On Bullsh*t and Medical Education

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It's not really lying, is it?

The term *bullsh*t* (BS) recently garnered public attention in the wake of a presidential election in which facts and fact-checking often were superseded by perception and emotional response. In fact, the amount of BS currently employed by politicians, advertisers, and academics prompted 2 University of Washington faculty members to develop the course "Calling BS in the Age of Big Data," in which students are instructed to identify and combat BS.[1]

In a 1986 essay[2] entitled "On Bullsh*t," philosopher Harry Frankfurt attempted to define this phenomenon, describing its essential characteristic as a purposeful misrepresentation of the self:

> When an honest man speaks, he says only what he believes to be true; and for the liar, it is correspondingly indispensable that he considers his statements to be false. For the bullsh*tter, however, all these bets are off: he is neither on the side of the true nor on the side of the false. His eye is not on the facts at all. . .insofar as they may be pertinent to his interest in getting away with what he says."[2(p56)]

Eubanks and Schaeffer[3] expanded on Frankfurt's definition in 2008 to include prototypical and nonprototypical forms of BS. Prototypical BS is Frankfurt's deceptive misrepresentation of self. The nonprototypical form is an attempt, not to deceive the listener, but to enhance the reputation of the bullsh*tter. Eubanks and Schaeffer argued that some academic writing falls into this category; it is not written to deceive the reader, yet it does inflate the importance of the writer, regardless of the importance of the content of the writing.[3]

This brings us to BS in the world of medical learners.

As an educator, I often gather informal baseline experience data from learners as part of an educational needs assessment. These inquires help direct bedside teaching, and they can be used to inform curriculum development. Despite low-stakes settings, I find certain trainees consistently report experience levels far above those of their peers, and then fail to demonstrate the clinical ability expected of that experience level.

Is this lying? My colleagues also struggle with this question, and they have given responses from "absolutely" to "not really." Lying is a serious accusation when educators are tasked with fostering medical professionalism in trainees.

I am strangely relieved to find the answer in BS.

Most of what we encounter in the clinical area, thankfully, seems to be the nonprototypical type. Residents are not attempting to purposefully deceive educators, but rather may be trying to inflate their own self-image with a disregard for the actual facts. This behavior is fostered in medical school, where students must compete for exemplary status in relation to their peers, and the projection of competence and confidence may be desired over an honest accounting of facts.[4,5] Frankfurt's statement that "bullsh*t is unavoidable whenever circumstances require someone to talk without knowing what he is talking about"[2(p63)] readily applies to the early clinical environment, where students are often questioned publicly on their comprehension of recently acquired information.

In addition to the self-preservation motive described above, BS has the potential to generate rewards as medical training continues. Physicians who project confidence may be perceived as being more competent than their peers, despite a poor correlation between physician confidence and clinical competence.[6] In studies on behavior and overconfidence, Anderson and colleagues found evidence that overconfidence makes individuals appear to be more competent to their peers, and it enhances social status even when confidence is unsubstantiated.[7,8] In groups, overconfident people also tend to achieve a higher social status compared to those with an accurate self-assessment of ability.[9] In the clinical area, achieving a higher status compared with one's peers could mean more clinical opportunities, such as procedures and increased clinical responsibility, and more professional opportunities in the form of research and leadership positions. Unfortunately, the success of these behaviors also means that BS continues in professional lives as trainees become faculty and leaders in their own fields.

Given the potential benefits to trainees, should educators ignore evidence of BS? Absolutely not.

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TABLE
Examples of Potential Bullsh*t (BS) Encountered by Educators, With Sample Responses

