



# TAKE CASE REVIEWS 'TO INFINITY AND BEYOND'

■ Peter Valenzuela, MD, MBA

## In this article ...

*Pixar's "post-mortems" cover what did and didn't work on a film, with input from all levels of the company. Imagine how patient care might improve if doctors applied that model to morbidity and mortality conferences.*

**IN THE BOOK *CREATIVITY, INC.*, PIXAR ANIMATION Studios'** president and co-founder Ed Catmull describes Pixar's "post-mortems" — meetings the studio executives hold to review the making of a just-completed film. It made me reflect on our reviews in health care and a vivid experience I had in medical school.

During my third year of training, I was called to review an "interesting case" at a morbidity and mortality conference. Interesting cases tended to be patients with rare conditions where mistakes were made during hospitalizations. My heart pounded as I made the long walk toward the bright lights at the front of the room filled with more than 100 faculty physicians, residents and fellow trainees.

The doctor facilitating looked at me and introduced the case by saying, "The patient is a 47-year-old white female who presents to the emergency room with acute abdominal pain and altered mental status. What are you thinking?" He then shoved the microphone in front of my face and waited for a response.

After looking around at the audience, I took a deep breath and tried to approach the case in a methodical way. I started by asking about the history of present illness, including environmental exposures or recent travel. Still not having a clue about the diagnosis, I moved to the review of systems, family history and social history. As each piece of the puzzle came together, an image of the patient started to form in my mind.

Next, I asked about the physical exam. "Hmm, that doesn't fit," I thought, because the exam findings weren't consistent with my presumed diagnosis. Sweat began to bead on my upper lip. "Any labs or imaging studies?" I asked with my voice starting to squeak.

After what seemed like an eternity, I figured everyone

in the conference room knew the answer but me. Finally, I gathered the courage to make a diagnosis. "Could this be systemic lupus?" What came next were the words every medical student fears.

"Well, that's one thought, but what else would you be thinking?"

Rough translation: "Your diagnosis is wrong." My heart sank.

The ultimate goal of an M&M is to learn from poor outcomes to improve the care of other patients. Studies show that one out of 10 people admitted to a hospital suffers harm during their care, also known as adverse events.<sup>1</sup> The injury can range in severity, with the ultimate harm resulting in death. Serious adverse events usually are reviewed in M&M conferences in hospitals across the country.

M&M conferences have existed for more than 100 years. They make up key aspects of medical education where it's common for trainees to get the first crack at solving a case presented by a more senior physician.

M&M conferences are conducted regularly as peer reviews, where doctors evaluate one another's clinical performance. Peer reviews tend to be confidential by law. Although not meant to be punitive, doctors can get extremely defensive when discussing cases where their care is called into question. Others blame themselves and doubt their abilities after the review. Most important, despite being confidential, doctors still fear being sued because of the case findings.

What can health care learn from Pixar's post-mortems? Pixar has been creating award-winning films for more than 30 years. Unlike health care's century-long history with post-mortems, Pixar's first was in 1998, shortly after finishing *A Bug's Life*.<sup>2</sup> Pixar doesn't limit post-mortems to movies that



In health care, morbidity and mortality conferences sometimes seem punitive. When creative organizations, such as Pixar Studios, hold “post-mortem” reviews of their work, they often are learning opportunities.

did poorly at the box office; they are done on all the company’s films. The process covers what worked well, not just what failed.

When Catmull, the studio president, introduced post-mortems, staff members dreaded the concept and felt like they were being “second-guessed,” much like doctors at M&M conferences. Pixar’s staff initially wanted to focus on what went right and avoid the negatives.

According to Catmull, there are five reasons Pixar performs them.<sup>2</sup>

1. **To consolidate what has been learned.** Staff members write down what has been learned before it’s forgotten and conduct an analysis that might not have been possible in the heat of filmmaking. In health care, analyses tend to occur when care goes bad; historically, there has been no structured model that promotes “lessons learned” from good situations. Health care can promote Pixar-type of learning, allowing a format for doctors to review on a regular basis what works well and what needs to be fixed. This would shift post-mortems away from rare missed diagnoses to a more systems-focused approach. A prime example is the use of surgical checklists in operating

rooms, first recommended by surgeon, writer and public health researcher Atul Gawande, MD, MPH. Studies indicate checklists can decrease morbidity and mortality by as much as 36 percent.<sup>3</sup>

