

Quality Improvement Is Local

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President Obama has advanced, as the core of his health care strategy, a need for improved quality and reduced costs. He and Congress have now provided \$1.1 billion to establish the Center for Comparative Effectiveness Research as a means to that end. In order for the surgical community to help achieve the President's objective, we should highlight how well our program, the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP), is suited to support quality improvement strategies. The essence of the ACS-NSQIP is, after all, comparative effectiveness. As Porter and Teisberg, the noted health care economists have said, outcomes metrics like the ACS-NSQIP "should become the norm for the treatment of every condition."¹ The ACS has advocated for federal support for the program and it would be appropriate and welcomed.

But to maximize the benefits of the ACS-NSQIP data, there has to be a mechanism—a local, face-to-face communication mechanism—where data can be evaluated and turned into quality improvement. This is difficult at the individual hospital level. We all become ingrained by our own biases and there is little opportunity for cross fertilization of ideas in this setting. It is even more difficult at national meetings, where data are presented rapidly and with little time for discussion. The best organization, I have come to believe, is one in which groups of regional hospitals form a "quality collaborative," meet regularly to get into details of quality improvement, and discuss who does what best. This is comparative effectiveness at the local level.

My experience in this area comes from the Michigan Surgical Quality Collaborative (MSQC), a group of 34, mostly community, hospitals in Michigan, which has been in operation for the past 4 years. Here, frontline caregivers generate lively discussions about real-world problems. But it is not a rambling dialogue. It is a targeted discussion based on ACS-NSQIP data, arguably the most reliable surgical data available. To use an example discussed recently at our quarterly meeting, the surgical-site infection rate for diabetic patients in MSQC was found to range from 2% to 20%—a 10-fold varia-

tion. And then the discussion began. What was it about the "best performer" here that accounted for the remarkable success? Or conversely, why were some hospitals struggling? Was finger-stick blood glucose routinely done on entry to the preoperative holding area? Were glucometers available in each operating room? Did anesthesia have an insulin infusion protocol? What was the intraoperative trigger for insulin administration? These and a multitude of similar questions were asked and answered in the collaborative environment. This process is how quality improves. It cannot be done in an individual hospital or at the microphone of a national meeting.

Face-to-face communication in a collaborative is critical and nurses' involvement is as important as surgeons. Typically, hospital groups sit together at our meetings, and they include the ACS-NSQIP surgeon champion, the surgical clinical nurse reviewer, and various administrators. Not many surgical meetings involve nurses in this way, but it is highly important, as the surgical clinical nurse reviewer is frequently more able to advocate for quality measures in a hospital setting—and carry them to completion—than the active surgeon with a busy operative schedule. And there are mechanisms available to enhance communication at and outside of meetings. We use an audience response system, for example, to assess practice patterns in Michigan. What percentage of our 34 hospitals uses a formal risk assessment methodology for venous thromboembolism prophylaxis? The answer is available in seconds (ie, not many), and forms the basis for a discussion. Participants choose to sit at various lunch tables based on a common interest. Although "bowel prep for colectomy" might not be an appealing lunch table discussion for the lay population, it draws a lot of attention at our meetings. Between meetings, communication comes from a dedicated MSQC Web site (www.MSQC.org), a hardcopy newsletter for those less inclined to use the computer, and, most recently, a dedicated MSQC channel on YouTube (www.youtube.com/msqc1), inspired by my offspring. Here "best practices" identified in member hospitals are described in 10 minutes or less, and can be easily viewed on a laptop or smart phone between patients.

There are core elements of a collaborative that are necessary if the group is to be effective. The first core element is availability of a standardized outcomes infrastructure.

