

“Wait!” I exclaimed, as all the heads in the procedural room turned, “Doesn’t the patient have a chlorhexidine allergy?” The resident, holding gauze soaked in chlorhexidine, froze. The room was so silent that the air could have been sliced with a scalpel.

The team was surprised to hear a medical student’s voice before the student was addressed by a resident or attending. It was a risky endeavor, or at least it felt risky right before I had spoken up, as I had learned that the subjective grading system of medical school was very much built upon hierarchy, and those who questioned it were punished with a less desirable grade. But there was much more than a grade at stake on the other side, and I was glad instinct had kicked in.

As the circulating nurse leaned over the computer, she pointed to the allergies section of the electronic medical record and remarked, “Yes, I believe the student is right. This patient has a history of anaphylaxis with chlorhexidine.”

The resident turned back and said, “Thanks for catching that,” as she opted for an alternative and the procedure proceeded. Silently, I let out a breath of relief.

I had made a point of introducing myself to the patients before their procedures, and I remembered this one pretty clearly. April sat attired in traditional hospital garb and huddled in a blanket, eyes wide and appearing lost. At first, I had thought this was because she was cold, so I offered to get her a warmed blanket. But when she refused, I realized that she was hyper vigilant because she was anxious. After I told her that the team was very skilled, she made me promise that they wouldn’t use chlorhexidine because she had previously had a very bad experience with it. I agreed, and she took a deep breath before settling into her chair, finally projecting some semblance of calm.

We were lucky that time, or from another perspective, perhaps we were unlucky that the situation had passed through so many Swiss-cheese holes and came so close to an undesirable patient experience.

It has been more than 15 years since the IOM published its famous “To Err is Human” followed shortly by “Crossing the Quality Chasm,” and yet only in the last couple of years have quality improvement initiatives been at work in health care. While at that time, medical error was attributed to 98,000 deaths, new estimates suggest 210,000 to 400,000 deaths may be more representative (1). A factor analysis previously identified that over 80% of these types of preventable errors could be immediately attributable to staff action factors, of which communication plays a substantial portion (2). In truth, this may only account for the tip of the iceberg of harm, as morbidity and quality of life, not to mention opportunity cost, are often difficult to quantitate and measure.

Since my experience with April, I’ve often wondered how many of these medical errors could have been prevented if a medical student braved the potential wraths of seniors and spoke up. Looking back, I am embarrassed that even I, who went into medical school with a Six Sigma black belt and have worked on quality improvement projects on the outpatient side, waffled with speaking up to my seniors. And while the literature points to several cases of when medical students were able to prevent patient harm (3); unfortunately, many medical students, residents, and even some attendings, hesitate or refuse to speak up because of the hierarchical nature of medicine (4) or the delicacy of not stepping on the toes of other specialties (5).

In some fields, such as anesthesiology, a flatter hierarchy has been tested and demonstrated significantly better outcomes (6). There are many ways that this flattening could be achieved, including suggesting all staff to use first names and supporting attendings who encourage students and other trainees to ask questions. In fields where morbidity and mortality conferences are not used yet, such as internal medicine, proper implementation of these could be instrumental in preventing errors and become fodder for HFEMA or RCA; and could also set the tone to discuss medical errors more openly. It is important to make these conferences neither too didactic nor too removed from the event occurrence (7) and to avoid blaming those involved (8). But most importantly, there needs to be a culture of willingness to improve.

That is why when I applied to residency programs, I valued programs that would be culturally open to change and supportive of quality improvement projects. During residency, I will strive to work with interdisciplinary teams, including process engineers, to apply Six Sigma or other quality improvement methodologies to reduce medical errors. I also aim to set a team culture where medical students and anyone else working with me can feel comfortable speaking up about their concerns. A structured team-work approach emphasizing openness and transparency could be key in preventing medical errors (9, 10) such as this one.

While there was no Ishikawa diagram or 5-whys analysis to examine how this near-miss transgressed, it is well known that communication failures account for a substantial portion of inadvertent patient harm (11). Whether it be using time-outs, check-lists, SBAR, or I-PASS, when the culture is geared toward patient-centered, quality and safe care, regardless of the title a person holds on a team, each individual should feel empowered to speak up about medical errors, during, after, and especially before they occur. My experience with April has not only inspired me to be braver next time, but also has given me an understanding of the importance of medical culture, something that no quality technique could teach; and I hope this experience and reflection can encourage others to do right by their patients and set up a cultural expectation of patient-centered, quality and safe care when given such a great gift of leadership and service.

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