Dear Dr. Steve:

A middle-aged man was recently admitted to our facility for post-acute care after cardiac bypass surgery and a sternal wound that became infected subsequently. He was confused and had behavioral issues at the post-acute care facility. The hospital alleged that he had hepatic encephalopathy, and the nursing home staff and practitioners concurred. However, it turned out that when questioned, his family reported that he did not drink. The cause of his problem were postoperative delirium and side effects of the medications that were started during hospitalization. No one had looked or asked further, and everyone accepted the wrong diagnosis without further inquiry. How can our facility avoid such mistakes in the future?

Dr. Steve responds: Cognitive biases refer to flawed or distorted ways of thinking that result from limited ways of seeking, obtaining, using, and interpreting information. Cognitive biases are universal and integral to human nature and activities, including patient care and the running of nursing homes. They are among the most problematic and destructive forces on Earth.

Despite a substantial literature on the topic, cognitive biases and cognitive errors in PALTC have rarely gotten the necessary attention or action.

How Cognitive Biases Work

Our brain constantly tries to make sense of a complicated and often bizarre world. At the same time, it protects us from being overwhelmed by unpleasant emotions due to complexity and the unknown by providing a way of organizing things so we can deal with them. Our brain has a unique capacity to “fill in the blanks” — to create, embellish, modify, simplify, and interpret information that we need for our emotional and physical stability. Like skilled hockey goalkeepers, the human brain has the ability to deflect anything and everything sent its way that doesn’t fit into its organizational structure. The downside of all this is that the brain often facilitates conclusions and actions that are based on selective or erroneous interpretation of limited and misleading information. This is cognitive bias.

Cognitive biases have underlying causes, including the way in which the human brain is constructed and functions. For instance, our past life experiences, particularly early life experiences, affect the brain’s wiring, which consequently either facilitates, inhibits, or modifies what we experience in the future. In other words, our brain helps us develop a framework for interpreting and acting on experience. Thus, while they may have political implications, cognitive biases are at heart a neurological phenomenon. David J. Lindon, PhD, author of *The Accidental Mind* (Harvard University Press, 2012) argues that biases serve an important neurological and evolutionary purpose and can be difficult to self-correct. However, cognitive biases can often be modified by feedback and guidance from others.

Cognitive Biases Are Diverse

Cognitive biases take many forms. They all have formal names that reflect common habits. For example, making assumptions and jumping to conclusions (anchoring bias and premature closure) and thinking that you know more than you do (overconfidence bias) occur often because we don’t know what we don’t know. Several other common examples of cognitive biases include:

- **Availability bias**: making a decision based on previous examples, such as assuming that symptoms are due to the same causes as other previous cases with similar symptoms, without considering additional potential causes.
- **Bandwagon bias** (diagnostic momentum): once a conclusion (eg, diagnosis) is inherited or approved, everyone agrees without further consideration or questions.
- **Confirmation bias**: selectively seeking out or focusing on information that confirms existing conclusions and downplaying, overlooking, or failing to seek other information that might lead to different conclusions.
- **Framing effect**: organizing or presenting information or asking a question that unduly influences the interpretation or response.

Cognitive Biases in PALTC

Health care-related cognitive biases are widespread and frequently very problematic. They play a major role in diagnostic error; for example, they can be found in the incomplete and questionable psychiatric diagnoses for patients coming from general or psychiatric hospitals and the community. As with the case in the letter above, such diagnoses are commonly accepted on admission to the nursing home, and they may never be challenged or updated (an example of bandwagon bias). Jumping to conclusions without adequate thought can be a problem as well, whether it results in too easily accepting a wrong diagnosis or too quickly dismissing a correct diagnosis in a complex situation. The impact of all this on the management of behavior and psychiatric issues is huge.

Major examples of bias can be found in the realm of “behavioral health” and psychiatric symptoms. Behavior can represent any of a spectrum of closely related disorders that have shared symptoms (DSM-5 *Handbook of Differential Diagnosis*, American Psychiatric Association, 2014). But inadequate data gathering, premature closure, anchoring bias, and other cognitive errors often result in ineffective or problematic treatment.

Some individuals with symptoms such as psychosis and aggression are inappropriately labeled as having schizophrenia; others who actually have severe psychosis, not schizophrenia, are inadequately treated because of the strong bias against the use of antipsychotics. However, as identified in key references such as the aforementioned DSM-5, “the case formulation for any given patient must involve a careful clinical history and concise summary of the social, psychological, and biological factors that may have contributed to developing a given mental disorder. Hence, it is not sufficient to simply check off the symptoms in the diagnostic criteria to make a mental disorder diagnosis.”

The relentless and excessive preoccupation with antipsychotics — when other categories of medications are equally or more problematic — has enabled the excessive use of medications such as valproic acid and hydroxyzine without concern or penalty, while antipsychotics are often not used when they are appropriate. This defies reputable professional advice to use careful assessment approaches that do not limit inquiry or make unwarranted assumptions.