2. **To teach others who weren’t there.** Pixar’s sessions allow others to learn and challenge decisions, and positive and negative lessons are shared with others, even those not involved in the project. On the other hand, health care M&Ms are limited to those in attendance. Discussing a case with anyone not in attendance is usually prohibited because of confidentiality restrictions. As a result, similar errors can be repeated across multiple organizations before improvements are made. By loosening privacy constraints and decreasing the risk for litigation, organizations might be more willing to share lessons with other systems.
3. **To prevent resentments from festering.** Pixar has a forum where workers may express any grievances that may have occurred during production. This forum includes workers from all levels, regardless of job status or titles. Unlike Pixar, M&Ms usually consist of physicians reviewing other physicians. Although non-physician staff may be interviewed to learn more about a case, it’s rare for them to be

included. Even when given the chance to contribute, staff members might be too intimidated to say anything negative because of the inherent hierarchies involving physicians, clinical staff and administrators.

Health care has been moving toward a “culture of safety”<sup>4</sup> that promotes all staff speaking up without fear of punishment, but, once again, this is not being done across systems. By spreading the “culture of safety” process, we can reduce errors and improve care.

4. **To compel reflection.** Simply scheduling a post-mortem at Pixar forces staff members to begin reflecting on the film. Catmull refers to this as the “pre- post-mortem” that sets the stage for the discussion. He believes that 90 percent of the value comes from the preparation leading up to a post-mortem.<sup>2</sup>

Unlike Pixar, M&M conferences are structured with little or no preparation material for participants. Most of the time, attendees don’t even know what will be presented. Although some teaching programs provide resident physicians “reflection” sheets to complete during the conference as part of their educational requirements,<sup>5</sup> this is not done uniformly across programs or even specialties within the same teaching centers. Giving participants the time to reflect and adequately prepare will help shift the focus from what some doctors might see as an inquisition to more of an intellectual inquiry.

5. **To pay it forward.** Pixar’s post-mortems review problems in making the previous film so participants can apply the solutions learned to the next project. Health care currently lacks a national system or federal guidelines for reporting adverse events.

In 1999, the Institute of Medicine (now, the National Academy of Medicine) called for a nationwide, mandatory reporting system. Nearly 20 years later, only 26 states have made progress toward standardizing reportable events.<sup>6</sup> The ultimate goal of state reporting systems is to communicate with other hospitals about best practices to improve patient care. Unfortunately, each state tracks adverse events differently, which makes it hard to share information or measure trends. If adverse cases are cataloged and shared on a

national level, future errors can be prevented.



As for the patient presented at the conference while I was in medical school, she was diagnosed with acute porphyria, a life-threatening metabolic condition that occurs in one out of 20,000 people. Thinking back, I wonder how I would have felt walking to the front of the room knowing the patient’s condition ahead of time.

What if I could have called a buddy at another medical school and talked about this patient without violating confidentiality? How interesting would the conference have been with non-physician staff in attendance that knew more specifics about the case and weren’t afraid to speak up when asked? What other hospitals across the country have struggled with acute porphyria patients and how did they improve care?

In the end, I wasn’t able to figure out this patient’s condition, and neither was the physician who cared for her in the hospital.



Peter Valenzuela, MD, MBA, is chief medical officer for California-based Sutter Medical Group of the Redwoods.

## REFERENCES

1. Vincent C, et al. Systems approaches to surgical quality and safety: from concept to measurement. *Annals of Surgery*. 2004; 239(4):475-82.
2. Catmull E. *Creativity, Inc.: Overcoming the Unseen Forces That Stand in the Way of True Inspiration*. New York, NY: Random House, 2014.
3. Haynes A, et al. A surgical safety checklist to reduce morbidity and mortality in a global population. *New England Journal of Medicine*. 2009; 360:491-99.
4. Agency for Healthcare Research and Quality. *Patient Safety Primer. Safety Culture*. Updated July 2016. Accessed Aug. 5, 2016, at <https://psnet.ahrq.gov/primers/primer/5>.
5. Tad-y D, Wald H. *Systems and Quality M&M Toolkit*. Denver, CO: University of Colorado School of Medicine. Department of Medicine, 2013.
6. Institute of Medicine. *To Err Is Human: Building a Safer Health Care System*. Washington, DC: National Academy Press, 2000.

## USC Master of Medical Management. Turning healers into leaders.

- Get the business skills you need to lead in today’s health care environment.
- Complete your degree in just over a year without interrupting your career.
- Earn your business degree from an internationally-ranked business school.

Call 213-740-8990 today to find out when classes begin, or learn more online at

[www.marshall.usc.edu/mmm](http://www.marshall.usc.edu/mmm)

**USC Marshall**  
Master of Medical Management