Repainting the ceiling: Do patient safety and satisfaction initiatives make things safer or more satisfying?

Thomas M. Scalea, MD, Baltimore, Maryland

think the symptoms first began when I bent over to adjust the backyard sprinkler head. I was distinctly uncomfortable, unable to get enough air, or so it felt; as if my belt were cinched too tight or my pants too small." This is how Jerry Jurkovich began the 1997 Western Trauma Association (WTA) Presidential Address, "Paint the Ceiling." He chronicled his life as a patient, his triumph over lymphoma, and his tribulations negotiating the mid-1900s health care system. He gave us the patient's perspective, lying in bed. In his case, he stared at the peeling paint. Hence, the title, "Paint the Ceiling." It was inspiring. All were touched. After everyone else left, the glow of his address surrounded me. It was perfect, heartfelt, and transparent; it evoked real emotion, and everybody left better for the experience. Using a sports metaphor, he left everything on the field.

Being President of the AAST and the WTA simultaneously was a huge honor. As I walked off the stage after delivering my address at the AAST, people began asking me about the subject of my WTA presidential address. I had no idea. It had to be intensely personal and new, but the things that were important to me had not changed. I was emotionally spent. I needed time to decompress, to recharge, and frankly, to actually do my day job.

In the weeks that followed, I was filled with ennui. I was lethargic and mildly depressed. I said I was tired. I am sure many people thought I was just in a bad mood, but the ennui did not lift. Something was bothering me. I had trouble concentrating. I was looking for inspiration. One night on call, in between cases at 3 AM, I reread "Paint the Ceiling."

I then attended a departmental meeting. We discussed our rate of colon-specific infections, including leaks. Each surgeon was provided his or her own data anonymously. My rate was above average. Of course, my results were compared to those of surgeons who do only elective cases. While there were primitive attempts to risk stratify, the data quality was poor and was simply presented as total infections or leaks per operative case. The Chairman told us that surgeons' performance improved if they have data; probably true. The hospital people said the information was publically reported and available to all. It was, after all, an issue of patients' safety and satisfaction.

The next day, I operated on a 71-year-old woman transferred to orthopedics with a hip fracture. She arrived profoundly hypokalemic and had severe colonic pseudo-obstruction causing her respiratory failure. The next day, she developed free air and peritonitis. I did an extended right hemicolectomy and left her open as she was in septic shock. I planned to do a primary anastomosis. While this is high risk, older people do poorly with an ileostomy. The output is difficult to control even with maximal medical therapy. They develop malnutrition, dehydration, and electrolyte abnormalities. As I was making a final decision, I thought about my leak rate. I did an ileostomy. Two days postoperatively, she put one liter out her stoma. She has done okay, but not surprisingly; we are having trouble controlling her output. I am not sure it was the right or wrong decision, but I know I factored in my report card as I decided. I was disappointed in myself. I then realized why I was feeling bad. While not obvious, that way of thinking has worked itself into everything we do, every hospital policy that is written. Patients' safety and satisfaction are the new hospital buzzwords. Do we really know what they mean?

In 1999, the Institute of Medicine rocked the world of health care reporting that as many as 100,000 people die in hospitals each year as a result of preventable medical errors.² The Institute of

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From the R Adams Cowley Shock Trauma Center, University of Maryland, Baltimore, Maryland.

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Address for reprints: Thomas M. Scalea, MD, FACS, MCCM, Physician-in-Chief, R Adams Cowley Shock Trauma Center, System Chief for Critical Care Services, University of Maryland Medical System, The Honorable Francis X. Kelly Distinguished Professor in Trauma, Director, Program in Trauma, University of Maryland School of Medicine, 22 South Greene Street, Baltimore, Maryland 21201; email: tscalea@umm.edu.

