

ETHICS CASE

How Should Trainee Autonomy and Oversight Be Managed in the Setting of Overlapping Surgery?

Commentary by Jean-Nicolas Gallant, PhD, and Alexander Langerman, MD, SM

Abstract

This case highlights an attending surgeon's conflicts between duty to care for individual patients, train independent surgeons, and serve a patient population in an efficient manner. Although oversight of surgical residents and multiple operating room scenarios can be conducted in an ethical manner, patients might not understand the realities of surgical training and clinical logistics without explicit disclosure. Central to the ethical concerns of the case are the attending surgeon's obfuscation of resident involvement and her insufficient oversight of two concurrent procedures. Full and proper informed consent, increased transparency, better planning, and improved communication could have prevented this difficult situation.

Case

Dr. Kim walks into the preoperative area of the hospital to greet her team of resident physicians and medical students early in the morning before a day full of cases. Dr. Mali and Dr. Lora, Dr. Kim's senior residents, greet her and begin discussing patients. "Dr. Mali, you'll be in Mr. C's ischial wound debridement and closure, and Dr. Lora, you'll be leading Mrs. B's blepharoplasty," Dr. Kim says.

Dr. Lora looks somewhat hesitant. "I apologize, Dr. Kim, it's been a while since I have done a blepharoplasty. I am not sure that it's safe for me to be doing the operation without your observation and assistance."

"Thank you for letting me know. Dr. Mali, are you okay with doing the majority of Mr. C's procedure?" Dr. Kim asks while walking toward the patients' beds. Dr. Mali nods in agreement with this plan, saying, "I've done so many of these debridements, I don't think I will need much help."

Both Mr. C's and Mrs. B's cases are the first of the day, so Dr. Kim and her team meet both patients before they are wheeled into the operating rooms. Dr. Kim assures both patients, creating the impression that she will be doing each of their cases.

Dr. Kim walks into Mr. C's operating room to be present for time out, which is a check-in before the procedure begins. After Mr. C is anesthetized, she tells Dr. Mali, "I'll be back at the very end when you're closing up. I'll be in Mrs. B's room helping Dr. Lora." Dr. Kim leaves.

Dr. Mali proceeds with the case and encounters a lot of bleeding when creating the muscular flap to cover the wound. He ligates and cauterizes the vessels and is able to control the bleeding. As Dr. Kim promised, she returns for the end of the case.

Later that day, Dr. Mali gets a page that Mr. C has a significant hematoma at the surgery site. He pages Dr. Kim and they both go to Mr. C's bedside. They tell Mr. C, "This is a complication from your surgery this morning. We are going to have to take you back to the operating room." Mr. C sighs and says, "Dr. Kim, how could this have happened with you as my surgeon?" Dr. Kim is unsure how to answer.

Commentary

It is a fundamental ethical requirement for physicians to deal honestly and openly with patients at all times [1]. Being honest supports accepted bioethical principles—respect for autonomy, beneficence, nonmaleficence, and justice [2]—and is the foundation for trust, the keystone of the patient-physician relationship [3]. Here, Dr. Kim put herself in a difficult situation by obfuscating the role of resident surgeons in her operations and by failing to disclose her oversight of multiple surgeries. A truthful explanation of the circumstances of Mr. C's complication—that his case was handled primarily by her resident while she was in another operating room—would likely surprise Mr. C and potentially undermine his future trust in her. Furthermore, it appears from the scenario that Dr. Kim might not even have been present for any of the case, calling into question whether she truly provided oversight. To evaluate this case, we will draw upon four key topics in surgical ethics: (1) the necessity of disclosure for informed consent, (2) the distinction between overlapping and concurrent surgery, (3) the balance between trainee oversight and autonomy, and (4) the relationship between complications and errors.

Disclosure

Unless informed otherwise, it is reasonable for patients to assume that the attending surgeon will be present for and perform all of their surgery. That surgeons might circulate between operating rooms and that residents can perform routine portions of procedures independently is not (yet) common knowledge. This informational asymmetry places the burden of [disclosure](#) on the surgeon. Although professional surgical guidelines do not directly address the issue of trainee involvement in overlapping operations, respect for autonomy demands that patients be informed of trainee participation and of which portions of their case will not have attending physician presence. It would also be appropriate to indicate any risks that are uniquely associated with the portions for which the attending physician will not be present. In this case, it

would have been appropriate for Dr. Kim to explain that the senior resident would be handling the majority of the procedure, to state his apparent experience performing debridements, to explain what aspects she would be overseeing directly, and to discuss the common risks (e.g., bleeding) so that the patient could better understand the care he is receiving. Such disclosure allows patients to give informed consent to the procedure or to refuse the proposed plan of care.

