

## VIEWPOINT

# Changing Mindsets to Enhance Treatment Effectiveness

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**During the past few decades**, significant biomedical advances have increased diagnostic and treatment effectiveness. Recent research from psychology provides a special opportunity to add value to the traditional cornerstone of medicine: the patient-clinician relationship.

What is it about the conversation between patient and physician that gives it therapeutic value? At the most basic level, physicians and other clinicians gather information and communicate disease and treatment information. At an emotional level, the conversation can evoke a sense of mutual trust, empathy, support, and reassurance. This Viewpoint discusses research on mindsets, a critical feature of the conversation between patients and physicians because of their ability to drive motivation and alter physiology to enhance clinical outcomes.

## Mindsets: Implications for Medicine

Mindsets are lenses or frames of mind that orient an individual to a particular set of associations and expectations. Mindsets, like beliefs, guide attention and motivation in ways that shape physiology and behavior; they are related to but distinct from heuristics, which are mental shortcuts used to make decisions under uncertainty and allow individuals to make decisions quickly and efficiently to solve problems. Sometimes grounded in facts and sometimes not, mindsets are biased or simplified versions of what is right, natural, or possible (eg, “girls are not good in math”; “diabetes runs in my family, so losing weight won’t matter”; “stress is going to kill me”; “this treatment will work because I am in good hands”). Humans rely on mindsets to simplify and make sense of the incredibly complex world. However, while mindsets are natural and unavoidable, their effects are not inconsequential. The mindsets individuals hold shape how they feel and act, in ways that can profoundly affect health and well-being.

Mindsets are shaped and influenced by outside factors such as culture, religion, media, social networks, and trusted people. Therefore, physicians have the unique opportunity to influence patient mindsets about health and healing for better or for worse. It is likely that many skilled clinicians shape effective mindsets in their patients, whether or not they are aware of it. As part of the patient-physician conversation, 2 types of mindsets—mindsets about treatment efficacy and mindsets about the capacity to change—are particularly important and synergistic.

## Mindsets About Treatment Efficacy

The first type of mindset that matters in clinical care pertains to mindsets about the effects of treatment (eg, “this medication will help reduce my blood pressure”). Research shows that mindset or expectations

to heal, similar to placebos, can trigger specific neurobiological correlates including the immune, cardiovascular, and neuroendocrine systems.<sup>1</sup> In fact, placebos are driven in large part by the mindset that the pill is effective. Unlike placebos, which are fraught with deception, however, mindsets can be changed nondeceptively to improve the effectiveness of active medications and behavioral treatments.<sup>2</sup> For example, morphine is more effective for reducing pain after thoracic surgery when the physician tells the patient, “I’m giving you morphine, a strong pain reliever,” compared with administering the same dose of morphine intravenously without the patient’s awareness.<sup>3</sup> The benefits of the same amount of physical activity are greater when people are made aware that “this work is good exercise.”<sup>3</sup> Positive effects of the same stress are achieved by helping individuals adopt a mindset that “stress is enhancing” by priming them with information on how the body’s stress response can boost immunity and speed cognitive function.<sup>4</sup> Although more research is needed on the value and limitations of such mindsets for specific diseases, what is clear is that simply being more thoughtful about the words used in diagnoses and recommendations may be just as important as the treatment delivered.

## Mindsets About the Capacity to Change

Mindsets about treatment efficacy are deeply embedded, and therefore may be strengthened or minimized, by the patient’s broader mindsets about the nature of health and his or her ability and efficacy to change. The mindset that a combination of diet and medication will reduce blood pressure, for example, may be less likely to be adopted or less effective if the patient has a pre-existing mindset that “heart disease runs in the family, and there is little I can do to change.”

Research in education shows that promoting the mindset that intelligence and social behavior are malleable and that success is based on effort and learning from failure results in improved school performance and behavior of adolescents and young adults.<sup>5</sup> Although less widely studied, growth mindsets are also proving to be critical in health care. In one study involving 124 adolescents with type 1 diabetes, those who believed that their health could be changed had lower mean hemoglobin A<sub>1c</sub> levels during the following year.<sup>6</sup> While more research is needed, what is clear is that instilling a growth mindset in patients about their belief in the capacity to change is an important precursor to health and healing. For example, a patient with hypertension and a family history of heart disease might believe that there is nothing he or she can do to prevent a heart attack. Instead, a clinician might nudge the patient toward a more growth-oriented mindset by saying, “Your blood

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pressure can go up or down based on many factors, not just your genes. You can control it by what you do, like taking your medicine and making small changes in your diet. This can greatly reduce your risk of a heart attack and stroke.”

### How Conversations and Relationships Shape Mindsets

Instilling the mindset that treatments will work and that change is possible may be as simple in some cases as providing information (eg, highlighting research showing the benefits of stress) or making subtle changes in how that information is framed. Because of uncertainty and individual variability in health care, physicians frequently make nondeceptive framing decisions by focusing on particular qualities of a drug, highlighting specific patient anecdotes in which the drug worked, downplaying the possibility of adverse effects, citing the usually low rate of occurrence, or emphasizing specific strengths of the patient. In other cases, the process of changing a more deeply ingrained fixed mindset may be more challenging and will require a combination of information, emotional care, and mindset. For example, a patient's expectations about the effectiveness of a placebo allergy cream might be more positive when he or she perceives the physician to be not just competent (“the doctor gets it”) but also warm and connected (“the doctor gets me”).<sup>7</sup>

Since the patient's social environment, family, culture, and other factors profoundly influence mindsets, it may be especially

helpful to identify and address the origin of a fixed or antitherapeutic mindset and to mobilize more adaptive mindsets for therapeutic advantage. Instilling a growth mindset maybe especially important for patients with certain cultural beliefs or those in poverty who feel they lack control in their life. Although mindsets can be changed with surprisingly brief interventions, a relationship-based, life-course approach remains important. For example, pediatricians should promote a growth mindset during pediatric visits, whereas mindsets in hospice may require a shift from focusing on mindsets about health to mindsets about what it means to have a “good death.”

### Beyond Supportive Conversations: Prescribing Mindset

Effective communication and the patient-physician relationship are central—not superfluous—aspects of medical care. However, it is not enough to simply say that any supportive conversation is therapeutic. Some conversations and some relationships can be more powerful than others, and it is important to apply the same scientific rigor used when developing new medications to attempts to understand the active ingredients in patient-physician conversations. A deeper understanding of mindsets and how they are shaped by the patient-clinician conversation can move health care beyond the vague recognition that patient-clinician communication matters toward a more sophisticated understanding of when and how conversations are likely to be especially therapeutic.

#### ARTICLE INFORMATION

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