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OP-ED

Never Events? Well, Hardly Ever.

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The well-bred Captain Corcoran of the HMS Pinafore was clear in his intent and could be forgiven a bit of braggadocio, but his affectionate crew was quick to remind him of his flaws and get him to be a touch more modest. Likewise, we can be sure that surgeons who perform medical procedures are clear in their intent—avoiding harm to patients. But their performance, too, belies this intent more often than we would like.

The Centers for Medicare and Medicaid Services have labeled avoidable adverse outcomes "never events," and will not pay for treatment of these outcomes [1]. The most visible "never event" in the eye of the public is a wrong-site surgery. Some of these events are terribly dramatic and sad, like the removal of a noncancerous kidney in Minnesota in 2008 [2]. Others are of less life-threatening import, like a wrong-side ankle surgery in Boston in that same year [3].

Any doctor who has carried out a wrong-site procedure understands that this is a searing event, both personally and professionally. No possible punishment is more effective than the alarm, embarrassment, and shame already felt by the doctor. And yet the rates of wrong-site surgeries remain essentially constant [4-7]. An article in the *Archives of Surgery*, for example, noted that self-reported data from 2002 through 2008 revealed a persistently high frequency of surgical "never events" and that "the main root causes leading to wrong-patient procedures were errors in diagnosis (56.0 percent) and errors in communication (100 percent), whereas wrong-site occurrences were related to errors in judgment (85.0 percent) and the lack of performing a 'time-out' [before surgery] (72.0 percent)" [8].

The regulatory response to this problem is based on the old principle: "When you have a hammer, everything looks like a nail." In this case, the hammer employed by governmental and private payers is simply a refusal to pay for such events. There seems to be a view that financial punishment will act as a deterrent. But we have seen that it does not.

What does work? Some, looking at the airline industry example, extoll the virtue of checklists. If only, they say, surgeons and other members of the OR team were to go through a preoperative checklist, the number of wrong-site procedures could be dramatically reduced.

But, as Captain Chesley Sullenberger notes, "a checklist is not sufficient. What makes it effective are the attitude, behavior, and teamwork that go along with the use

of it" [9]. It is important to confirm that the listed actions have actually taken place. This confirmation will only occur if there is sufficient trust and mutual respect among the OR staff that any member of the team can say to the surgeon, "Excuse me, have we properly carried out that step?"

The basis for this kind of behavior is codified in an environment in which "crew resource management" (CRM) has been taught and adopted. There, everyone in the room has a shared sense of responsibility for the outcome of the case. CRM is powerful for a team that works together often; it also enables a group of people who have never worked together to carry out a compact of defined goals and responsibilities.

When CRM was first introduced into the airline industry, some pilots thought it was a threat to their autonomy. Sullenberger writes, "In the old days, we had cowboys who didn't believe in checklists." Over time, though, the pilots came to understand that they were more likely to be successful in their tasks if they were part of a well-functioning team. They learned to reduce variation in their practice, to standardize the aspects that could be standardized. "Let the exceptional things be difficult," grew to be the expectation among all pilots.

The parallels to surgery are clear. Hospitals that have engaged in CRM have found it to be helpful. At Beth Israel Deaconess Medical Center, for example, CRM was introduced in the Department of Obstetrics and Gynecology after the tragic loss of a baby and the near-death of the mother [10]. After the CRM curriculum was modified for clinical application, 220 staff received training to incorporate its principles and concepts into their daily work processes. The result was a dramatic reduction in major adverse obstetric events, which improved overall patient safety and the quality of obstetric care and reduced malpractice liability exposure [11].

As recently as 2006, though, some in surgery rejected much that is known about process improvement from other industries. An article in the *Archives of Surgery* concluded:

> Wrong-site surgery is unacceptable but exceedingly rare, and major injury from wrong-site surgery is even rarer. Current site-verification protocols could have prevented only two-thirds of the examined cases…. No protocol will prevent all cases. Therefore, it will ultimately remain the surgeon's responsibility to ensure the correct site of operation in every case [12].

This assertion is reminiscent of Captain Sullenberger's description of the airline pilots before they found the correct path. Can surgeons and other doctors find their way? It is heartening that the thinking of at least one of the authors of the above-cited paper has changed [13].

In the face of slow progress, there is little doubt why the regulatory hammer is employed. But it is a crude tool. Its effectiveness as a deterrent is minimal because it

does not address the structural issues underlying the problem. It emphasizes a particular outcome rather than a process that will achieve it. It penalizes people when it is too late to make a difference. Finally, it serves mainly to create resentment among those who are targets for improvement. Such is often the nature of regulation, no matter how well intended.

What, then, is the solution? It relies on the profession rather than those on the outside. In addition to employing CRM it is time for doctors and hospitals to be much more transparent about the errors that do occur. David Ring, a surgeon at Massachusetts General Hospital, is an exemplar in this regard. Dr. Ring was convinced that the profession would be better off if he published an article about his own surgical error [14]. He understood that acknowledging the manner in which errors occur is the first step to eliminating them in the future.

Likewise, when there was a wrong-site surgery at Beth Israel Deaconess in 2008, circulation of the story to staff throughout the hospital [3] enabled us to achieve widespread interdisciplinary participation in redesigning the work flow in our ORs. As I noted at the time:

> The wide disclosure of a "never" event in a blame-free manner resulted in an intensity of focus and communal effort to solve an important systemic problem, resulting in redesign of clinical procedures, buy-in from hundreds of relevant staff people, and an audit system that will monitor the effectiveness of the new approach and leave open the possibility for ongoing improvement. If you ever needed a clear example of the power of transparency, here it is [15].

Transparency, combined with a commitment to and training in crew resource management, enables doctors to hold themselves accountable to the standard of care they would wish for their own family members. This combination of ingredients offers far more potential than financial penalties or other regulatory actions for sustained process improvement in the operating rooms of America.

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