



PALLIATIVE CARE CASE OF THE MONTH

“Medical Conspiracy Theories: Evolution, Cognition, and Emotion” by

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Case: M.S. is a 63-year-old woman with history of diabetes, hypertension, hypercholesterolemia, obesity, and severe congestive heart failure, with several recent admissions for progressively worsening heart failure exacerbations. She was admitted to the inpatient cardiology service and subsequently transferred to the cardiac intensive care unit following an episode of oxygen desaturation and altered mental status. Her pulmonary workup was generally reassuring, and this episode was felt to most likely be related to worsening cardiac failure. Palliative care was consulted to discuss goals of care with M.S. and her family.

When we arrived for our initial consult, we met M.S.’s son, F.S., and husband H.S., at the bedside. M.S. was resting comfortably with BiPAP in place and was unable to speak with us due to ongoing alteration in mental status. We met privately with her family and discussed their concerns. They were understandably worried given how many times she had been admitted recently and expressed concern that this admission felt different because of how much more time she had required in the intensive care unit, as well as her waxing and waning mental status. Her husband, H.S., became very emotional and tearful while describing how ill she had become over the past few weeks at home, and he expressed disbelief at the possibility that she may not recover from this exacerbation of her chronic heart failure. He stated that he was unable to continue the conversation and excused himself from the room to return to Mrs. S’s bedside.

F.S. then described in significant detail how he had seen his mother slowly getting sicker over the past year. He described the pain of seeing her activity level wane over time, to the point where she spent most of her waking hours on the couch or in bed. He was able to directly verbalize his fear that she might die during this hospitalization. He had been working full-time and staying at his parents’ home to help with bathing, self-care, and cooking.

After describing his mother’s decline, he went on to express significant distrust in the medical system. He endorsed the belief that the U.S government possessed cures for cancer and many other common chronic health problems but kept them secret so that pharmaceutical companies could continue making large profits from chemotherapy and medications.

We nodded in silence and then replied, “It sounds like this is all really frustrating—being in the hospital over and over when you’re working so hard to keep everything together at home.” He nodded in agreement, and then asked politely if we could show him the way back to his mother’s room so he could continue to sit with her.

After showing him the way back, we debriefed the conversation. Acknowledging that we had heard many similar statements, we wondered what is known about the actual prevalence of belief in such theories, why people become so fixated on information that is,

in some cases, so demonstrably false, and how best to respond to similar statements during clinical encounters.

Scope and Ramifications: Contrary to what we may assume, belief in medical conspiracy theories is not a fringe behavior. In a 2014 study of 1351 nationally representative U.S. adults, 37% agreed that the FDA “is deliberately preventing the public from getting natural cures for cancer and other diseases because of pressure from drug companies,”—a theory remarkably similar to the claim endorsed by our patient’s son.¹ In the same sample, 20% of respondents agreed that healthcare officials know cell phones cause cancer but are not permitted to stop it because corporations won’t allow them to, and 20% agreed that doctors and governments are colluding to vaccinate children even though they know that vaccines cause autism and psychological disorders.¹ Although no evidence supports a link between vaccines and autism, the belief has nonetheless gained traction among several well-known celebrities, including Bill Maher, Jim Carrey, Robert DeNiro, and Jenny McCarthy, who have used their public reach to spread and amplify this idea.^{2,3,4,5}

Belief in such conspiracy theories is not benign. The same survey asked respondents about their own health behaviors. Respondents who agreed with progressively higher numbers of medical conspiracy theories were correspondingly less likely to get an annual physical exam, visit a dentist, use sunscreen, or get an influenza vaccine.¹ The relationship remained after controlling for socioeconomic status, paranoia, and social estrangement. Belief in medical conspiracy theories is relatively common and can have deleterious effects on believers’ health and wellbeing.

Evolutionary Mechanisms and Cognitive Bias:

Belief in conspiracy theories may be rooted in certain evolutionary mechanisms. Agency detection is the ability to ascribe events in the environment to the behavior of agents.⁶ It is an important evolutionary mechanism that can serve to alert us to the presence of predators in our environment—if the foliage behind us rustles a certain way, there is a high cost of failing to detect the tiger causing that rustling, whereas there is almost no cost to mistakenly thinking one has detected a tiger.^{7,8} As human beings, we differ from non-human animals in that we also have a tendency to assign intent, feelings, and beliefs to those agents.⁶ Work by Imhoff and Bruder suggests that a tendency to assign agency, intent, and feelings to inanimate objects is predictive of belief in conspiracy theories.⁹ Van Prooijen et al. showed that those who believe in conspiracy theories are more likely to detect nonexistent patterns when presented with random data.¹⁰

Conspiracy theories often couple the tendency to discover nonexistent patterns and agency detection with proportionality bias, which is the “tendency to explain big events with big causes.”¹¹

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Evolutionary Mechanisms and Cognitive Bias “Continued”

In other words, we have a difficult time accepting that seemingly trivial events can have catastrophic consequences, and that those trivial events may be the product of random chance rather than a cohesive plot. We find it more comprehensible that large-scale events should have large-scale causes. It seems more proportionate that the COVID-19 virus should be the result of one country’s nefarious plan to decimate the population and destroy the economy of another country, rather than the result of a chance interaction between a few unlucky people and some exotic animals at an outdoor market.

Reflection: Perhaps we should consider conspiracy theories as desperate efforts to cope with unimaginable life events. Despite the mental gymnastics involved, it may indeed be easier to reassure oneself that a loved one’s cancer has arisen from a pattern of malicious global conspiracy rather than face the imminent loss of a parent, sibling, spouse, or child. Conspiracy theories often incorporate a highly emotional component—should we therefore treat them as expressions of emotion and use pertinent aspects of communication frameworks like REMAP to engage and respond?¹²

On the other hand, conspiracy theories can emanate from genuine cognitive distortions and can have negative ramifications on health-related decisions the believer makes for themselves and others. Is it therefore incumbent on us as clinicians to help dispel these demonstrably false beliefs? When there is a risk of imminent harm to a patient resulting from a patently false belief, one could argue that clinicians have a duty to correct that belief if doing so would mitigate the risk of serious harm. However, attempts to dispel such beliefs are often not successful and might just further worsen the conflict.

Starting from a place of curiosity—asking ourselves “why would this otherwise reasonable person think and behave this way?”—is a potentially productive way to approach these conversations. Doing so can move us away from a mental framework predicated on judgment, and towards one that begins with inquisitiveness and the desire to understand where someone is coming from. The following table is adapted from a 2022 article by Marques et al. and offers some practical strategies for framing our reactions and responses to medical conspiracy theories.¹³

Strategy	Aim	Examples
Keep an open-minded approach. Ask questions and listen	Build understanding. Listen carefully. Avoid defending your own beliefs.	“Thank you for sharing your thoughts with me.”; “I appreciate you sharing your perspective with me.”
Maintain conversational receptiveness	Foster empathy and increase understanding	“It feels hard to trust us given everything you’ve heard.”; “Can you tell me more about that?”
Affirm values of critical thinking	Affirm the person’s desire to think critically. Redirect this towards a deeper examination of conspiracy theories.	“We both agree that thinking critically and asking tough questions is important—what questions can I be helpful with?”; “You’re working so hard to help make the best decisions for your family.”
Work at restoring personal control	Attenuate the need to believe in medical conspiracy theories in order to reduce existential concerns.	“This is such a stressful time for you and your family—your voice matters and I’m here to answer any questions you have. It’s so important that we all work together.”

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