Excising the "Surgeon Ego": Progress Made and Paths Forward for Enhancing the Culture of Surgery

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RUNNING HEAD: Excising the "Surgeon Ego"

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Progress Made and Paths Forward for Enhancing the Culture of Surgery

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Recent years have seen a palpable change in the surgical community, with significant efforts invested in shifting toward a more positive, humanistic surgical culture.[1-3] These recent changes reflect a broad recognition that bullying, ego-driven behaviors, and disruptive attitudes pose a risk to surgical culture.[2,4,5] However, the objective and subjective evidence that has prompted these efforts has not been thoroughly explored and understood within the surgical community.

From time to time, drastic examples of negative behavior arise that generate increased scrutiny and discussion, but these are often fleeting and do not fuel substantive changes. For example, in December 2017, transplant surgeon Dr. Simon Bramhall was convicted of assault in the United Kingdom for cauterizing his initials on patients' livers during operations.[6] Unnecessary cauterization of any kind may be considered a reckless behavior, but the choice to cauterize his own initials highlights the element of ego in this behavior. Indeed, the judge in his case described the action as "conduct born of professional arrogance of such magnitude that it strayed into criminal behavior".[6]

Fortunately, such cases of extreme arrogance are rare among surgeons – although, unfortunately, this is not the first time patients have been allegedly marked with surgeons' initials.[7] However, milder forms of ego-driven behavior are still observed in modern surgery. A recent *JAMA Surgery* study of "unsolicited patient observations" among surgeons[8] highlighted examples of patient complaints about surgeons' arrogant, intimidating, or rude behavior, such as:

> "I asked Dr. Y how long he thought the operation would take. He said, 'Look, your wife will die without this procedure. If you want to ask questions instead of allowing me to do my job, I can just go home and not do it.'"[8](p.523)

Though high-profile cases of arrogant behavior (such as Dr. Bramhall's) garner significant attention, recognizing the milder forms of ego-driven disruptive behavior, and their

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consequences, is important for health care organizations and those who work within them. In this article, we draw from research in the medical and organizational literatures to outline the deleterious effects of surgeon ego in health care organizations. We also highlight the progress made in shifting surgical culture in a more positive direction, as well as potential solutions to accelerate change.

What is the Problem?

Overconfidence has long been noted as a potential problem among physicians,[9] but the practice of surgery holds a particular reputation for ego-oriented behaviors. For instance, in a study of personality traits among UK healthcare professionals, surgeons were found to have significantly higher levels of narcissism (considered a sub-clinical personality characteristic that manifests in egotist, arrogant, or dominant attitudes[10]) than their non-surgeon colleagues.[11] Other research has found greater numbers of disruptive behaviors and patient complaints among surgeons than non-surgeons, which could be the result of more arrogant attitudes (alongside the high-stakes, high-stress environment of surgery).[12-16]

While arrogant behavior amongst surgeons is certainly not universal (and likely varies across specialties or departments), even a few "bad apples" can significantly disrupt patient care and perpetuate the reputation of surgical culture as ego-oriented.[3] As medical students are selecting specialties, they often develop perceptions of surgeons as overly self-confident, to the point of arrogance, and believe that they need to fit this stereotype in order to be a successful surgeon.[12,13,17] This perception is shared by other health professionals as well. In a study of Swiss surgeons and internists, ratings provided by nurses demonstrated a shared perception of surgeons as less socially oriented and more aggressive.[18] Notably, these perceptions were

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supported by self-reported ratings from physicians in the study, with surgeons rating themselves as more aggressive than internists.[18]

This widespread perception raises a concern about self-selection, where individuals comfortable with this behavior are more likely to go into surgery – and more importantly, that the profession loses promising candidates that are averse to these behaviors. Indeed, a study of US medical students revealed that those who chose to match into technique-oriented specialties (including surgery) tended to be more dominant and less warm than those who entered person-oriented specialties.[19] Compounding this selection effect, surgical training may at times perpetuate "down the chain" bad behavior and unintentionally encourage residents to carry forward disruptive behaviors.[3,12] These dual pressures of selection and socialization are worrisome insofar as they may push well-intended individuals from reasonably confident to problematically arrogant through the course of surgical training. In a study at a large US academic medical center, surgical residents and faculty scored significantly lower on the personality characteristic of agreeableness (the tendency to exhibit altruism, trust, and modesty) than did faculty and residents in medicine and family medicine. However, surgical faculty also scored significantly lower on agreeableness than surgical residents[20], a troubling trend across these different career points.

