

## HISTORY OF MEDICINE

### The Evolving Surgeon Image

Heather J. Logghe, MD, Tyler Rouse, MD, Alec Beekley, MD, and Rajesh Aggarwal, MD, PhD

#### Abstract

The stereotype of the abrasive, technically gifted white male surgeon is ubiquitous among members of the public and the medical profession. Yet modern surgeons are far more diverse and socially adept than the stereotype suggests. While the stereotype is largely a relic of days gone by, it continues to influence patients' expectations and surgeons' interactions with their clinical colleagues. The #ILookLikeASurgeon movement and subsequent #NYerORCoverChallenge demonstrate the changing face of surgery and the roles of social media in resisting the social and cultural force of long-standing stereotypes.

#### Legends of "Mean" and Disruptive Surgeons

Stereotypes are widely held, fixed, and simplified images or ideas of a particular type of person or thing [1]. For example, surgeons are often stereotyped as abrasive, arrogant, and difficult to work with [2]. Nevertheless, many trends, both historical and current, have contributed to the evolution of the image of the surgeon. This article canvasses some historical foundations of surgeon stereotypes and highlights how inclusive education, historical perspectives, and social media are contributing to a more inclusive and diverse range of images representing modern surgeons.

#### Surgeon Stereotypes

Numerous medical and nonmedical forums as well as blog posts address the stereotype of surgeons as less than "nice." Enter "why are surgeons so" into Google and suggested searches include "why are surgeons so mean" and "why are surgeons so arrogant" [3]. Similar questions regarding the dispositions of surgeons are posed on online forums such as Student Doctors Network, KevinMD, and Ask MetaFilter (all publically accessible) [4-6]. A 2015 article in *Pacific Standard* was titled, "Why Are So Many Surgeons Assholes? And How Can We Make Them Nicer" [7]? A nonsurgeon physician's blog post even seems to justify representations of surgeons as egotistical: "The Surgeon's Ego Has a Purpose" [8].

Legendary stories abound of angry and impatient surgeons yelling, throwing instruments, and ordering people out of the operating room [9-11]. In the words of a

community surgeon, surgeons “can have outbursts. Some of us curse, some throw instruments, others have tantrums” [12]. The surgeon blogger *Skeptical Scalpel* describes an episode early in his career when he threw a surgical clamp “so hard that it went out the door of the nursery, across a wide hallway and into an elevator the doors of which had just opened” [13]. This dysfunctional behavior has not been limited to male surgeons. It was a female surgeon who set down an instrument with such force that she broke a scrub technician’s finger [14]. Traditionally, and presumably, this behavior was tolerated with the justification that surgeons’ technical ability was all that mattered [9].

While times have changed—surgical education now emphasizes bedside manner, and throwing instruments and angry outbursts are now no longer tolerated and regarded as unprofessional—stories of such behavior can continue to influence perceptions and expectations of surgeons. One problem with stereotypes is that they can lead patients to believe it’s unreasonable to expect their surgeons to be professional and kind; in surgery, this can result in patients being guarded and on edge when discussing treatment plans with their surgeons [15]. Moreover, interprofessional colleagues might make erroneous assumptions about how they should behave—uncharacteristically submissively and deferentially, for example—when working with or consulting surgeons, based on stereotypes of surgeons’ interpersonal behavior or prior experience with poorly behaved or uncollegial surgeons. Both patients’ and practitioners’ expectations can be influenced by stereotypes. For example, surgeons who are members of a gender, racial, or ethnic minority group are often mistaken for other members of a health care team and support staff. One woman surgeon, for example, reported she was often presumed to be a nurse [16], and one surgeon of color reported being asked to remove food trays or being ignored [17]. Another consequence of negative surgical stereotypes is that they can deter medical students from seeking surgical residency training [18, 19]. Indeed, an ethical harm of stereotypes is that they can limit personal and professional expectations of others or ourselves and thus limit our conceptions of others’ or our own personal and professional agency and capacities.

