autonomy and beneficence. It also advances justice and equality in how we treat our patients, because all individuals should have “access to and benefit from... equal quality in the processes, procedures, and services being conducted.”<sup>1</sup>

There are significant disadvantages to non-disclosure: the original 2012 PM&R case highlighted the long-term harm that nondisclosure may have caused from continued unwarranted or unneeded medical procedures. Further, by avoiding disclosure, we risk depriving FND patients of evidence-based interventions such as cognitive-behavioral therapy (CBT). It is also worth considering the broader societal harms to

nondisclosure of FND: the potential to perpetuate misinformation and stigma and the negative impact on research.

## BARRIERS TO DISCLOSURE

Why are we reluctant to disclose and educate patients on FND? Even prior to disclosure may be our reluctance to make the diagnosis and to inadvertently miss a “real” illness. Historically, FND was a diagnosis of exclusion. However, it can now be made as a diagnosis of inclusion based on specific signs and symptoms, and the likelihood of misdiagnosis is actually quite low.<sup>2</sup> Even when we are reasonably certain we are looking at FND, a barrier to communicating the diagnosis is that FND itself has long been a fuzzy and ill-defined disorder, explained by what it is not. Etiological theories have implied that FND is rooted in deep-seated psychopathology that requires years of intensive psychotherapy to address. This meant that FND was not a particularly satisfying diagnosis to deliver.

Recent neurobiologically informed research has challenged many of these notions. There are specific brain circuits and cognitive processes that underlie the development and expression of FND. These include altered functional connectivity within and between the supplementary motor area, limbic structures, and prefrontal cortex.<sup>3</sup> The implicated circuits suggest that emotional processing may interfere with sensorimotor integration and motor planning and execution. These neurobiological abnormalities may also give rise to altered cognitive processes such as heightened body-focused emotion and the perception of movements as involuntary or lacking agency. Although many individuals with FND do not have a history of trauma or psychopathology, recent stressors substantially increase the risk of FND.<sup>4</sup> Thus, the diagnosis of FND can be explained within a biopsychosocial framework like many other disorders we treat in rehabilitation.

There are other barriers to disclosure that stem from psychological processes at the individual and group level. We may tend to avoid giving a diagnosis because we anticipate that a patient will respond with fear, anger (especially toward us), self-blame, or resignation. However, the probability of these anticipated negative outcomes is likely overestimated because it is colored by our emotions. In fact, we are used to having difficult conversations about difficult diagnoses. FND can be a hopeful diagnosis to deliver because we expect that symptoms will get better: rehabilitation works and so does CBT.<sup>5</sup> Although the team-based approach of rehabilitation has several advantages, it can create diffusion of responsibility in which each team member may not see it as their role or

responsibility to educate the patient. A related barrier in acute inpatient rehabilitation is that a patient may be on the unit for only a brief period before returning to their primary team, who it is assumed will provide the diagnosis and education.

## STRATEGIES TO PROMOTE DISCLOSURE

How to mitigate and circumvent these barriers? I have found it helpful to think of FND as a brain disorder like any other we treat in rehabilitation. Adopting this mindset can make the care of FND more “tangible,” help reduce stigma, increase empathy, and empower us to take a proactive approach to diagnosis and treatment. It can be helpful to identify and challenge our own automatic thoughts and emotions, which color our decision-making and lead us to overestimate the risk of a negative outcome from making and disclosing a diagnosis. Relatedly, it is helpful to bring to mind the long-term benefits of disclosure and costs of nondisclosure, to ensure our decision-making is not overly weighted to the short term.

The process of relaying a diagnosis and educating a patient can be iterative. In the acute inpatient rehabilitation unit in which I work, FND diagnoses are often being considered in a differential diagnosis but are not yet confirmed. Even without 100% certainty, it is useful to talk about cognitive and emotional processes that may influence the patient’s expression of physical signs and symptoms. I have found it helpful to meet with patients for CBT sessions in which I provide education on mind-body connections, discuss the role of thoughts and emotions in physical symptoms, and teach brief strategies to mitigate excessive body-focused attention, avoidance, and catastrophic thinking. The goal here is not to negate or invalidate the patient’s perceptions and experience but to suggest that psychological and environmental factors may trigger, influence, or exacerbate symptoms. This approach is similar to psychological treatments for chronic pain. Most patients are receptive to this—after all, who has not had the experience of stress leading to physical symptoms such as aches, fatigue, and exhaustion.

In a recent case conference of a confirmed FND case at my home institution, a physiatrist colleague at an affiliated hospital shared with me and our team the website for FND Hope,<sup>6</sup> a patient advocacy organization that provides educational resources and information on ongoing research and peer support groups. It struck me that it was precisely because our team was open to discussing a difficult illness that we learned of a novel resource that could empower us in our clinical practice. It highlighted to me that the more that we continue to proactively talk about and treat FND—which includes making and disclosing diagnoses and

implementing FND-specific interventions—the better we will serve our patients.