Conceptualizing the 'Surgeon Ego'

The preceding examples cover a variety of different topics (e.g., narcissism, arrogance, dominance, disruptive behavior), and indeed, one obstacle to addressing the effects of 'surgeon ego' is the fragmentation of research in this domain, with studies focusing on different manifestations of these attitudes and behaviors. To help clarify how these disparate findings

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relate to one another, in Figure 1 we organize concepts from existing literature to help build an integrated understanding of the 'surgeon ego.'

Many of the surgeon attitudes and behaviors described in prior research are manifestations of an underlying characteristic of narcissism (considered a sub-clinical personality characteristic possessed by most individuals at varying levels[10]). This personality characteristic, evident to others as "arrogant, self-promoting, aggressive" attitudes,[10](p.558) is a driver of disruptive behavior in the perioperative environment.[12] However, these attitudes are not the only cause of disruptive behavior (represented by the dotted segment in Figure 1), which can also result from situational stressors or other cultural conditions.[12] In turn, these attitudes and disruptive behaviors can have a detrimental impact on a range of patient- and provider-relevant outcomes.

What are the Consequences?

There is no doubt an important role for healthy self-confidence in medicine, and surgery in particular.[21] The ability to take decisive action in the face of complex, time-sensitive, and high-stakes procedures requires a confident disposition and belief in one's own abilities to step up and lead – to be the "captain of the ship." But particularly in the modern era of multidisciplinary care, where the "captain" is less clear,[22] it is important that this beneficial confidence not give way to more disruptive ego.

Notwithstanding the preceding examples, we could find relatively little research directly examining the performance consequences of surgical ego. However, drawing on established literature in the organizational sciences, there are important inferable consequences of ego-driven behavior among surgeons. For instance, higher levels of arrogance in the workplace are associated with worse job performance,[23] and meta-analytic evidence reveals a strong

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relationship between narcissism and counterproductive behaviors in work organizations and between narcissism and worse job performance for those in positions of authority.[10,24]

Some surgical research has addressed the outcomes of 'surgeon ego' indirectly. For example, Cooper et al found that patient complaints about intimidating or disrespectful surgeon behavior significantly predicted complication and readmission rates for that surgeon.[8] And substantial research has shown how disruptive behaviors can draw attention away from patient care, while also increasing medical errors and impacting the well-being, turnover, and collaboration of others in the perioperative environment.[5,13,14,25]

One particular consequence of the 'surgeon ego' may be the deterrence of women from pursuing surgical careers.[26] Alongside perceptions of arrogance and intimidation, medical students report perceiving the practice of surgery as "masculine" and feel pressured to conform to that norm (or feel they must be highly exceptional to succeed without conforming).[17] Highlighting issues of inclusion for women in surgery, much attention has been paid to recent evidence of better outcomes for female surgeons' patients (relative to those of male surgeons).[26-28] Though we cannot say definitively that issues of surgeon ego are linked to gender, more than half of physician and nurses who responded to a survey on disruptive behavior reported that male physicians engage in more disruptive behavior (while only 2% reported that female physicians engage in more disruptive behavior, and 41% reported no difference).[25] Moreover, meta-analytic findings in the general population demonstrate that men consistently score higher on measures of grandiose narcissism than do women.[29]

What Does the Future Hold?

In light of these negative consequences for teamwork, well-being, and patient care, the surgical community must recognize and address practices and norms that might unintentionally

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encourage or condone this ego-oriented behavior. Effective change will require a multidisciplinary effort including surgeons, anesthesiologists, nurses, and the many professionals vital to perioperative care. Dr. Bramhall was not alone in the operating room while cauterizing his initials into his patients' livers – yet no one stopped him. It was only years later that he was held accountable. A key first step is simply acknowledging that this behavior – both in its extreme forms, as well as its less severe manifestations – disrupts interprofessional teamwork, decreases situational awareness, and inhibits communication in ways that ultimately impact quality and safety. However, creating lasting change necessitates more systematic efforts to understand and address these behaviors, and will require altering the fundamental norms and practices that may unwittingly keep these behaviors alive.

Important efforts have been made by healthcare systems and leaders in recent years to create the necessary infrastructure and support to curb ego-oriented behavior. For instance, the Center for Professionalism and Peer Support at Brigham and Women's Hospital has pioneered interventions for reducing disruptive behaviors and improving the quality of physician peer interaction.[30] Likewise, the University of Michigan Department of Surgery's "Michigan Promise" is a longitudinal investment to create an inclusive and welcoming environment for current and future surgeons.[31] Social media campaigns such as #ILookLikeASurgeon[27] have highlighted long-standing biases and problematic attitudes within surgery, sparking important discussion and change. Finally, surgical governing bodies have stepped up efforts to combat negative aspects of surgical culture, including the Royal Australasian College of Surgeons' 2016 *Let's Operate with Respect* campaign, focused on ending bullying, discrimination, and sexual harassment in surgery.[32]

