

Overconfidence, Humility, and Diagnostic Error

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Newsletter Editor

Humility, empathy, and compassion are personal qualities that improve relationships among clinicians, patients, and families and affect clinical outcomes.^{1,2} Confidence is another attribute that characterizes many expert clinicians and is perceived positively by patients.

On the other hand, overconfidence, arrogance, and narcissism detract from patient satisfaction, and may interfere with the ability to arrive at timely and accurate diagnoses.

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Berner and Gruber describe the role of overconfidence in diagnostic error, linking it to inappropriate trust in diagnoses that are derived intuitively.³ Humans, like all animals, have evolved to take advantage of pattern recognition and intuitive problem solving whenever they can, presumably because it is fast, effortless, and usually leads to the correct solutions in familiar situations. When this plays out in the diagnostic process, intuitive recognition leads to the correct diagnosis in the vast majority of cases. It may also, however, open the door to error in cases where the correct diagnosis is something else, which might have been considered if the problem had been approached analytically.⁴

Medical Narcissism

The 7th annual Diagnostic Error in Medicine conference featured “Uncertainty, Overconfidence, and Humility,” a presentation by John D. Banja, PhD, from the Center for Ethics at Emory University.⁵ In Banja’s view, the current medical cul-

ture promotes “narcissistic” behaviors: being self-oriented, self-enhancing, and defensive. Banja calls this “medical narcissism,”^{6(p48)} which is not pathological, but problematic nonetheless. He attributes those narcissistic behaviors to physicians feeling the need to protect traditional professional self-images rooted in confidence, competency, and authority.

Physicians link their self-esteem and confidence to their knowledge and training. When physicians feel their self-esteem is threatened by uncertainty or having to acknowledge they have made an error, they naturally react with defensive behaviors and denial. In society and in medicine, uncertainty is seen as weakness. Physicians have been trained to supply answers; their sense of professional self-esteem is at stake. Many patients and family members want clear information and authoritative direction, thereby reinforcing the physician’s avoidance of uncertainty.

Also in This Issue ...

| | |
|--|---|
| Become a Member of SIDM..... | 3 |
| Message From SIDM Leadership: | |
| 7 th Annual Diagnostic Error in Medicine Conference | 4 |
| News From the Field..... | 4 |



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Better Outcomes Through Better Diagnosis

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When physicians experience threats to their sense of self-esteem, it's understandable that they, as Banja says, reach into their “professional bag of tricks”⁵—what they know—to demonstrate competency based on years of study and training. That response is likely, however, to be counterproductive if the physician lacks empathy for the patient, colleague, or student in need of help. Inadequate emotional connections will trump displays of clinical wisdom and leave patients and others feeling unheard, neglected, and less likely to contribute information that may be crucial.

Wrongness and Humility

Changing these counterproductive patterns is possible but not easy. Banja says that to promote humility and develop a healthier sense of professional self-esteem, physicians must develop a new “relationship to wrongness.”⁵ They must become more comfortable with uncertainty. For guidance, Baja turns to Kathryn Schulz, author of *Being Wrong*⁸ and contributor to Slate, where her essay series is titled “The Wrong Stuff.”⁹

In a TED talk, Schulz asks audience members, “What does being wrong feel like?”¹⁰ When some answer, “dreadful, embarrassing, ‘thumbs down,’ ” Schulz points out they have described what it feels like to realize that they're wrong. She draws a distinction between being wrong and the acknowledgement of

Banja cites Meyer et al⁷ who found that with increased experience, physicians become less likely to seek outside opinions, reference materials, and other assistance. In this way, overconfidence may also lead to isolation, stagnation, and obstinacy. Clearly, this cycle does not lead to improvement.

Banja allows that physicians' self-esteem is “under constant attack” from outside forces. The current environment challenges them repeatedly with production and regulatory pressures, chaotic work environments, and demanding colleagues and patients. Those dynamics may trigger counterproductive, narcissistic reactions. Humans are “hardwired” for defensive reaction, and the

being wrong. Being wrong feels exactly like being right... up to the moment when someone *realizes* that they're wrong. She invokes the cartoon character Wile E. Coyote¹¹ to illustrate that point. In nearly every cartoon, Coyote chases his nemesis, Roadrunner, toward a cliff at full speed. Being a bird, Roadrunner has no problem running off the edge of the cliff. Coyote follows right behind, running boldly into thin air. He does fine until he looks down. When he realizes the mistake he's made, he makes a face to which we can all relate and plunges to the ground.

Schulz believes it is important and liberating for everyone to accept that they are wrong at least some of the time.¹⁰ As James Reason also has studied, error or “wrongness” is part of the human experience.¹² To be humble is to share in a collective sense of human imperfection. Humility may lead to feeling vulnerable, but it also enables asking for help and offers a way to avoid Coyote-like distress and disaster.