Of course, cognitive biases impact clinical decisions in far more areas than behavioral health. The Joint Commission reported that cognitive biases were identified in 10 to 15% of patient cases. The Joint Commission released a guide titled “Improving Your Board’s Approach to Cognitive Biases” in 2018, which details the types of cognitive biases and how to identify and address them.

Cognitive Biases in Management

Cognitive biases in management are also prominent and damaging. All aspects of management in nursing homes involve complex problem solving and personnel oversight. For example, there are numerous reasons for adequate and inadequate staff and practitioner performance (Ferdinand F. Fournies, *Why Employees Don’t Do What They’re Supposed To Do; and What to Do About It*, rev. ed. [McGraw-Hill, 2007], and *Coaching for Improved Work Performance*, 3rd ed. [McGraw-Hill, 2000]). However, there are many misconceptions about how to address inadequate performance, despite available guidance with sound approaches.

Cognitive biases may lead medical directors and other managers to make unwarranted assumptions about employee and practitioner performance and undermine any attempts to tailor the intervention to the cause. Even after a half century, many nursing homes have serious cognitive biases about medical direction that lead them to misunderstand and misuse it. In the same vein, medical directors only sometimes do what they should.

Elements That Exacerbate Cognitive Biases

Complex patient presentations, insufficient time or inadequate processes, and poor teamwork can exacerbate cognitive biases. Nursing homes face many of these challenges on a frequent basis. There is often too much to do, far too much data to collect, and overwhelming challenges of interpreting and using information and coordinating care, despite the alleged virtues of the Centers for Medicare & Medicaid Services Resident Assessment Instrument and process.
Identifying Cognitive Biases and Errors

There are many basic ways to seek, identify, and address cognitive biases and reduce errors. By doing so, we can help combat bias in all aspects of our lives and work. There is much to be done in helping people think soundly and analyze and solve complex problems effectively.

The first step is to actively look for evidence of cognitive biases. For example, individuals who resist critical appraisal of their thinking and performance — such as their conclusions about the diagnosis and treatment of patients that are not consistent with the evidence — may be acting on cognitive bias. Bias might also be found in individuals who resist or refuse to consider adverse consequences of medications as a possible cause of symptoms in patients. This is especially problematic with difficult and complex medical and behavior cases, especially when patients are not responding to treatment or improving as expected.

Be on the lookout for and mentor practitioners who lack knowledge, do not recognize their errors, or insist on continuing to do what isn’t working without adequately rethinking the situation. (See also Travis Neill, “Rooting for the Null Hypothesis: Key Strategies for Avoiding Bias in Clinical Decision Making,” Caring for the Ages 2022; 23[3]:7.)

Tactics for Addressing Cognitive Biases

Ultimately, addressing cognitive biases is about reasoning, thinking, and problem solving. Helping people learn to think about how they think (metacognition) can have a major impact on reducing bias. This requires role models, mentors, and effective systems for operations, patient care, and the acquisition, interpretation, and application of information. Such an approach has been used successfully, led by medical directors and other key facility leadership (for instance, see my own “Smart Case Review,” J Am Med Dir Assoc 2021;22:2212–2215).

Additional examples of actions that can influence the thinking of the staff and practitioners include the following:

• Show staff and practitioners how to use reliable resources on the internet and other materials to look up information about patient management, medical and psychiatric conditions, and medications (including adverse consequences).

• Guide staff and practitioners to seek and use guidelines and protocols for care (e.g., judicious blood pressure management, evaluation of agitation and aggression) while also maintaining a person-centered approach when implementing guidelines.

• Demonstrate how to identify causes of and to manage falls, behavior, weight loss, and other symptoms.

• Review with staff and practitioners how to find, review, and interpret the actual content of the Omnibus Budget and Reconciliation Act of 1987 (OBRA) regulations and surveyor guidance.

• Discuss the desired collaborative role with consultants, including consultant pharmacist and psychiatric consultants, as well as the limits on their prescribing and recommending treatment, and address the misconception that consultant recommendations should automatically be followed.

• Discuss care practices and processes in quality assurance/performance improvement meetings.

• Discuss the desired collaborative role with consultants, including consultant pharmacist and psychiatric consultants, as well as the limits on their prescribing and recommending treatments, and address the misconception that consultant recommendations should automatically be followed.

Cognitive biases are common and often misunderstood or overlooked. They are integral to being human, and they have a major influence on all aspects of our lives and work. We could do far better in recognizing them, and we must address them as part of all efforts to improve PALTC.

Dr. Levenson has spent 42 years working as a PALTC physician and medical director in Maryland. He has helped lead the drive for improved medical direction and nursing home care nationwide.

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