Who Is Really the Communicator of Adverse Outcomes—And When?

To the Editor:

Fritz *et al.*[1] studied surgical complications by reviewing the recollections of patients and by a retrospective chart review. Remarkably, not once does the word "surgeon" enter their discussion. That complications will occur is a given. There remain many issues attendant to disclosure of adverse outcomes. First, what one physician considers a complication may not be a complication in the eyes of another. Second, in an era of multiple providers dealing with complex cases, just who is charged with that difficult discussion is often problematic. There is much emphasis on handoffs from the Joint Commission, but there is no standard regarding explanation of complications as part of that process. Third, disclosing complications in the hospital environment may add to patient confusion, such that it may be better done late after hospitalization, at a time when the patient and extended family may be present, rather than during hurried 06:45 rounds. The authors focused on a 30-day window, but this may not be enough time for that discussion to have occurred with any hope that either understanding or resolution might result. Fourth is the question of just who should be disclosing a complication. In a large single-specialty group, in which I work, for example, the surgeons have different styles and opinions about disclosure of medical problems, just as we do not all agree on the management of a particular medical problem. For me, to discuss a partner's complication would lead to much disharmony in the practice. This is not a theoretical issue. My group has experienced a malpractice suit as a result of how one doctor described another partner's complication when the patient interpreted the situation as blaming and finger pointing. Fifth, the authors ignore the reality that often the people most interested and needful of that discussion about complications are the patient's family or guardians. They were not surveyed for this study. Should they have been?

For an anesthesiology group to examine this problem raises a significant question: would older, experienced members of their Department of Surgery agree with their findings? Did they go to surgeons with these results and ask for change in the habits of their colleagues? Or, would the surgeons merely state that things are actually better than they have represented, and the anesthesiologists should deal with their own complications?

Competing Interests

The author declares no competing interests.

Jeffrey L. Kaufman, M.D. Baystate Vascular Services, Baystate Medical Center, Springfield, Massachusetts. kaufman@massmed.org

 Anesthesiology 2017; 126:194-6

Reference

1. Fritz BA, Escalier KE, Ben Abdallah A, Oberhaus J, Becker J, Geczi K, McKinnon S, Helsten DL, Sharma A, Wildes TS, Avidan MS: Convergent validity of three methods for measuring postoperative complications. Anesthesiology 2016; 124:1265–76

(Accepted for publication October 5, 2016.)

In Reply:

We thank Dr. Kaufman for his response to our recent article.[1] He raises interesting and important points about discussions between clinicians and patients after a postoperative complication has occurred. Dr. Kaufman's concerns seem to be predominantly about how best to disclose complications to patients, whereas the focus of our publication was on how best to discover complications. Dr. Kaufman has five specific concerns, which we will address sequentially, although several of the concerns fall outside the scope of our article. First, we agree that different clinicians might not agree on whether or not a complication has occurred. Indeed, this is borne out by our study, which found that three different methods yielded substantially different conclusions regarding a range of complications. The three bases for detecting complications in our study were (1) what is written in the medical record; (2) what is coded (*e.g.*, International Classification of Diseases, Ninth Revision code) as a complication; and (3) what the patient reports as a complication. Second, Dr. Kaufman contends that there is no standard approach for explaining complications in the hand-off process. We agree with the sentiment and concur that developing standards would be helpful. Third, Dr. Kaufman expresses reservations about disclosing complications to patients in the hospital environment. We respectfully disagree with this perspective. Complications often have treatment implications and typically require compliance from patients and their families. For example, a patient who suffers a deep venous thrombosis, a wound infection, or a postoperative myocardial infarction will require specific follow-up, will need to take targeted medications, and might need to modify behavior. We believe that disclosing such complications in the hospital environment is mandatory; however, we agree that follow-up after hospital discharge can be very beneficial. Fourth, regarding who should disclose complications to our patients, we agree that all members of the healthcare team who have a stake in perioperative complications (including surgeons and anesthesiologists) should do this collaboratively. Although we agree with the fifth point that surveying patients' family members regarding complications would likely yield valuable insights, ethical concerns regarding patient privacy and protected healthcare information make this challenging. It would also be logistically difficult.

<zdoi;10.1097/ALN.0000000000001412>

Finally, and of particular relevance to our article, without knowing when our patients have experienced complications, we cannot appreciate our potential failings, and lack the necessary information to guide quality of care improvements. Thus, it is entirely appropriate and important for all clinicians, including anesthesiologists and surgeons, to track postoperative outcomes. On many occasions, information on complications can only be gleaned from patients' reports. Based on our experience, our patients are pleased when we follow up with them to track their positive and negative outcomes, and increasingly they expect us to do this.

