JAMA Network

A PIECE OF MY MIND

Opinion

Peter J. Pronovost, MD, PhD

Armstrong Institute for

Patient Safety and Quality, Johns Hopkins Medicine, Baltimore, Maryland; and Departments of Anesthesiology & Critical Care Medicine, Surgery, and Health Policy and Management, Johns Hopkins University, Baltimore, Maryland.

O. Joseph Bienvenu, MD. PhD

Departments of Psychiatry and Behavioral Sciences and Mental Health, Johns Hopkins University, Baltimore, Maryland.

Corresponding

Author: Peter J. Pronovost, MD, PhD (ppronovo@jhmi.edu).

Section Editor:

Roxanne K. Young, Associate Senior Editor.

From Shame to Guilt to Love

Several months ago, one of us (P.J.P.) attended a quality-of-care conference and spoke candidly and confidentially with several medical students and residents from around the United States. These students and trainees, our future leaders of health care quality, were both excited about advances in the field and distressed about responses to their errors.

One surgical resident described being chastised and shamed for obtaining an endocrine consult for a patient he was uncomfortable managing on his own, when none of his seniors on the surgical team responded to his pages. Multiple residents and students described being shamed by senior clinicians for voicing their concerns during past clinical cases, learning to stay quiet even when they perceived risks.

A common frustration voiced by the residents was having to use risky and inefficient health information technology (HIT). They described how hospital leaders made them feel guilty when they raised safety concerns, because the hospital would lose millions of dollars in financial incentives if clinicians were not using the technology. Even though the residents felt that overall patient care suffered, they used the technology so the hospitals would demonstrate meaningful use and receive incentive payments.¹

One resident was hopeful, describing how he felt supported and empowered (loved) after he made an error. He prescribed the wrong dose of insulin in part because the HIT system listed the insulin concentration in a larger font size than the dose font size. The resident had taken a patient safety course in medical school and knew this was a system problem; the technology had facilitated his mistake. He raised this issue with the hospital's patient safety and quality leader, who convened a meeting with residents from other departments, HIT leaders, and physician leaders from across the hospital. He acknowledged that he could have obtained more training, but he noted that the design itself facilitated errors. He described how he helped redesign the HIT system to reduce the risk of another dosing error.

The field of patient safety has matured considerably since *To Err Is Human*² was published in 1999. The Joint Commission evaluates hospitals' journeys toward high reliability, and the Accreditation Council for Graduate Medical Education (ACGME) uses its Clinical Learning Environment Review (CLER) to engage teaching programs in their efforts to improve quality and safety. Also, patient safety practitioners and researchers now draw on a diverse group of disciplines, including human factors and systems engineering, epidemiology and biostatistics, psychology and sociology, informatics and computer science, and anthropology and behavioral economics.

Yet these programs largely focus on maturing the technical components of patient safety (eg, measure-

ment, public reporting of performance). The emotional components of patient safety are barely regarded yet essential if we want the evolving technical components to succeed. This essay describes how the emotional response to error needs to mature from shame to guilt to love.³

JAMA The Journal of the American Medical Association

The difference between shame and guilt is the difference between feeling bad about ourselves and feeling bad about our actions. An ashamed person feels like a bad person, while a guilty person feels like he or she did a bad thing. To thrive, clinicians must learn to separate themselves from their actions, and errors, channeling their efforts into creating safer systems.

While our psychological characteristics and situations influence how we feel when confronted about our errors, reactions from our colleagues, supervisors, and others also influence whether we feel shame, guilt, or love. As noted by Kluger and DeNisi,⁴ when feedback leads individuals to focus on themselves, performance declines; conversely, feedback that focuses attention on tasks improves performance.

Shame is a common response to medical errors, especially those that harm a patient, and language used by managers, supervisors, and colleagues can trigger shame. Some comments are particularly shameinducing: "You will never make it as a doctor" or "You are worthless."

Shame is a destructive response to a medical error, imposing needless suffering on the one who erred, increasing the risk of another error, and limiting learning from mistakes.⁴ When we are shamed, we feel diminished and humiliated and may withdraw from colleagues, family, and friends. We are also distracted and preoccupied by our shame; we are less likely to investigate, learn, and grow through our mistake. Thus, the underlying reason for the error remains—whether a memory-intense care process that needs a checklist or another work system problem—as does the likelihood that another patient will suffer the same fate.

Despite the potentially harmful impact of shameinducing language, few academic health systems or professional societies train physicians to avoid it or train students and residents to separate their identity from their role. Few hospitals monitor errors or provide coaching. Mistakes are rarely openly discussed but openly whispered about, negatively influencing an organization's culture and its ability to improve safety.

Guilt can be a potent tool for individual learning, etching the lessons learned from a medical error permanently in a physician's memory. Many of us vividly remember mistakes we've made.⁵ Responses by supervisors and colleagues that focus on actions can trigger guilt. Guilt-inducing comments might include "Your failure to get the diagnosis right led to the patient's being harmed." or "The surgical approach you used led to the complication." These comments sharpen the guilt many physicians feel when realizing our mistakes, and the lessons learned are to squelch our needs and figure out what we did wrong.

Guilt usually emerges from a conversation between a senior or supervising physician and a physician-in-training, between a patient who was harmed or his or her family member and the physician, or between a highly respected colleague and a physician desiring his or her positive regard. Guilt can motivate individual improvement rather than system improvement, a more potent and enduring type of improvement. Guilt might motivate the person who erred to try harder or obtain new knowledge. Yet many errors are system rather than individual failures. Guilt alone rarely fixes the system failure or reduces the risk that another patient will be harmed.