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J Trauma Acute Care Surg Volume 81, Number 6 Medicine is an august body. Simply put, they are really smart, but thoughtful as well. Most of these medical errors were not caused by individuals but by system failures. They recommended four steps: establishing a national focus, a nationwide public mandatory reporting system, raising performance standards and expectations, and implementing safety systems in health care organizations. These seem reasonable today. Five years later, Leape and Berwick³ suggested that implementing an electronic health record, wide diffusion of proven and safe practices, wider application of training on teamwork and safety, and full disclosure to patients following injury would make things safer.

The safety climate in surgical departments can be measured but varies widely. Makary et al. surveyed a 60-hospital system and respondents reporting a good safety climate varied between 18% and 100%. There was little variability among the responses over various job descriptions. A team huddle in the OR reduces perceived risks and increases perceived collaboration. The changes, while in absolute terms relatively small, were statistically significant. However, there are considerable discrepancies among OR caregivers about teamwork. Most of the surgeons thought things were good. The nurses and anesthesiologists were not so sure.

A number of checklists have been developed to improve communication and increase safety.^{7–9} Pronovost et al. demonstrated impressive increases in the percent of residents and nurses understanding of daily goals of therapy by instituting a daily goals form for each patient. Intensive care unit length of stay also decreased.⁷ The Medical Team Training questionnaire, developed by the Department of Veterans Affairs, identified hidden problems with communication, particularly in the OR.⁸ Again, surgeons thought culture, communication, and teamwork were better than did nurses or anesthesia providers.

While voluminous, most of these data are opinion. Improvements in outcome by implementing safety measures is a lot harder to prove. Hospitals measure what they can measure. Whether it actually reflects quality of care remains less clear. Let us consider the issue of ICU infections, catheter-associated urinary tract infections (CAUTIs), and central line—associated bloodstream infections (CLABSIs) have gained the most scrutiny. There is little question that we left urinary catheters and central lines in too long in the past. Focusing attention on these has undoubtedly made things better.

All institutions track the incidence of CLABSI and CAUTI's. Mine tracks them by individual unit. We use national benchmarks. The results are publicly displayed at every quality meeting. Best performers are heaped with praise. Those below the bar are not. Nurse manager's salary at risk is tied to this measure. Infection control nurses visit each unit 2 to 3 times per week and audit central line and Foley catheter use. If an individual does not meet their indications for catheter use, they pressure the bedside nurse to have it removed.

Nurse managers "encourage" staff nurses to advocate for removal of vascular and urinary catheters. After all, it is impossible to have a complication if there is no catheter. This starts on ICU rounds. If not successful with the attending physicians, the fellows are next. If that fails, the residents are next. If all fail, the poor person covering that night is next. How often do we say no to the nurses? What we never ask is how many people have we harmed by removing them.

In the past year, I excised methicillin-resistant Staphylococcus aureus septic peripheral thrombophlebitis in three patients. We now dispense caustic drugs via peripheral IVs instead of a central line as in the past. All had positive blood cultures and sepsis including organ dysfunction. All had their arms opened from their axilla to their wrists and had multiple operative procedures. They did not have CLABSI. Is this better?

Recently, Sharon Henry did a modified radical mastectomy in a patient with untreated breast cancer who developed serious soft tissue infection. The patient was quite ill. Dr. Henry walked into the intensive care unit to find the patient with multiple peripheral IVs in the ipsilateral arm. Normally, we try to avoid taking blood pressures on that arm, but she was informed that the patient required vascular access and the ICU did not wish to place a central line for fear of central line infection. Is this better?