### **Culture, Rigid Gender Roles, and Masculinity**

As of 2015, roughly 81 percent of practicing general surgeons were male [20]. In orthopedic surgery, the number was 95 percent [20]. Although there are more women among the ranks of residents, men still account for 62 percent of trainees in general surgery and 85 percent of trainees in orthopedic surgery [21]. As a male-dominated profession, it is not surprising that many of the extreme behaviors associated with surgeons reflect rigid definitions of masculinity. Traditional masculinity is associated with being powerful, strong, and in control; self-sufficiency, sexual prowess, and monetary success are lauded and demonstration of weakness or vulnerability is frowned upon. These same characteristics play out in the stereotypes and [hierarchy of surgery](#). Medical students view surgeons as “self-confident,” “intimidating,” and “rude” and surgical culture as “competitive” [19]. These masculine stereotypes are seen in the popular

media portrayal of surgeons, such as Hawkeye and Trapper from the television series *M\*A\*S\*H* and Marion Stone in the novel *Cutting for Stone* [22].

*Exclusion of women and minorities from medical education and surgical discourse.*

The Caucasian male stereotype of surgeons can be attributed in part to the same gender and racial oppression that has barred women and minorities from achieving formal medical education. Prior to the Civil War, freed slaves who wanted to obtain medical training typically had to go to Canada or Europe. After the Civil War, American blacks continued to face barriers to obtaining a medical education, as they were largely excluded from existing medical schools [23]. By 1910, when Abraham Flexner's report on medical education was published, there were three women's medical schools and seven black medical schools in existence [23, 24]. The report led to the closing of such medical schools, with only one woman's medical school and two black medical schools surviving the following decade [24].

*Masculine surgical culture.* Another factor in the Caucasian male stereotype of surgeons is the biased written and oral history of surgery, which often excludes women and minorities and even misattributes their accomplishments. The most famous surgeons—from the Indian surgeon Sushruta of the sixth century BC, to Al-Zahrawi of the Islamic Golden Age, to the historical figures of the last two centuries—have been male. In fact, “the father” of different aspects of surgery is a commonly used title, never “the mother.” In United States history, minority surgeons are similarly underacknowledged. Of the 24 “pioneer surgeons” listed by Wikipedia, not a single one is a woman or person of color [25], despite their notable contributions to surgery [26-31].

**Creating an Inclusive Image Reflective of Today's Surgeons: From Education to #ILookLikeASurgeon**

Once stereotypes are established, they are not easily changed, even with abundant evidence to falsify them. However, stereotypes can evolve through repeated exposure to persons who contradict the stereotype [25].

*Overcoming barriers to education.* Over time, women and minorities have been increasingly integrated into traditional medical schools. The year 2017 was the first that more women (50.7 percent) than men matriculated in medical school and that the percentage of accepted women students was representative of the US population (50.8 percent female) [32, 33]. However, the proportion of American minority medical students is not reflective of the US population. In fact, fewer black men entered medical school in 2014 than in 1978 [34]. Efforts to promote diversity in medicine include improving primary education and increasing access to mentors in medicine for communities of color [26].

*Inclusive interpretation of history.* Acknowledging the historical and modern obstacles faced by female surgeons and surgeons of color as well as their numerous contributions

despite these barriers is an essential step in creating a more inclusive culture of surgery. Many might be surprised to learn that the earliest evidence of women in surgery in Western civilization dates back to 3500 BC [26]. Examples of contributions by women and minorities throughout history are not as infrequent as their underrepresentation and limited inclusion would suggest. For example, in the fourth century AD, Aspasia was considered a medical genius whose writings influenced male surgeons centuries later [26, 27]. The writings of “Tortula” of Italy in the eleventh century AD were similarly influential [26]. Examples of minority surgeons who contributed to surgery include Daniel Hale Williams, who performed the first successful open heart surgery in the United States in 1893; Charles Drew, who was instrumental in developing blood banking during the second world war; and Vivien Thomas, who had a tremendous impact on surgery through his role as a surgical technician for Alfred Blalock [28-31]. Inclusion of and appropriate historical representation of these contributions in the surgical canon validates the presence of women and minority surgeons in the profession.

