A Video Is Worth a Thousand Operative Notes

Justin B. Dimick, MD, MPH; John W. Scott, MD, MPH

How serious are we about improving surgical quality? If we want to take the next step at improving the quality of our craft, we need to take advantage of the richest source of data available to us: operative video. Most efforts to improve surgical quality focus on optimizing care before surgery (eg, adhering to evidence-based processes around preventing wound infection and deep venous thrombosis) and the early recognition and treatment of complications to mitigate downstream harm (eg, failure to rescue). While these efforts will improve care, we need to push the frontier to improving what happens in the operating room—the quality of the operation itself.

There are 2 important barriers to improving the technical execution of an operation. First, the main source of data regarding the details of the operation—the operative note—is severely flawed. Operative notes were never intended to provide actionable information regarding the technical quality of the procedure and so their utility in quality improvement is limited at best. Many operative notes are dictated from a template and contain very little detail. Moreover, while they may describe how a particular step was conducted (eg, what staplers were used for an anastomosis?), they do not describe how well it was conducted (eg, was it a good anastomosis?).

Second, surgeons may have significant blind spots regarding what happened in the operating room. What the surgeon reports (either in an operative note or a survey about their technique) and what actually happened may not be the same thing. Moreover, surgeons with less technical expertise may have the least reliable operative notes, further limiting the effect of self-reporting on quality improvement. We need an independent data source that represents what happened in the operating room with complete fidelity, and we need that data reviewed by someone else to address any blind spots.

In this issue of *JAMA Surgery*, van de Graaf et al add to the growing body of literature demonstrating the value of video as a source of data for quality improvement. The investigators demonstrate that standardized video reports more effectively demonstrated the technical details of an operation compared with a narrative operative report. They found that about half (52.5%) of the essential technical steps were documented with traditional operative report compared with 85.1% with the addition of video recording of essential steps.

As van de Graaf et al demonstrate, there is ample room to improve documentation using video. However, there are several key questions left unanswered by this study. Namely, as discussed above, how do we document how well the steps were conducted? We need some way to assess the adequacy and quality of each step of the procedure. Recent data from bariatric and pancreatic surgery suggest that surgeon video peer review using a simple Likert scale of technical skill strongly correlates with risk-adjusted outcomes. Developing a scientific understanding of the quality of an operation from video will open new frontiers in surgical quality improvement. That leads us to another important question—what will we do once we have reliable data on the quality of an operation? There are many ways to use these data for quality improvement, including accreditation, board certification, and surgical coaching. Which of these modalities will ultimately be most effective is unclear. What is certain is that we owe it to our patients to push this frontier forward and develop the capability to continuously improve the quality of our craft.

ARTICLE INFORMATION

**Author Affiliations:** Department of Surgery, University of Michigan, Ann Arbor (Dimick); Surgical Innovation Editor, JAMA Surgery (Dimick); Department of Surgery, Harborview Medical Center, University of Washington, Seattle (Scott).

**Corresponding Author:** Justin B. Dimick, MD, MPH, Department of Surgery, University of Michigan, 2800 Plymouth Rd, Bldg 16, Office 136E, Ann Arbor, MI 48109 (jdimick@umich.edu).

**Published Online:** January 23, 2019. doi:10.1001/jamasurg.2018.5247

**Conflict of Interest Disclosures:** Dr Dimick has received grants from the National Institutes of Health and has received personal fees from and is an equity owner of ArborMetrix. No other disclosures were reported.

REFERENCES