In our ICU, urinary catheters are removed the second someone is extubated. I recently took care of a patient who had at least 20 laparotomies after a shotgun wound as a child. Unfortunately, she developed duodenal perforation after an esoghasogastroduodenoscopy. Getting her abdominal wall closed was extremely difficult, but I was able to do so. She was extubated postoperatively but required reintubation approximately 30 minutes later. I saw her several hours later and wondered if I had closed her too tightly. I asked the nurse to measure a bladder pressure. Her catheter had been removed. Now, this woman was in the diuretic phase of her resuscitation and was making 3.5 L of urine per day. When I saw her, her heart rate was 144 beats per minute, and she was breathing 30 times per minute. When I went to reinsert her catheter, there were several urine-soaked pads between her legs. I was told that it was the ICU's protocol to do this because we were trying to prevent CAUTIs. I tried to maintain my composure, but I am afraid I did not do as good a job as I probably should have. The shock trauma nurses are the best in the country; that includes everyone from the bedside providers to the managers and clinical specialists. They are my partners. We treat together. I cannot excel without them. If it is happening in my shop, then it is happening everywhere.

In fact, it is not really the ICU's protocol to remove the catheter in this patient. However, we have browbeaten the nurses to the point where removing catheters is first on their mind. Now, I realize that these are only a few anecdotes, but they are not isolated. This is pervasive. Judgment has been replaced by dogma.

Arguably, one of the first patient safety initiatives was the 80-hour workweek. This radical reform really came out of several high-profile cases in NYC; first, Libby Zion, and later, Yankel Rosenbaum. Ms. Zion's death led to the formation of the Bell commission, which recommended adequate resident supervision and limiting resident fatigue. To those of us in New York at the time, the issue was supervision, which is what really failed both of these patients. However, we stressed the duty hours. It was easier, and we could measure it.

In 2003, postgraduate medical training was changed to limit resident hours to 80 per week. It is not clear where the number 80 came from. To the best of my ability to tell, this was arbitrary and not data driven, likely because the ACGME said so. Nearly 15 years later, we have actually tested whether limiting

resident hours changes outcome. In a randomized prospective trial just published in the *New England Journal of Medicine*, 118 surgical residencies were randomized to current regulations versus a more flexible set of duty hour requirements. ¹⁰ In the study group, how long interns and second-year residents worked and requirements that residents must have prescribed time off after a regular shift were no longer mandated. There was no difference in any outcome measure.

We now debate the issue of fatigue among faculty physicians. Nurok et al.¹¹ have suggested that surgeons doing elective procedures after being on call should disclose this to their patients. This is despite the fact that there are several well-done studies demonstrating that there is no increase in complications when surgeons operate after being on call.¹² The group from Memphis demonstrated no difference in complications when hernia repairs, cholecystectomies, and intestinal procedures were done after being on call. Rothschild et al.¹³ demonstrated similar results when obstetricians/gynecologists did elective procedures after working at night.

While checklists ensure that important tasks are completed, does simply checking boxes on a list improve things? In the January edition of the *American Surgeon*, a well-respected institution reported that a checklist improved family communication by residents after trauma care. The authors used an 11-point checklist to be sure that all important matters were discussed with the family. They demonstrated a statistically significant increase in compliance in eight of the 11 parameters studied according to families who filled out a questionnaire 1 to 2 days later. There was better performance in notifying families that a patient required an emergency operation. We now need a checklist to remember to tell patients' family that a patient needs emergency surgery.

Being safe is one of the most important aspects patients seek. Recent data would suggest that how our patients are treated is, in fact, the most important aspect of their care to them. Being treated with respect and dignity, confidence and trust in the providers, and courtesy and availability of staff ranked highest when 27,000 patients discharged from a hospital in Massachusetts were asked what would make them willing to recommend a particular hospital. 15 In addition, in a recent Wall Street journal online survey, physicians' interpersonal skills were valued more than their training or them being up-to-date. 16 The parameters ranked important by more than 80% of people surveyed were being treated with dignity and respect, having physicians listen carefully to health care concerns and questions, being easy to talk to, taking concerns seriously, being willing to spend enough time with the patient, and truly caring about the patient and their health. Having significant experience treating people with similar conditions, the ability to admit the patient to a leading hospital, and even being trained in a top-flight hospital ranked much lower. Our patients want us to not only care for them, they want us to care about them.

The measures we use to assess patient satisfaction are far from perfect. Like safety, hospitals measure what they can, but they are slaves to those measures. We now get our Press Ganey scores and have been told hospital reimbursement will be tied to patient satisfaction.