*#ILookLikeASurgeon, #HeForShe, #NYerORCoverChallenge and beyond.* In 2015, the first author (HJL) tweeted the suggestion for an #ILookLikeASurgeon hashtag to defy gender stereotypes in surgery, and the surgeons on Twitter responded en masse [35]. By November 2015, the hashtag had been tweeted nearly 40 000 times, resulting in more than 128 million impressions [36]. Both female and male surgeons tweeted photos of themselves inside and outside of the operating room. Patients lauded the images and tweets as “humanizing the profession” [37]. For perhaps the first time, surgeons had a means to put forth images that represent them. Some have argued that the hashtag should be #IAmASurgeon [38, 39], unaware that the goal of the hashtag is to establish the reality that a surgeon can look like anyone. The goal has never been to help women surgeons believe they are surgeons but rather to celebrate the diversity of the field and encourage an image of surgeons inclusive of all genders, ethnicities, and personality types [40].

In the spring of 2016, Caprice Greenberg’s presidential address to the Association of Academic Surgery set forth the gender disparities, implicit biases, and other obstacles faced by women in surgery [41]. She encouraged the audience to respond by continuing to use the #ILookLikeASurgeon hashtag and challenged men to demonstrate their support for gender equity with tweets additionally tagged with #HeForShe. HeForShe was started in 2014 by UN (United Nations) Women as a solidarity campaign for the advancement of women [42]. Once more the surgical community responded in force, and a #HeForShe task force has been created within the Association of Women Surgeons [43].

Later that spring, the *New Yorker* featured a depiction of four female surgeons’ faces as seen from the perspective of a patient lying on the operating table under the light, their hands, eyes, and facial contours being unambiguously female. Realizing the uniqueness

of this image, Susan Pitt used the #ILookLikeASurgeon hashtag to launch the #NYerORCoverChallenge, challenging women to take similar photos under their own operating lights [44]. With the social media community established, the positive response to the hashtag was more tenacious than the initial response to #ILookLikeASurgeon. Notably, in our experience, it was often the male surgeons of the department taking the photos and tweeting and retweeting them.

The *New Yorker* cover suggests an evolving image of modern surgeons. The response of surgeons, both male and female, in harnessing social media to amplify the impact of that image normalizing women's presence in the operating room is a testament not only to the power of social media but also to the motivation of surgeons to show themselves, their colleagues, their patients, and their communities who they are.

### Conclusion

To stereotype is arguably human nature, since it reduces the amount of mental processing needed when interacting with stereotyped group members. That is, one benefit of stereotyping is that a single stereotype presumably reflects group members' salient characteristics and abilities. There's trouble with that assumption, however. As we've argued here, in the case of surgeons, many have become frustrated with the demographic and personality confines of an outdated stereotype that negatively impacts how they are perceived by colleagues and patients. Through increased diversification of the surgical workforce and through amplification of caring, empathic voices of today's surgeons by social media, surgical images can more truly reflect and represent modern surgeons.