Example of BS	Response Type	Example Response
A PGY-2 emergency medicine resident declines an opportunity to practice chest tube placement in a skills lab, stating, "I have placed hundreds of chest tubes."	Focus on objective measures	That sounds like a lot. Let's look at how many supervised procedures you have logged during your training.
	Acknowledge thought process and clarify	It may seem like you were involved in several procedures in your observations and study, but I am interested in how many you performed as the primary provider.
	Reductio ad absurdum	That experience level would place you far above what we expect for faculty-level experience, and is not what we expect from a second-year resident.
After reporting a neurological examination as "completely normal," you discover your resident based this assessment on general observations from his or her interview and not from a focused neurological examination. The resident defends this, saying, "the component of the examination I did was normal."	Focus on objective measures	Let's take this opportunity to review all the components of a normal neurological examination.
	Acknowledge thought process and clarify	Although your general *gestalt* can be important in formulating an initial plan, a "completely normal" neurological examination suggests that you tested cranial nerves, motor, sensory, coordination, etc. A complete examination should have all of these elements, or it will be considered a misrepresentation.
	Reductio ad absurdum	Given that approach, a patient with hemi-neglect has a "completely normal" neurological examination if you stand on the correct side of the bed.
At afternoon conference a resident frequently dominates the discussion and cites "recent articles" to back up his or her claims, but is unable to provide citations.	Focus on objective measures	Let's take a moment to find some of the articles you brought up today and figure out how best to organize them for swift access in the future.
	Acknowledge thought process and clarify	Given the scope of scientific literature and educational resources available, it can be difficult to remember where you acquire information. However, it is important and expected to provide these articles to share with the group during discussion so we can all participate.
	Reductio ad absurdum	Without the opportunity to analyze the referenced articles, we could potentially be spending conference time debating *JAMA* versus GomerBlog.

Abbreviations: PGY, postgraduate year; JAMA, *Journal of the American Medical Association*.

If trainees' misrepresentations are not identified, they may be placed in clinical situations without having adequate skills or adequate supervision. This robs trainees of essential feedback and guidance, and it may compromise patient safety. Mislabeling trainees as "liars" instead of acknowledging BS as a maladaptive behavior can potentially alienate learners. Ignoring evidence of BS can have the unintended consequence of disproportionately affecting female trainees, given evidence that female medical students are more likely to underestimate their abilities compared with males.[10] Medical educators in Indiana also found evidence that female students are viewed by observers as significantly less confident than their male counterparts during standardized testing.[11] Ultimately, we as educators must foster in learners and peers the core value of medical professionalism, and we need to take an active role in dissuading the promotion of self above truth.

So, what is an educator to do?

The literature has well described the confidence-competence gap in learners, and a *Journal of the American Medical Association* (*JAMA*) review suggested that we need to rely on more objective, external measures of competence.[6] This is especially important as we move to competency-based undergraduate and graduate medical education. The problem of what to do when faced with potential gross overreporting of competence, or BS, in the clinical area is less well described.

For guidance we look outside medical literature. Bergstrom and West's[1] course syllabus offered techniques of *reductio ad absurdum* and myth-debunking as tools to refute BS. *Reductio ad absurdum* takes a claim to its logical end to show that the claim itself leads to impossible consequences. For example, an intern who reports performing a procedure in excess of a faculty level of experience (ie, claiming he or she has performed 20 postmortem cesarean procedures in pregnant trauma patients) should be confronted with the impossible conclusion that at the time of graduation he or she will have performed this procedure more than any living practitioner. Although this confrontation may be perceived as hostile

by the learner, the educator who gives the intern an opportunity to revise his or her original claim could be providing a valuable moment of self-correction, while clarifying the standard of expectation (examples provided in the TABLE).

Another method is to treat the exaggerated claim as a "myth" that the learner believes about himself or herself.[12] Effective debunking of myths first requires that refutation focus on facts (eg, "Let's look at how many supervised procedures you have logged during your training"), just as the *JAMA* review stressed the need for external measures of competence. This refutation should also include an alternative explanation for an exaggerated claim (eg, "It may seem like you were involved in several procedures in your observations and study, but I am interested in how many you performed as the primary provider"). In this approach, the educator acknowledges *how* the trainee is thinking instead of *what* he or she is thinking, and preserves the relationship with that trainee, while clarifying the thinking behind the claim.

As educators, we must acknowledge that BS as a maladaptive behavior has been fostered over generations of medical trainees. We are not immune. Monitoring oneself for overconfident or misrepresentative statements, and then modeling clarification, can be valuable to both trainees and peers. This helps set a new standard of clarity and professionalism in our departments and workplaces.

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