Disclosure needs to be not only clear and honest but also timely. When possible, explanations of resident participation and overlapping cases are best handled prior to the day of surgery. Indeed, several aspects of this case would have been better handled earlier—the case reads as though the senior residents were unaware of the cases they would be participating in (ostensibly leaving them no opportunity to prepare, read ahead, or flag the attending surgeon of their [inexperience](#)), and, by extension, Dr. Kim was unaware of the help she would have for each of the cases. While the ideal of knowing every case's exact timing and team composition in advance can be challenging to accomplish, surgeons should strive to plan as much in advance as possible, especially when proposing to economize their effort over multiple cases or rooms [4]. Surgeons running multiple rooms should also be prepared to adjust operative schedules when it becomes apparent that ethical care is not feasible. In this case, Dr. Kim could conceivably have pushed back the start of one of the cases to ensure that she was present for the “critical portions” of both.

The Distinction between Overlapping and Concurrent Surgery

The notion of critical portions is central to the recent controversy concerning overlapping surgery. Surgeons frequently oversee and “operate” in two rooms at once in academic medical centers [5], focusing their time in individual cases on the portions that require advanced judgment, skill, or expertise (i.e., the critical portions). This economical use of surgeon effort can lead to increased throughput, decreased wait time for patients, and more of a surgeon's procedures being performed during “daylight hours” when experienced teams and ancillary services are more readily available [4, 6]. The practice of overlapping surgery is formally approved within a framework set forth by the Centers for Medicare and Medicaid Services (CMS) and requires an attending surgeon to be present for the “critical or key portions” of both overlapping procedures [7]. This means that attending surgeons have latitude to delegate “noncritical” portions of procedures to qualified trainees, a practice that is specifically acknowledged by the American College of Surgeons (ACS) [8]. The American Medical Association (AMA) also acknowledges the participation of substitutes and endorses full and proper informed consent (which, in this case, would include “notify[ing] the patient ... that others will participate, including whether they will do so under the physician's personal supervision or not” [9]). Other prominent professional societies, such as the American Society of Plastic Surgeons (ASPS), support proper informed consent but do not have specific statements with regard to the ethics of running two operating rooms [10].

In contradistinction to overlapping surgery, “concurrent” surgery, in which the critical or key portions of procedures are occurring at the same time (as appears to have happened in this case), is inappropriate. As discussed above, it is reasonable for patients to assume that the attending surgeon will lend his or her skills and time during the critical portion of the surgery. Therefore, because the attending surgeon is absent during critical portions, concurrent operations deny the implicitly promised care to the patient. Moreover, the operations are unjust (in that only one of two concurrent patient receives the benefit of the expert attending surgeon’s skills) and possibly maleficent (causing harm with unclear benefit). Legally, concurrent operations approach medical fraud: such procedures are not eligible for CMS payment unless the teaching physician is physically present during all “critical or key” portions of the procedure and “immediately available” (or assigns a colleague to be immediately available) during other portions [7].

From the wording of the case as it pertains to Mr. C, we don’t know for how much (if any) of the actual operating Dr. Kim was present. That surgeons are entrusted to define critical portions for a given case implies that at least *some* portion of every case is “critical.” Although there are some emerging attempts to generate consensus on what constitutes the critical portions of specific procedures [11], we cannot, at this point, definitively say what would have been critical in this case. At the very least, we would expect Dr. Kim to be present for *some* of the procedure, to a degree that she could personally ensure that the case was done properly (even if she was confident in Dr. Mali’s work).

Trainee Oversight and Autonomy

Surgical residency training involves residents progressing from surgical assistance and observation to independent performance of surgical tasks. Concomitantly, there is a natural transition in attending surgeon oversight from “show and tell” to “no help” [12]. This last stage of training, at which point an attending surgeon typically provides no unsolicited advice to a resident, still requires attending surgeon oversight to ensure optimal patient care. At no point in surgical residency training is there a no-supervision phase [4]. It would be incumbent on the supervising physician, at the very least, to inspect the work of the resident, which means being present at a stage in the case prior to closure when factors in the adequacy of the care can be assessed (e.g., in this case, complete debridement, viability of the flap, skin tension, and hemostasis might all be important). The case describes Dr. Kim’s presence only “at the very end” once closing was underway, suggesting she might not have been able to do even this minimum of oversight in this particular case.

Errors and Complications

Regardless of resident involvement in surgery, complications are a near inevitable part of surgical treatment. Even patients of the best surgeons might have [surgical](#)

[complications](#), and a complication does not mean an error occurred. This point warrants additional clarification: when anticipated potential negative consequences occur, they are considered complications—a term distinct from error. Errors, in medicine, are preventable acts of omission or commission that could or could not lead to complications [13]. Dr. Kim (and we) can't know if the complication—a hematoma requiring reoperation—was caused by an error. It might alternatively have been caused by uncontrollable factors or even factors outside the operating room (e.g., a rough bed transfer). Her absence from the case denies us an “attending surgeon level” evaluation of the causative factors and also denies Dr. Mali a potential educational opportunity and Mr. C an acceptable explanation. While the complication might not have been due to an error and been unpreventable even in the best hands, once the circumstances surrounding this error are revealed to Mr. C, he might—understandably—conclude the complication was directly due to Dr. Kim's lack of oversight.