### References

1. Stereotype. *Oxford English Dictionary*.  
<https://en.oxforddictionaries.com/definition/stereotype>. Accessed January 10, 2018.
2. Shrestha A. An excerpt from SBMJ Feb'08 on surgery. Blogger.  
<http://shresthaanup.blogspot.com/2008/02/excerpt-from-sbmj-feb08-on-surgery.html>. Published February 10, 2008. Accessed January 11, 2018.
3. Google Search. Why are surgeons so.  
[https://www.google.com/search?ei=lnJXWu-GOCzajwOwx6bYDA&q=why+are+surgeons+so&oq=why+are+surgeons+so&gs\\_l=psy-ab.3..35i39k1j0i7i30k1j0i5j0i30k1i2j0i8i30k1.40823.40823.0.42589.1.1.0.0.0.0.111.111.0j1.1.0...0...1c.1.64.psy-ab..0.1.110...0.vekbFpZnBSM](https://www.google.com/search?ei=lnJXWu-GOCzajwOwx6bYDA&q=why+are+surgeons+so&oq=why+are+surgeons+so&gs_l=psy-ab.3..35i39k1j0i7i30k1j0i5j0i30k1i2j0i8i30k1.40823.40823.0.42589.1.1.0.0.0.0.111.111.0j1.1.0...0...1c.1.64.psy-ab..0.1.110...0.vekbFpZnBSM). Accessed January 11, 2018.
4. Student Doctor Network. So what is the deal with you male surgeons?!  
<https://forums.studentdoctor.net/threads/so-what-is-the-deal-with-you-male-surgeons.1120492/>. Accessed January 10, 2018.

5. Vuong S. Does a stereotypical surgical personality exist? *KevinMD*. <https://www.kevinmd.com/blog/2010/08/stereotypical-surgical-personality-exist.html>. Published August 28, 2010. Accessed January 10, 2018.
6. Ask MetaFilter. Why do surgeons have attitude? <https://ask.metafilter.com/70056/Why-do-surgeons-have-attitude>. Published August 24, 2007. Accessed January 10, 2018.
7. Paulas R. Why are so many surgeons assholes? And how can we make them nicer? *Pacific Standard*. Published July 20, 2015. <https://psmag.com/social-justice/why-is-my-surgeon-acting-like-biff-from-back-to-the-future>. Accessed January 10, 2018.
8. Kashmer D. The surgeon's ego has a purpose. *Healthcare Quality Blog*. July 26, 2014. <http://www.surgicalbusinessmodelinnovation.com/team-dynamics/the-surgeons-ego-has-a-purpose/>. Accessed January 10, 2018.
9. Cochran A, Elder WB. A model of disruptive surgeon behavior in the perioperative environment. *J Am Coll Surg*. 2014;219(3):390-398.
10. Cochran A, Elder WB. Effects of disruptive surgeon behavior in the operating room. *Am J Surg*. 2015;209(1):65-70.
11. Van Norman GA. Abusive and disruptive behavior in the surgical team. *AMA J Ethics*. 2015;17(3):215-220.
12. Ruggieri PA. *Confessions of a Surgeon: The Good, the Bad, and the Complicated ... Life Behind the O.R. Doors*. New York, NY: Berkley Publishing; 2012:100.
13. Diamond D. Why one surgeon is skeptical of colleague's "confessions." Advisory Board. <https://www.advisory.com/daily-briefing/2012/01/05/surgeon-skeptical-of-or-confessions>. Published January 5, 2012. Accessed January 11, 2018.
14. Boodman SG. Anger management courses are a new tool for dealing with out-of-control doctors. *Washington Post*. March 4, 2013. [https://www.washingtonpost.com/national/health-science/anger-management-courses-are-a-new-tool-for-dealing-with-out-of-control-doctors/2013/03/04/74a44f86-67ed-11e2-85f5-a8a9228e55e7\\_story.html](https://www.washingtonpost.com/national/health-science/anger-management-courses-are-a-new-tool-for-dealing-with-out-of-control-doctors/2013/03/04/74a44f86-67ed-11e2-85f5-a8a9228e55e7_story.html). Accessed January 11, 2018.
15. A doctor tells all in "Confessions of a Surgeon." *NPR*. January 13, 2012. <https://www.npr.org/2012/01/13/145175271/a-doctor-tells-all-in-confessions-of-a-surgeon>. Accessed February 6, 2018.
16. Wilson N. The secret world of women surgeons you had no idea existed. *HuffPost*. September 10, 2015. [https://www.huffingtonpost.com/niamey-wilson/the-secret-world-of-women-surgeons\\_b\\_8110786.html](https://www.huffingtonpost.com/niamey-wilson/the-secret-world-of-women-surgeons_b_8110786.html). Accessed January 11, 2018.
17. Kpodzo DS. #ILookLikeASurgeon, not an imposter. *Allies for Health*. October 18, 2015. <http://alliesforhealth.blogspot.com/2015/10/ilooklikeasurgeon-not-imposter.html>. Accessed January 11, 2018.