Competing Interests

The authors declare no competing interests.

Bradley A. Fritz, M.D., M.S.C.I., Michael S. Avidan, M.B.B.Ch., F.C.A.S.A. Washington University in St. Louis, St. Louis, Missouri (M.S.A.). avidanm@wustl.edu

Reference

1. Fritz BA, Escallier KE, Ben Abdallah A, Oberhaus J, Becker J, Geczi K, McKinnon S, Helsten DL, Sharma A, Wildes TS, Avidan MS: Convergent validity of three methods for measuring postoperative complications. Anesthesiology 2016; 124:1265–76

(Accepted for publication October 5, 2016.)

Complexities of Bleeding During Spine Surgery: It'll Take Your (Mechanical) Breath Away

To the Editor:

We read with great interest the article by Kang *et al.*[1] wherein the authors report the effect of mechanical ventilation mode on perioperative blood loss in patients undergoing posterior lumbar interbody fusion surgery. The authors report that pressure control ventilation, by limiting peak inspiratory airway pressure, reduced median intraoperative blood by 130 ml.

We would like to highlight several limitations of this study, which may confound interpretation of the results:

1. The authors' description of the surgical procedures performed in the study is vague. The surgical procedure is described as "posterior lumbar interbody fusion (two or three levels)" in subjects with no previous surgery. It is important that more granular information about the surgical procedures performed in each group be provided. The exact number of intervertebral cage constructs (necessitating a discectomy), extent of Smith-Peterson osteotomies, and the number of laminectomies performed during multilevel spine surgery have a linear correlation with perioperative blood loss. One tool the authors could have used to quantify the extent of surgery and the associated risks of bleeding is the Spine Surgery Invasiveness Index, first reported by Mirza *et al.*[2] This scoring system assigns each operated level a score between 0 and 6 based on whether an anterior or posterior decompression, instrumentation, and/or fusion was performed and explains at least 44% of the variation in blood loss. By not reporting more detailed information regarding the surgery, it is difficult to establish whether the two groups underwent surgical procedures with an equivalent risk of blood loss. The group size (28 patients per group) is too small to assure that randomization would equalize these factors.
2. The authors describe preoperative coagulation parameters; however, no intraoperative coagulation results or allogeneic blood product administration is reported. Several studies have reported the hemostatic abnormalities encountered during spine surgery. Furthermore, hypofibrinogenemia is increasingly recognized as an important cause of intraoperative bleeding.[3] It is critical to exclude the impact of any underlying intraoperative coagulopathy as the cause of difference in patient blood loss reported by the authors.

In conclusion, this article suggests that the mode of mechanical ventilation, by altering airway pressure and inferior vena cava compression, will ultimately affect surgical-site bleeding. However, the authors have not provided sufficient surgical and coagulation data to demonstrate conclusively that mode of mechanical ventilation was the only factor responsible for the observed difference in blood loss.

Competing Interests

The authors declare no competing interests.

Bhiken I. Naik, M.B.B.Ch., Edward C. Nemergut, M.D., Marcel E. Durieux, M.D., Ph.D. University of Virginia, Charlottesville, Virginia (B.I.N.). bin4n@virginia.edu

References

1. Kang WS, Oh CS, Kwon WK, Rhee KY, Lee YG, Kim TH, Lee SH, Kim SH: Effect of mechanical ventilation mode type on intra- and postoperative blood loss in patients undergoing posterior lumbar interbody fusion surgery: A randomized controlled trial. Anesthesiology 2016; 125:115–23
2. Mirza SK, Deyo RA, Heagerty PJ, Konodi MA, Lee LA, Turner JA, Goodkin R: Development of an index to characterize the "invasiveness" of spine surgery: Validation by comparison to blood loss and operative time. Spine 2008; 33: 2651–61; discussion 62
3. Naik BI, Pajewski TN, Bogdonoff DI, Zuo Z, Clark P, Terkawi AS, Durieux ME, Shaffrey CI, Nemergut EC: Rotational thromboelastometry-guided blood product management in major spine surgery. J Neurosurg Spine 2015; 23:239–49

(Accepted for publication October 5, 2016.)

<zdoi;10.1097/ALN.0000000000001415>