With all of the attention put on patient safety and satisfaction, one would reasonably assume that there is some

correlation between scores and patient outcome. After all, the patient is supposed to be at the center. Safety initiatives are not really wise if they do not make things safer. Patient satisfaction initiatives that are window dressings designed to create an illusion of satisfaction do not help either. Unfortunately, the data on this are lacking. A recent Hasting Center report concluded that patient satisfaction means something different to everyone and bears no clear relationship to technical quality of health care. ¹⁷ In addition, the standardized questions and measures allow hospitals to design interventions specifically to improve their scores by shaping patient perceptions. ¹⁷ Does this really represent better care, or is this just more window dressing?

Fenton et al.¹⁸ conducted a prospective series of nearly 52,000 adults to ascertain whether patient satisfaction scores correlated with health care utilization and outcomes. After adjusting for sociodemographics, insurance status, chronic disease burden, and other relevant parameters, higher patient satisfaction scores were associated with less emergency department use but with greater use of inpatient care, higher overall health care, prescription drug costs, and had increased mortality. Press Ganey CEO, Patrick Ryan, described as a veteran health care executive, was quoted as saying "Nobody wants to be evaluated. It's a tough thing to see a bad score. When I meet with physician groups, I tell them the train has left the station. Measurement is going to occur.¹⁹" It is good to know that we are using the highest-quality scientific methods available to gauge health care performance.

When patients are critically ill, we sometimes think giving families more information improves communication and satisfaction. They sit in the room and stare at the monitor. What else is there to do? However, those of us caring for the patient cannot always agree on what the numbers mean. How then can we expect a patient's family who is not medically trained to understand these complicated concepts, particularly when they are so stressed? Several years ago, I heard one of my ICU nurses reviewing laboratory parameters with a patient's mother, in particular, the relative importance of that day's lactate level. This young man was desperately ill and not getting better. That afternoon, I told his mother that he was still quite sick. The mother replied "Dr. Scalea, I guess you did not see his lactate is down this afternoon. That means he is getting better. The nurse told me that you did the research that proves that." She clearly wanted her son to get better. Therefore, she would hang on to anything that allowed her to believe that. Just before I left for this meeting, I re-explored a young man with compartment syndrome of his entire left side when he bled on IV heparin. The muscle looked fine. When I told his parents, the mother grabbed my arm and said, "But what about his increased myoglobin? That means there is dead muscle somewhere." I am not sure she believed me that everything was ok.

We post signs on the walls of the ICU to educate families. It is part of patient-centered care. We routinely place posters announcing that a particular month is deep vein thrombosis (DVT) awareness month. The posters encourage families to ask whether their family member is receiving DVT prophylaxis, stressing that DVT and pulmonary embolus are potentially lethal and preventable diseases. What then should we say to a family member of a patient with severe traumatic brain injury and multiple extremity fractures that cannot receive DVT

prophylaxis when they ask? We must communicate with families based on their ability to understand.

The electronic medical record was touted as a huge improvement. It was one of the four things that Leape and Berwick³ thought would decrease preventable medical errors. I can find no definitive data that prove that the EMR has actually made anything better. Now, it has made things harder. It has certainly taken us further and further away from the patient. The level of frustration that most of us feel when we fight with the computer makes the job substantially less satisfying. It diverts our attention. At my institution, the computers rarely all work. When we want to look at images, everyone logs onto the radiology system simultaneously. It is a race to see who can actually get the system to respond first. Writing orders is even worse. Orders routinely disappear. How is that possible? Where do they actually go when they disappear? I know I am the least computer savvy person in our group, but I envision a large computer graveyard where the lost orders live. I remain unconvinced this is advancement. It is hard to remember that medicine is more art than science while we flash through rounds on computers, writing compliant notes, so we are able to bill to get to the administrative tasks we all have.