18. Fitzgerald JEF, Tang SW, Ravindra P, Maxwell-Armstrong CA. Gender-related perceptions of careers in surgery among new medical graduates: results of a cross-sectional study. *Am J Surg*. 2013;206(1):112-119.
19. Hill EJ, Bowman KA, Stalmeijer RE, Solomon Y, Dornan T. Can I cut it? Medical students' perceptions of surgeons and surgical careers. *Am J Surg*. 2014;208(5):860-867.
20. Association of American Medical Colleges. Active physicians by sex and specialty. <https://www.aamc.org/data/workforce/reports/458712/1-3-chart.html>. Published December 2015. Accessed February 6, 2018.
21. Association of American Medical Colleges. Number of active residents, by type of medical school, GME specialty, and sex. <https://www.aamc.org/data/484718/report-on-residents-2017-b3table.html>. Accessed February 6, 2018.
22. Verghese A. *Cutting for Stone*. New York, NY: Vintage Books; 2009.
23. Harley EH. The forgotten history of defunct black medical schools in the 19th and 20th centuries and the impact of the Flexner Report. *J Natl Med Assoc*. 2006;98(9):1425-1429.
24. Pannier ST. *African Americans, Women, and the 1910 Flexner Report: Progressive Medical Reform and Professional Exclusion* [bachelor's thesis]. Salt Lake City, UT: University of Utah; 2016. <https://cdmbuntu.lib.utah.edu/utills/getfile/collection/honors/id/54/filename/82.pdf>. Accessed January 12, 2018.
25. Wikipedia. Surgeon. [https://en.wikipedia.org/w/index.php?title=Surgeon&oldid=817111628#Pioneer\\_surgeons](https://en.wikipedia.org/w/index.php?title=Surgeon&oldid=817111628#Pioneer_surgeons). Accessed January 11, 2018.
26. Wirtzfeld DA. The history of women in surgery. *Can J Surg*. 2009;52(4):317-320.
27. Tsoucalas G, Sgantzios M. Aspasia and Cleopatra Metrodora, two majestic female physician-surgeons in the early Byzantine era. *J Universal Surg*. 2016;4(3).
28. African American Registry. Black surgeon performs the first successful open-heart surgery in America. <https://aaregistry.org/story/black-surgeon-performs-the-first-successful-open-heart-surgery-in-america/>. Accessed January 10, 2018.
29. Organ CH Jr. Charles Richard Drew: the man and the myth. *JAMA*. 1989;261(2):298-299.
30. Alan Mason Chesney Medical Archives of the Johns Hopkins Medical Institutions. Vivien T. Thomas, LLD. Supervisor of surgical research laboratories (1910-1985). <http://www.medicalarchives.jhmi.edu/vthomas.htm>. Accessed January 11, 2018.
31. Tan SY, Merritt C. Charles Richard Drew (1904-1950): father of blood banking. *Singapore Med*. 2017;58(10):593-594.
32. More women than men enrolled in US medical schools in 2017 [news release]. Washington, DC: Association of American Medical Colleges; December 18, 2017.