Complacency and Feedback

Banja, Schulz, and Reason accept the inevitability of human error, but they do not advocate complacency. In healthcare, as in other hazardous industries, accepting and understanding human error can lead to systems that are designed for better safety and reliability. Complacency, on the other hand, accepts the status quo of error and learns to live with it. Complacency also implies that errors are insignificant. In the context of diagnostic error, Berner and Graber say, “Complacency (ie, ‘nobody’s perfect’) reflects a combination of underestimation of the amount of error, tolerance of error, and the belief that errors are inevitable.”^{3(S9)}

Physicians' tend to underestimate the incidence of diagnostic error, at least in their own practices. Graber identifies this denial or lack of awareness as a chief barrier in efforts to improve diagnosis.

The remarkable discrepancy between the known prevalence of error and physician perception of their own error rate... lies at the crux of the diagnostic error puzzle, and explains in part why so little attention has been devoted to this problem.^{3(S10)}

Everyone needs to learn from his or her mistakes, but physicians often miss out on that opportunity. As autopsies have disappeared as an effective source of feedback, physicians have lost an important source of information on diagnostic

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Schiff describes clinical diagnosis as being an “open-loop system.”

ask for it (overconfidence), don’t think it matters (complacency), or because they don’t have the tools, energy, or time to follow up with patients and other members of the care team, the missing information contributes to diagnostic error.

Overconfidence that tips toward arrogance is problematic in general. In medicine, it can lead physicians to commit to diagnoses prematurely, sometimes without the benefit of crucial, available information and assistance. Attributes such as overconfidence and arrogance can be part of anyone’s personal makeup. With his concept of medical narcissism, Banja links these self-enhancing behaviors to a natural defensive reaction to perceived threats, both of which—the threats and the reaction—are common in the current healthcare environment. Humility, empathy, and compassion can provide an antidote.

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Diagnostic Error in Medicine 2014

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The 7th annual Diagnostic Error in Medicine (DEM) conference was held September 14 to 17, 2014, in Atlanta. Attendees generally gave it high praise. Attendance figures matched DEM 2013 despite the conference having moved away from Chicago, with its many medical schools, healthcare companies, medical societies, and large metropolitan population. Increased participation from enterprise risk managers and medical malpractice insurers added new diversity to the attendance list and brought greater richness to discussions.

As noted by SIDM President Mark Graber and keynote speaker Bob Berenson, healthcare may be local, but diagnostic error is personal (and pervasive). Helen Haskell has said, "To not learn from errors is the epitome of disrespect to patients." Newly elected SIDM Board member David Meyers pointed out that patients are the most underutilized resource in our drive to reduce diagnostic error. Gurpreet Dhaliwal emphasized that stories have impact. He challenged

all in attendance to collect stories of low-value care so that we are better able to rebut demands for inappropriate service. Everyone must understand that there is "no free lunch" and inappropriate care carries its own risks.

Bob Trowbridge indicated that reducing diagnostic error is tough work and that it will be helpful if physicians and all members of the healthcare team could find fewer barriers to becoming engaged. Paul Chang from the University of Chicago was noted for his eye-opening statement that there is only one billable code for an abdominal CT scan, but there are 100 ways to implement that test order. Without clinical context, pathologists and radiologists can't maximize the value that patients deserve.

It was a remarkable conference, and the increased energy from attendees was noticeable to all regular attendees. DEM 2014 will certainly provide a benchmark for the next conference, which is scheduled for September 27 to 29, 2015, in Washington, DC.

NEWS FROM THE FIELD

First Case of Ebola in US Exposes Problems in Diagnosis and Use of EHRs

Ebola US Patient Zero: lessons on misdiagnosis and effective use of electronic health records.
Upadhyay DK, Sittig DF, Singh H. *Diagnosis.* 2014;1(4): 283-287.
DOI:10.1515/dx-2014-0064.

Upadhyay, Sittig, and Singh find many "teachable moments" in their review of the case of "Ebola US Patient Zero." The story of that patient, Thomas Eric Duncan, is well known: Soon after arriving in Texas in September 2014 from his native Liberia, Duncan came down with symptoms consistent with Ebola infection and went to a hospital emergency department in Dallas. He was evaluated, given a diagnosis that "included sinusitis," and sent home. He returned to the same ED when his symptoms worsened. He was admitted to the hospital, diagnosed with Ebola, and died eight days later. Two of the nurses who cared for him also became infected with Ebola and recovered.

The authors observe that Duncan's case provides lessons in misdiagnosis and ineffective use of electronic health records (EHRs), "two of the greatest concerns in patient safety in the US outpatient health care system."^(p4) They have analyzed publicly available records, including pre-

liminary findings from 1,400 pages of Duncan's medical record that were released to the Associated Press. Upadhyay, Sittig, and Singh provide the following observations about this case:

- While often flawed, EHRs are not meant to replace effective history taking, physical examination, or critical thinking.
- Pre-define symptoms and treatment options available in EHRs often lead to errors and may have contributed errors in this case.
- Lack of teamwork among clinicians and others meant that critical information was not shared, which contributed to sending the patient home with the wrong diagnosis.
- Over reliance on diagnostic testing may have delayed the eventual diagnosis.
- Unlike many cases of missed and/or delayed diagnoses, Duncan's case had profound implications for public health.