## REFERENCES

1. American Psychological Association. *Ethical Principles of Psychologists and Code of Conduct*; 2017. <https://www.apa.org/ethics/code>
2. Espay AJ, Aybek S, Carson A, et al. Current concepts in diagnosis and treatment of functional neurological disorders. *JAMA Neurol.* 2018;75(9):1132-1141. doi:10.1001/jamaneurol.2018.1264
3. Perez DL, Nicholson TR, Asadi-Pooya AA, et al. Neuroimaging in functional neurological disorder: state of the field and research agenda. *NeuroImage Clin.* 2021;30:102623. doi:10.1016/j.nicl.2021.102623
4. Ludwig L, Pasman JA, Nicholson T, et al. Stressful life events and maltreatment in conversion (functional neurological) disorder: systematic review and meta-analysis of case-control studies. *Lancet Psychiatry.* 2018;5(4):307-320. doi:10.1016/S2215-0366(18)30051-8
5. O'Neal MA, Baslet G. Treatment for patients with a functional neurological disorder (conversion disorder): an integrated approach. *Am J Psychiatry.* 2018;175(4):307-314. doi:10.1176/appi.ajp.2017.17040450
6. FND Hope. Accessed November 15, 2021. <https://fndhope.org/>

# A neuropsychiatric perspective on ethical dilemmas in the management of functional neurological disorder

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*“I solve the mind-body problem by stating there is no such problem. There are of course many problems concerning the ‘mind’ and the ‘body,’ and all the intermediate levels of integration of the nervous system. What I wish to emphasize is that there is no problem of ‘mind’ versus ‘body,’ because biologically no such dichotomy can be made. The dichotomy is an artifact; there is no truth to it, and the discussion has no place in science in 1943.” Stanley Cobb (1943)*

Functional neurological disorder (FND) is a prevalent, potentially disabling and costly condition at the intersection of neurology and psychiatry.<sup>1</sup> Although Stanley Cobb offered a neuropsychiatric perspective that remains timely to this day, modern medicine and healthcare systems continue to embrace a false dualism between physical and mental health. Here, we highlight some ethical considerations that we encounter in caring for patients within an outpatient multidisciplinary FND clinic that emphasizes diagnostic clarification based on “rule-in” physical examination signs and the development of a biopsychosocially informed, patient-centered treatment plan.<sup>2</sup>

## WHAT IS MY DIAGNOSIS, DOCTOR?

Effectively communicating the diagnosis of FND is vital to treating patients with functional neurological symptoms. Despite growing consensus on the importance of transparent and open dialogue, data suggest that clinicians find it challenging to inform patients about a FND diagnosis. A recent survey showed that after confirming a FND diagnosis clinically, a high proportion of neurologists did not communicate their impressions to patients and/or used less precise diagnostic codes.<sup>3</sup> Why might this be? Amidst a range of possibilities, there can lie a misplaced sense of beneficence in the decision to not disclose the diagnosis - placing the patient under risk of unnecessary tests and procedures and hindering their engagement in evidence-based treatments. Furthermore, western practicing physicians have been exposed societally and during their medical training to codified distinctions between neurological and psychiatric conditions, a point of view that can leave the neurologist (and other clinicians) feeling ill equipped to care for patients with both high neurological and psychiatric complexity. The brain does not separate into distinct “neurologic” and “psychiatric” circuits.

In the clinic, we open the dialogue about a possible FND diagnosis through several concerted efforts: (1) the frame is established early in the encounter that the setting is to evaluate and care for patients suspected of having sensory, motor, and/or cognitive symptoms at the intersection of neurology and

psychiatry; (2) through emphasis on detecting physical examination signs and features supporting an FND diagnosis, these “rule-in” diagnostic features are pointed out to the patient in real time (eg, I notice that when I test your strength you are strong for a moment before your arm collapses; I notice that when you perform finger tapping movements with your right hand, your head tremor resolves); and (3) once confirmed clinically, a FND diagnosis is communicated to the patient - noting that this condition is real, common, brain based, and potentially treatable. Providing education on FND is seen as the first step in treatment (albeit generally insufficient as a definitive intervention when used in isolation).

Nonetheless, a subset of patients may verbalize concern that the diagnosis is incorrect - including continuing to suggest alternative possibilities. Although this offers an opportunity for the physician to revisit the rationale for one’s diagnostic impressions, open discussion about potential differences of opinion should be welcomed. In our viewpoint, it is not the physician’s role to “convince the patient” about the correct diagnosis, but rather provide the patient with information so that they can make an informed decision for themselves. This approach speaks to an important nuanced issue with regard to FND care: the patient is NOT in any way bringing about their symptoms or responsible for being sick, but the patient plays an important role in their own recovery. In other words, “brain retraining” through physical and/or psychological treatments requires that the patient is an active participant rather than a passive contributor (eg, as would be the case for a prescribed medication or surgical intervention).

