



Asking How Our Patients Understand Addiction

When the President's Commission on Combating Drug Addiction and the Opioid Crisis declares "addiction [a] chronic relapsing disease of the brain"¹ and calls for expanded access to care, within those statements is recognition of the influx of patients with addiction into general medicine settings for chronic disease management. The initial conversations that can shape a patient's understanding of addiction will occur more and more within primary care offices or at the bedside in the general medicine wards. The stakes are high: how patients understand their addiction may shape their health behaviors, relationship with their care team, and willingness to accept treatment.

Backed by advances in neuroscience,² leading addiction researchers³ and professional societies⁴ have promoted an understanding of addiction as a chronic brain disease. However, a recent systematic review shows varied adoption of the brain disease model among addiction treatment providers, with some viewing addiction as a purely behavioral problem or maladaptive coping mechanism.⁵ We recognize that the brain disease model has critics,⁶ but we argue here that the model is not incompatible with other explanatory models. Furthermore, it provides strong support for why many interventions that can be provided in general medicine settings—like medications for addiction treatment—are effective.⁷

We assert that as providers in general medicine settings are asked to rapidly scale up services for people with addiction, they have 3 responsibilities: 1) seek to understand their own and their patients' explanatory models of addiction; 2) consider presenting the brain disease model to patients as an option for how they might view addiction; and 3) develop a shared vocabulary for discussing addiction—even if patient and provider models differ.

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EXPLANATORY MODELS OF ADDICTION

Eliciting a patient's "explanatory model" has long been central to cross-cultural medical care. The explanatory model is how a patient conceptualizes his or her illness, including what causes it, how it affects his or her life, and how it is best treated.⁸ In addition to or instead of the brain disease model, people may see addiction as a spiritual process, a moral failing, or an intrinsic part of their character.

We recently conducted a qualitative study that included interviews with many people in addiction recovery.⁹ Very few respondents described addiction as a brain disease, but many shared other understandings of their disease:

- As a combination of physical, spiritual, and psychological forces, echoing the language of 12 step groups.¹⁰ For many patients, the narrative of the 12-step model resonates with their lived experience of addiction and recovery, and this model is associated with an effective, accessible treatment modality.¹¹
- As a personal moral failing, which may be reflective of internalized stigma
- As a symptom of a system (social, health care, or governmental) that has failed the patient

Generalists are often attuned to how patients' backgrounds or belief systems affect other chronic diseases, but may not be as inclined to ask how a patient understands his or her addiction. This knowledge gap can be dangerous: intervening without an understanding of the patient's explanatory model can provoke or worsen shame, self-blame, and stigma.

THE BRAIN DISEASE MODEL

The brain disease model offers patients potentially helpful, destigmatizing ideas to explain the biological changes manifested in altered thinking, emotions, and behavior. It explains addiction as a series of changes in the brain's reward circuits, resulting from the combined influence of genes, environment, and exposure to substances. It acknowledges that cycles of withdrawal, anticipation, bingeing, and intoxication perpetuate addiction and points to the need for biologic and behavioral interventions that can help restore healthy brain function.³

Providers and many patients have long perceived other psychiatric illnesses, such as major depressive disorder, as brain diseases, rather than solely the product of individual circumstances. Perception of a psychiatric illness as a brain disease has been associated with greater treatment-seeking.¹² Other chronic diseases, such as heart disease or diabetes, often are driven by behavioral factors, but are almost universally seen as biologically based, with pathophysiology used to explain to patients how the behavior led to the disease.

The brain disease model has its pitfalls. When we frame substance use as part of patients' internal chemical wiring, we risk making it seem as if they have no control over their behavior. It is crucial, therefore, to emphasize how treatable addiction is, how relapse is part of the chronic disease process, and how recovery from many chronic diseases (such as type 2 diabetes) is a combination of behavior change and biological treatment.

The brain disease model is also not incompatible with other models for understanding addiction, as it often helps explain at the biological level what patients are experiencing. For instance, attending mutual-help meetings has been shown to help change people's social networks toward people who abstain.¹⁰ Shifting a social network can help remove exposure to conditioned cues for substance use and can help develop coping skills that strengthen the parts of the frontal lobe that help with impulse control, leading to less use.

MOVING FROM A MODEL TO A PERSONALIZED PLAN

When presenting a patient with a new physical diagnosis or discussing an exacerbation of an existing disease, clinicians frequently start by asking patients how much they understand about their illness (eg, "Why do you think your legs started to swell?") and what caused it—eliciting their explanatory model. Patients' answers to these initial questions help direct how clinicians explain the basic pathophysiology of a chronic disease or therapies to a patient.

Elicit the Patient's Explanatory Model

What do you think caused your addiction? How does it change your body or mind? These questions can start the conversation about the patient's explanatory model of addiction. Eliciting a patient's explanatory model can go hand in hand with understanding a patient's readiness to change and personal goals.⁸

Explain the Brain Disease Model

Once a provider understands the patient's explanatory model, he or she may ask if the patient would like to hear more about the brain disease model (ie, getting permission, which is often used in motivational interviewing). The goal of presenting the brain disease model is not to dismiss or replace the patient's explanatory model of addiction, but to

incorporate another perspective, and help patient and physician develop a shared vocabulary.¹² The brain disease model may provide a supplementary or alternative model for the patient if he or she is distressed by his or her own model, potentially reducing internalized stigma.

Educate When Doing So Can Improve the Patient's Self-efficacy

By listening to the stories of patients and explaining how brain biology is at play in the specific decisions they are making about substance use, providers can use the words of the patient's personal narrative and explanatory model to share parts of the brain disease model.⁸ For instance, a physician could use a discussion of how the prefrontal cortex (the "planning" part of the brain) may be overcome by the subcortex (the "craving" part of the brain) to explain a patient's description of not being able to abstain when facing certain triggers. This could lead to a discussion of behavioral or pharmacologic treatment options to modify the craving part of the brain.

While we need additional research on how different explanatory models and ways of explaining or introducing those models influence treatment outcomes, it is time to start exploring how our patients think about their addiction. As they do with other chronic diseases, generalists must meet patients where they are in their own understanding of addiction and to help them see addiction as a treatable condition affecting the brain's neurocircuitry, with multiple options for recovery.

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