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We use the ACS-NSQIP. The second core element is that there is some financial support for the effort, apart from the individual hospital. Fortunately for us, Blue Cross/Blue Shield of Michigan (BCBSM)/Blue Care Network (BCN) has completely subsidized hospital participation in ACS-NSQIP, as they had enough foresight to realize that improved quality will save money. Another core element is that the environment of the collaborative be “safe.” That is to say, surgeons and nurses need to believe that what they divulge about quality (or lack of it) at the meetings will stay within the group. Results are not shared with BCBSM, except in the aggregate, and they do not end up on billboards. Although there is no real mechanism for enforcing this stipulation, no one has broken it yet. It is important that the group functions in a friendly and collegial atmosphere. The safe environment helps, and most of us already know each other through association with the Michigan Chapter of ACS. The sense of common purpose—quality—adds to the collegiality. And we are fortunate that BCBSM/BCN has not endorsed the pay-for-performance approach so common today. In my experience, such a strategy does not improve quality and it does generate competitiveness among hospitals. This results in creative data collection and animosity between colleagues. BCBSM has instead used a “pay-for-participation” strategy in which MSQC participants are rewarded equally for participation in the group. The result is a friendly environment in which objective data can be evaluated.

What is the evidence that collaborative efforts like the MSQC are effective? There are several very prominent efforts that support the collaborative strategy. One, the Northern New England Cardiovascular Consortium, pioneered this area by developing a multi-institutional collaborative of hospitals performing coronary artery bypass grafting in Maine, New Hampshire, and Vermont.² An intervention consisting of data feedback, training in continuous quality-improvement techniques, and site visits to each hospital resulted in a 24% reduction in hospital mortality rate during the postintervention period. Another, the Blue Cross/Blue Shield Cardiovascular Consortium of Michigan, a group of 17 Michigan hospitals, examined the variation in hospital practice associated with percutaneous coronary intervention.³ The variation in practice was remarkable. The amount of contrast material administered per patient, for example, varied from 200 to 335 mL, depending on whether ventriculography was done or not. The more contrast, the more postintervention nephropathy. When the suggestion was made that ventriculography was not needed since the advent of echocardiography, variation was eliminated, and the drop off in the incidence of ne-

phropathy was profound. During the initial 4 years of the Blue Cross/Blue Shield Cardiovascular Consortium of Michigan efforts, hospital mortality was reduced by 25% and various morbid conditions, such as stroke, other vascular complications, emergency coronary artery bypass grafting, and in-hospital MI dropped dramatically. More recently, the Keystone Collaborative, an effort sponsored by the Michigan Hospital Association and BCBSM, brought >100 Michigan ICUs together and promoted adherence to evidence-based practice for prevention of bloodstream-associated infections.⁴ During the course of 2 years, incidence of bloodstream-associated infection was reduced by 66% and estimated savings amounted to \$160 million. And the MSQC, described previously, showed a 13% reduction in the incidence of various complications after inpatient general surgical cases during a 1-year interval. These efforts do work and will save money.

If the time comes when dollars are allocated from the Center for Comparative Effectiveness to support ACS-NSQIP, more hospitals will be immediately drawn to the system. The ACS, I contend, should manage the ACS-NSQIP in such a way as to make hospital participation in a quality collaborative an integral aspect of the program. Collaboratives could be regional or, in some cases, specialty- or disease-specific. But the common themes—reliable data, collegiality, and safety—must be preserved.

This proposal for development of the ACS-NSQIP stands in stark contrast to the recently implemented Centers for Medicare and Medicaid Services policy for nonpayment of hospital-acquired conditions, otherwise known as “never events.” Although most of us would agree that payment is not appropriate for a certain few egregious errors (eg, wrong patient, wrong-side operation), many on the never-event list are not actually in this category. I am not aware of any evidence documenting that a nonpayment strategy actually improves quality. Indeed, this policy might detract from real quality improvement because it could tend to drive clinical problems underground, and inhibit the very detailed and honest discussion of outcomes, good or bad, that we think is so important. And the few payers who have so far supported the collaborative concept might be disinclined to do so if they believe they would not have to pay for adverse events anyway. But in the nonpayment scenario, no venue for learning about quality improvement exists. Better to limit the never-event approach to a few specific areas, and focus on what we know works. What works is a common, standardized reporting infrastructure, augmented by organization of people who actually know each other, know their subject, and have common

interests in quality. This is the path to quality improvement. The ACS should advocate for this position nationally, as a thoughtful response to President Obama's challenge.

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