## WHY DO I HAVE FND?

Ethical considerations and clinical pitfalls can also occur when the question “why do I have FND?” is brought up. Clinicians encountering patients with FND in their practices should develop a thoughtful approach for how to handle this question. Although considerable progress has been made over the past two decades in elucidating a range of neurobiological and etiological factors for FND, data underscore that this condition is likely mechanistically and etiologically heterogeneous.<sup>4</sup> As such, the biopsychosocial-informed assessment for this population is designed to focus on the range of neurological symptoms endorsed by the patient, while also collecting psychiatric and social histories to help put the patient’s symptom complex in context.<sup>5</sup> That being said, we generally do not know upfront why any given patient has developed an FND - and models linking “stress” or “trauma” to FND are oversimplified and just not relevant for some.

In the clinic, we address the question of “why” one has developed FND as follows: (1) we acknowledge that we do not know the “why” regarding the specific

factors underlying a given patient’s symptoms, and (2) we frame FND using two interrelated models (ie, the software vs hardware and mind-body overload analogies). The “software vs. hardware” analogy highlights that although there is no macroscopic structural lesion, how parts of the brain are communicating with one another (the software) is impaired in patients’ with FND<sup>6</sup>; the “overload” analogy suggests that functional neurological symptoms can emerge when the brain reaches a certain threshold or limit in its capacities. When using either or both analogies, it can be helpful to encourage individuals to be curious during their treatment course about what may be contributing to their own “personal equation” for their computer (brain) to be crashing or becoming overloaded.

## WHO TREATS FND?

There is a major void in health care for FND. Patients with FND have often been to multiple specialists before diagnosis and can therefore carry the notion of having a rare or “mystery” illness. This delay in diagnosis and treatment derives, at least in part, from the lack of physicians adequately trained to diagnose and manage this population. The dualistic approach of brain/body versus mind is pervasive. In this context, psychiatrists often feel ill equipped to appropriately evaluate the range of sensorimotor symptoms seen in FND. Similarly, and despite the large proportion of patients encountered across clinical settings, neurologists, psychiatrists, physiatrists, and allied mental health professionals may lack proper training to effectively guide and/or deliver evidence-based treatments. Medical training perpetuates the idea that neurology and psychiatry are separate, despite many patient populations challenging the artificiality of this divide. FND asks us to expediently reexamine the problematic notion that we have two clinical specialties for the same organ system. In our opinion, increasing the pool of clinicians with integrated neurological and psychiatric expertise will add considerable value to the therapeutic landscape in FND.<sup>7</sup> This is in part the rationale behind why our multidisciplinary and interdisciplinary FND clinic is imbedded within a behavioral neurology-neuropsychiatry framework.

## FRAMING CARE

In a consumer approach to medicine, physicians are expected to provide readily accessible diagnostic tests and treatments - driven in part by patient preference. In FND care, a consumer model has the potential to lead towards unnecessary repeat testing and/or the use of medication interventions that may not be clinically indicated (eg, opiates for chronic pain management). We suggest using a negotiated contract model of care -

where transparency is encouraged, expectations for patients and providers are outlined, and guided self-discovery is emphasized. The patient is also given the space to opt out if they feel that it is not a good fit for their specific situation, and the members of the clinical team are encouraged to be clear about the treatment components they can provide and consider indicated.

In conclusion, we have outlined some core ethical issues from a neuropsychiatric perspective based on our clinical experience working with people with FND. We encourage a turn away from mind-body dualism, promoting an integrated perspective embracing the inherent connections between the brain, mind and body.

## DISCLOSURE

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## REFERENCES

1. Stephen CD, Fung V, Lungu CI, Espay AJ. Assessment of emergency department and inpatient use and costs in adult and pediatric functional neurological disorders. *JAMA Neurol.* 2021; 78(1):88-101. doi:10.1001/jamaneurol.2020.3753
2. Glass SP, Matin N, Williams B, et al. Neuropsychiatric factors linked to adherence and short-term outcome in a U.S. functional neurological disorders clinic: a retrospective cohort study. *J Neuropsychiatry Clin Neurosci.* Spring 2018;30(2):152-159. doi:10.1176/appi.neuropsych.17060117
3. Herbert LD, Kim R, Hassan AA, Wilkinson-Smith A, Waugh JL. When neurologists diagnose functional neurological disorder, why don't they code for it? *CNS Spectr.* 2021;15:1-30. doi:10.1017/S1092852921000833
4. Perez DL, Edwards MJ, Nielsen G, Kozłowska K, Hallett M, LaFrance WC Jr. Decade of progress in motor functional neurological disorder: continuing the momentum. *J Neurol Neurosurg Psychiatry.* 2021;92(6):668-677. doi:10.1136/jnnp-2020-323953
5. Perez DL, Aybek S, Popkirov S, et al. A review and expert opinion on the neuropsychiatric assessment of motor functional neurological disorders. *J Neuropsychiatry Clin Neurosci.* 2021; 33(1):14-26. doi:10.1176/appi.neuropsych.19120357
6. Carson A, Lehn A, Ludwig L, Stone J. Explaining functional disorders in the neurology clinic: a photo story. *Pract Neurol.* 2016; 16(1):56-61. doi:10.1136/practneurol-2015-001242
7. Keshavan MS, Price BH, Martin JB. The convergence of neurology and psychiatry: the importance of cross-disciplinary education. *JAMA.* 2020;324(6):554-555. doi:10.1001/jama.2020.0062

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