- <https://news.aamc.org/press-releases/article/applicant-enrollment-2017/>. Accessed January 11, 2018.
33. US Census Bureau. QuickFacts: United States. <https://www.census.gov/quickfacts/fact/table/US/PST045216>. Accessed January 11, 2018.
34. American Association of Medical Colleges. Altering the course: black males in medicine. <https://members.aamc.org/eweb/upload/Altering%20the%20Course%20-%20Black%20Males%20in%20Medicine%20AAMC.pdf>. Published 2015. Accessed January 12, 2018.
35. Logghe H. #ILookLikeASurgeon Tweet it. Own it. *Allies For Health*. <http://alliesforhealth.blogspot.com/2015/08/ilooklikeasurgeon-tweet-it-own-it.html>. Published August 7, 2015. Accessed October 31, 2017.
36. Hughes KA. #ILookLikeASurgeon goes viral: how it happened. *Bulletin of the American College of Surgeons Blog*. November 1, 2015. <http://bulletin.facs.org/2015/11/ilooklikeasurgeon-goes-viral-how-it-happened/#.WqfqumrwYdU>. Accessed March 13, 2018.
37. Coutee T. Trending on Twitter #Ilooklikeasurgeon. *DiepCjourney*. August 11, 2015. <http://diepcjourney.com/2015/08/11/trending-on-twitter-ilooklikeasurgeon/>. Accessed February 6, 2018.
38. Chang A. @annamariechang Twitter post. <https://twitter.com/annamariechang/status/630565761388531712>. Published August 9, 2015. Accessed February 6, 2018.
39. Klauer J. @jotka Twitter post. <https://twitter.com/jotka/status/852466420248186880>. Published April 13, 2017. Accessed February 6, 2018.
40. Logghe HJ, Boeck MA, Atallah SB. Decoding Twitter: understanding the history, instruments, and techniques for success. *Ann Surg*. 2016;264(6):904-908.
41. Greenberg CC. *AAS Presidential Address* [video]. Las Vegas, NV: Academic Surgical Congress; 2017. <https://www.youtube.com/watch?v=KH01x2sk0gw>. Accessed July 14, 2017.
42. UN Women. HeForShe in brief. [http://www.heforshe.org/-/media/heforshe/files/our%20mission/heforshe\\_overview\\_brief.pdf?la=en](http://www.heforshe.org/-/media/heforshe/files/our%20mission/heforshe_overview_brief.pdf?la=en). Accessed March 13, 2018.
43. Varghese T. Why I joined AWS. *Association of Women Surgeons Blog*. November 15, 2017. <http://blog.womensurgeons.org/gender-differences/why-i-joined-aws/>. Accessed March 14, 2018.
44. Mouly F, Bormes G. The *New Yorker* cover that's being replicated by women surgeons across the world. *New Yorker*. April 11, 2017. <https://www.newyorker.com/culture/culture-desk/the-new-yorker-cover-thats-being-replicated-by-women-surgeons-across-the-world>. Accessed October 5, 2017.



**Heather J. Logghe, MD**, is a surgical research fellow at Thomas Jefferson University in Philadelphia. She founded the #ILookLikeASurgeon social media movement and is passionate about increasing diversity in surgery.

**Tyler Rouse, MD**, is a physician practicing in Stratford, Ontario, Canada. He is the creator and producer of the podcast series, *Legends of Surgery*, covering a variety of topics on the history of modern surgery.

**Alec Beekley, MD**, is a professor of surgery at Thomas Jefferson University in Philadelphia. His practice focuses on general and bariatric surgery as well as trauma and critical care.

**Rajesh Aggarwal, MD, PhD**, is the senior vice president for strategic business development and a professor of bariatric/minimally invasive surgery at Thomas Jefferson University in Philadelphia. He seeks to transform health care through deliberate and purposeful engagement with industry.

**Related in the *AMA Journal of Ethics***

[The Doctor's White Coat--an Historical Perspective](#), April 2007

[Education to Identify and Combat Racial Bias in Pain Treatment](#), March 2015

[Gender Stereotypes in Pain Diagnosis](#), July 2008

[Medical Hierarchy and Medical Garb](#), June 2013

The viewpoints expressed in this article are those of the author(s) and do not necessarily reflect the views and policies of the AMA.

**Copyright 2018 American Medical Association. All rights reserved.  
ISSN 2376-6980**