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However, these efforts remain isolated within specific institutions or regions. A more systematic, evidence-based, and interprofessional approach is needed to develop grounded interventions and reliably assess key outcomes of surgical culture and practice. Helping to foster this area of inquiry, the American Medical Association developed health systems science as the third pillar of medical education (joining basic and clinical sciences).[33] The curriculum provides a framework for understanding aspects of health care delivery not traditionally taught in medical schools, such as teamwork and leadership. Further, we need more research directly assessing the impact of different forms of surgeon behavior on care outcomes and patient perceptions. For instance, in-depth, interpersonal simulations could be developed for assessing and training surgeons as they engage in the complex inter-professional dynamics of an operating room. These interpersonal, non-technical skills have been increasingly highlighted as drivers of patient outcomes[34-37] and have been implicated in the differential ability of surgical units to rescue patients after major postoperative complications.[38-40] Incorporating these types simulations into the ongoing assessment and training of surgical residents[41] is particularly important in order to break the cycle of selection and socialization described earlier as enablers of negative surgeon behavior. Understanding the significant accumulating evidence in the medical literature – and the broad existing evidence in the organizational sciences – demonstrating the deleterious effects of ego-driven culture may provide even more impetus for this movement and help to generate more sustainable change in the practice of surgery.

The typical surgeon today no doubt possesses an appropriate degree of confidence and self-assurance, as well as a healthy level of humility. But as we continue to observe cases of behavior that depart from the normal bounds of confidence, it is imperative that the field at large re-iterate its commitment – both in word and deed – to selecting, training, and maintaining a

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population of surgeons prepared to act and interact in ways that deliver the best outcomes to patients in the modern health care environment. Given the monumental shifts and progress made in just the last few years, the future is bright.

Key Messages

- Surgical culture is in the midst of a significant change towards a more positive and humanistic culture, in part as a response to both extreme and subtle ego-driven disruptive behavior among surgeons.
- Accumulating evidence from both the medical and organizational sciences demonstrates substantial negative consequences for ego-oriented behavior in complex work environments such as surgery.
- Considerably more research and systematic exploration of ways to further reduce ego-oriented behavior in the practice of surgery are needed.

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Competing Interests

We have read and understood the BMJ policy on declaration of interests and declare the following interests: CGM, YLM, and AAG declare no competing interests.

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Figure

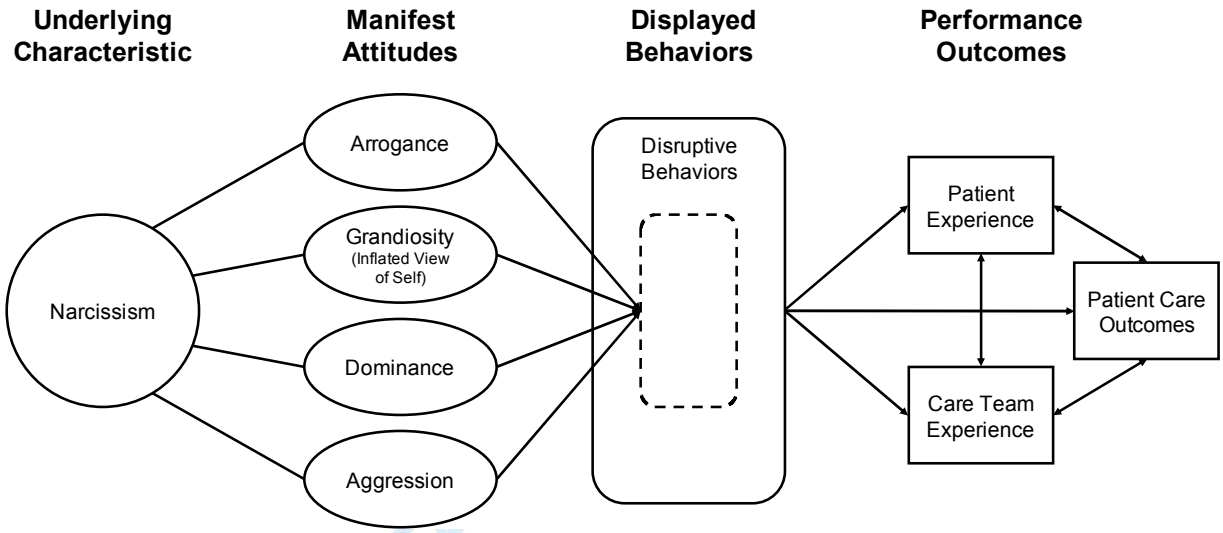

Figure 1. Organizing Framework for Causes and Consequences of 'Surgeon Ego.'

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