While guilt is more productive than shame, love is perhaps the most cogent emotional response to an error. Barbara Frederickson⁶ defines love as micromoments of positive connection between people. This is the definition of love we use, where we seek to understand others, assume positive intentions, show respect, and engage in shared accountability. Love can be expressed through a comforting smile or a period of intent and objective listening. When Avedis Donabedian, the "father of quality improvement," was on his deathbed, he was interviewed by a former student about his experience as a patient and about quality in health care. Donabedian said, "The secret of quality is love. ... If you have love, you can then work backward to monitor and improve the system."⁷

A compassionate or loving response to a medical error acknowledges that, with many errors, the clinician meant to help not harm the patient. However, clinicians are part of the system, and sometimes their skill, attitude, or decisions prevent them from navigating vulnerable systems, with clunky technologies, unrealistic production pressures, and/or underdeveloped support systems. The resident who ordered the wrong insulin dose used HIT that the hospital was eager to implement for meaningful-use financial incentives. While the resident's attending physician acknowledged that the resident could have avoided the error with more training on the new system, he contacted the hospital's information technology department and safety leaders to address the "system issue" with the technology, pointing out that the hospital left little time for training and did not test the technology before its implementation. The resident, supported by his attending as well as safety and information technology leaders, led an investigation of the error and presented his findings to hospital leaders; as a result, the leaders created policies for implementing new HITs that included much more input from users.

A love response must hold clinicians accountable for risky and reckless behavior, while supporting those who make errors and engaging them to reduce risks to future patients. A love response can directly and nonjudgmentally address personal shortcomings, such as failing to obtain required HIT training, and help ensure that physicians learn needed lessons. A love response can work to understand system factors leading to errors and to implement interventions to defend against those hazards, ultimately reducing the risk that a future patient will be harmed. A love response can engage physicians who make errors in improving systems, helping patients, families, physicians, and organizations to heal.⁸ By creating a humble, respectful, and accountable culture based on trust, a love response can accelerate technical efforts by the Joint Commission, the ACGME, researchers, and clinicians to learn and reduce harm.

We can speed this journey from shame to guilt to love by discussing the emotional responses to error in medical schools, graduate medical education settings, and continuing medical education curricula. To our knowledge, such discussions are not part of any formal medical curriculum, although we know of physician leaders and program directors who model this approach. We can train students and residents to better understand their own feelings of shame, guilt, and love and to disarticulate their identities from their roles. We can train attending physicians as well as residency and fellowship program directors to avoid language that can evoke shame, language that makes trainees feel they are bad people, and instead use language that focuses on actions and causes in order to mitigate risks to future patients. Reckless behavior should be punished, risky behavior should be corrected through training, and human error should be supported.⁹ Dr Donabedian got it right: the secret of quality is love; we need to ensure we respond to errors with love.

Conflict of Interest Disclosures: Both authors have completed and submitted the ICMJE Form for the Disclosure of Potential Conflicts of Interest. Dr Pronovost reports grant or contract support from the Agency for Healthcare Research and Quality, the Gordon and Betty Moore Foundation (research related to patient safety and quality of care), the National Institutes of Health (acute lung injury research), and the American Medical Association (improve blood pressure control); honoraria from various health care organizations for speaking on patient safety and quality (the Leigh Bureau manages these engagements); book royalties from the Penguin Group for his book Safe Patients, Smart Hospitals; fees as a strategic advisor to the Gordon and Betty Moore Foundation; and stock and fees to serve as a director for Cantel Medical. Dr Pronovost is a founder of Patient Doctor Technologies, a startup company that seeks to enhance the partnership between patients and clinicians with an application called Doctella. No other disclosures were reported.

Additional Contributions: The authors thank Christine G. Holzmueller, BLA, senior medical writer and editor for the Armstrong Institute for Patient Safety and Quality, for editing the manuscript. She was not compensated for her contribution.

 Centers for Medicare & Medicaid Services. EHR Incentive Programs. http://www.cms.gov /regulations-and-guidance/legislation /ehrincentiveprograms/index.html?redirect =/ehrincentiveprograms. Updated June 29, 2015. Accessed July 13, 2015.

2. Kohn LT, Corrigan JM, Donaldson MS, eds. *To Err Is Human: Building a Safer Health System.* Washington, DC: National Academy Press; 1999.

3. Ofri D. What Doctors Feel: How Emotions Affect the Practice of Medicine. Boston, MA: Beacon Press; 2014.

4. Kluger AN, DeNisi A. The effects of feedback interventions on performance: a historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychol Bull*. 1996;119(2):254-284.

5. Kita J. Doctors confess their fatal mistakes. *Reader's Digest*. October 2010. http://www.rd.com /health/conditions/doctors-confess-their-fatal -mistakes/.

6. Fredrickson BL. *Love 2.0*. New York, NY: Hudson Street Press/Penguin; 2013.

7. Donabedian A. A founder of quality assessment encounters a troubled system firsthand. Interview by Fitzhugh Mullan. *Health Aff (Millwood)*. 2001;20 (1):137-141.

8. Gallagher TH, Waterman AD, Ebers AG, Fraser VJ, Levinson W. Patients' and physicians' attitudes regarding the disclosure of medical errors. *JAMA*. 2003;289(8):1001-1007.

9. Wise D. Getting to know just culture. https://www .justculture.org/getting-to-know-just-culture/. Published February 18, 2014. Accessed November 23, 2105.