Conclusion

The duty of the attending surgeon to the patient requires oversight of and responsibility for resident actions. Attending surgeons are obligated to personally ensure that portions of procedures performed independently by residents were done correctly and that any complications or errors be disclosed in detail to the patient. Dr. Kim should disclose her lack of appropriate oversight to Mr. C and explain, in a manner that does not inappropriately “blame” Dr. Mali for the outcome, that she was wrongly involved in concurrent surgeries on two different patients in two different operating rooms. Dr. Kim should apologize for poorly informing the patient of the logistical and training circumstances regarding the patient's surgery and attempt to salvage any trust in the relationship. She also should not attempt to bill for this case if she wasn't present for the critical portions. Finally, Dr. Kim and her team should present this case at a departmental morbidity and mortality conference to receive feedback, improve their practice, and prevent this situation from happening again. Future strategies for preventing this situation might include better planning of the cases and of resident involvement, more transparent disclosure about the (important and valuable) role of trainees, and latitude to delay the start of cases when proper attending surgeon oversight cannot be assured.

References

1. American Medical Association. Principles of medical ethics. *Code of Medical Ethics*. <https://www.ama-assn.org/delivering-care/ama-principles-medical-ethics>. Accessed January 30, 2018.
2. Beauchamp TL, Childress JF. *Principles of Biomedical Ethics*. 7th ed. New York, NY: Oxford University Press; 2013.
3. Pellegrini CA. Trust: the keystone of the patient-physician relationship. *J Am Coll Surg*. 2017;224(2):95-102.
4. Langerman A. Careful, compassionate, concurrent surgery. *Boston Globe*. January 10, 2016. <https://www.bostonglobe.com/ideas/2016/01/10/careful->

compassionate-concurrent-surgery/YBNewe5HE6ygL05N27Ulxj/story.html. Accessed November 16, 2017.

5. Abelson J, Saltzman J, Kowalczyk L. Clash in the name of care. *Boston Globe*. October 24, 2015. <https://apps.bostonglobe.com/spotlight/clash-in-the-name-of-care/story/>. Accessed November 16, 2017.
6. Langerman A. Concurrent surgery and informed consent. *JAMA Surg*. 2016;151(7):601-602.
7. US Senate Finance Committee. Concurrent and overlapping surgeries: additional measures warranted. <https://www.finance.senate.gov/imo/media/doc/Concurrent%20Surgeries%20Report%20Final.pdf>. Published December 6, 2016:3. Accessed January 1, 2018.
8. American College of Surgeons. Statement on principles. <https://www.facs.org/about-ac/s/statements/stonprin>. Revised April 12, 2016. Accessed January 1, 2018.
9. American Medical Association. Opinion 2.1.6 Substitution of surgeon. *Code of Medical Ethics*. <https://www.ama-assn.org/delivering-care/substitution-surgeon>. Accessed January 30, 2018.
10. American Society of Plastic Surgeons. Code of ethics of the American society of plastic surgeons. <https://www.plasticsurgery.org/documents/Governance/asps-code-of-ethics.pdf>. Updated September 25, 2017. Accessed January 1, 2018.
11. Laratta JL, Cohen-Tanugi S, Shillingford JN, et al. Defining the "critical elements" for the most common procedures in spine surgery: a consensus of orthopaedic and neurosurgical surgeons [published online ahead of print September 15, 2017]. *Spine*. doi:10.1097/BRS.0000000000002416.
12. DaRosa DA, Zwischenberger JB, Meyerson SL, et al. A theory-based model for teaching and assessing residents in the operating room. *J Surg Educ*. 2013;70(1):24-30.
13. Angelos P. Complications, errors, and surgical ethics. *World J Surg*. 2009;33(4):609-611.

Jean-Nicolas Gallant, PhD, is a trainee in the MD-PhD Medical Scientist Training Program at Vanderbilt University in Nashville, Tennessee. He completed his PhD on the genetic basis of non-small cell lung cancer. After completing his MD, he plans to complete a residency in otolaryngology with the goals of pursuing a career as a head and neck surgeon, researcher, and ethicist.

Alexander Langerman, MD, SM, is a head and neck surgeon and ethicist at Vanderbilt University Medical Center in Nashville, Tennessee, with appointments in the Department of Otolaryngology and the Center for Biomedical Ethics and Society. With a master's degree in clinical and administrative data science, he also directs the Surgical Analytics Lab at Vanderbilt. His research focuses on the intersection between ethics, data science, and logistics in the operating room, addressing topics such as surgeon-patient decision

making, informed consent, surgical transparency, and “black box” recording.

Acknowledgements

Alexander Langerman gratefully acknowledges funding received from the Greenwall Foundation and the Triological Society to conduct this research.

Related in the *AMA Journal of Ethics*

[Disclosure of Experience as a Risk Factor in Informed Consent for Neurosurgery: The Case of *Johnson v. Kokemoor*](#), January 2015

[Informed Consent: What Must a Physician Disclose to a Patient?](#), July 2012

[Managing Risk in Cataract Surgeries Performed by Resident Ophthalmologists](#), December 2010

[Medical Culture and Error Disclosure](#), May 2008

[What about Learners’ Roles in the Operating Room Should Be Disclosed to Patients?](#), April 2018

The people and events in this case are fictional. Resemblance to real events or to names of people, living or dead, is entirely coincidental.

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**