I recently had a total knee replacement. By every measure, I was a success. Four hours postoperatively, I was up and walking. I was out of the hospital in less than 36 hours and back in the office and the gym in four days. I returned to the operating room to do small cases one week postoperatively and took calls four weeks after surgery. I was satisfied.

However, not all was that rosy. My life was fundamentally disrupted. It still is. I bled into my thigh immediately postoperatively, and my hematocrit fell to the mid 20-mg percent. I had a blood pressure of 90 mm Hg. I was weak and became fatigued with minimal effort. I have still not completely recovered. Most days in the midafternoon, I need to take a 30- or 45-minute nap. I was unable to sleep. I fell asleep, but at precisely 12:50 AM, I woke up and spent the rest of the night tossing and turning. I had night sweats, I thought from an inflammatory response to old blood in my thigh. I had no explanation as to why I could not sleep. My surgeon told me how well I was doing. I was doing well and I was satisfied, but I just did not feel well.

I began searching for answers. A friend, a vascular surgeon, had his knee replaced earlier and had the same problems. His recipe was two glasses of red wine per night. It did not work as well for me as it had for him, but I drank a lot of good red wine. He said it would last six weeks. Six weeks almost to the day, I began to be able to sleep and night sweats went away.

Every narcotic made me sick. I took one dose of 400-mg gabapentin and became comatose for 16 hours, waking up disoriented. Acupuncture, however, worked great. I tried additional complementary medical techniques, which also worked. I continue to use them to help manage the pain and residual inflammation. I have now made it a part of my typical practice to ask postoperative patients how they are sleeping. Most have problems. I have no solution, but do have empathy. Like me, they want to know that it will get better.

Returning to Dr. Jurkovich's presidential address, he gave us clear direction. He told us that injury and illness are unsettling and disruptive, and he asked us to not ignore these.

These leave patients and families vulnerable. He reminded us that it is our job to be counselor and friend.

Jerry quoted Hippocrates reminding us it is not sufficient to do only the medically correct procedures but that we must be prepared to involve ourselves in other aspects of our patients' lives. Hippocrates came from a family who were descendants of Aesculapius, the Greek god of healing. Aesculapius entered the home of a sick friend. A serpent twined itself around his staff and he killed it. This was replaced by a second serpent whose mouth was filled with healing herbs. His followers built circular temples on hills near wells guarded by serpents, where no one was allowed to die. People who were ill entered to sleep and to have healing dreams. It was what being admitted to a hospital should be. Consider the lapis lazuli Buddha, always the characteristic blue lapis color. Underneath the picture, there is always the statement "I will heal with my radiance and presence." It is not I will cure, but I will heal. Curing is different from healing. We cure with our hands; we heal with our hearts and minds.

In the winter edition of *Pharos*, Dr. Francis Neelon²⁰ discussed the difference between curing, (treating, ameliorating or eliminating disease) and healing (helping patients visualize and regain their sense of purpose and goals in life). Dr. Neelon told the story of author Lee Smith who was unable to cope with the death of her son, Josh. Eventually, she consulted a psychiatrist who after listening to her for several weeks wrote her a prescription. Anticipating a sedative, she was astonished when the prescription read "write fiction every day." He wanted her to write for two hours a day. When she said "I can't do that," he replied "then just sit in the chair, show up for work". She sat for three days and on the fourth began to write a novel ultimately entitled *On Agate Hill*. Who knows what was in the psychiatrist's head when he made that decision? He was able to see inside her and knew what to do. He did not cure her, he healed her.

How we interact with our patients is why they trust us. We each have our own way. For me, I try never to speak to the patients standing up. I sit down. I am on their level. The patient's perspective is lying flat on their back staring at the ceiling, hence, paint the ceiling. Sitting down makes the patients think that you have all the time in the world to spend with them, although it is never true. Standing up makes them think that you may bolt out of the room at a moment's notice. Spending 90 seconds speaking to them, looking them in the face, and holding their hand is all most of them want or, in fact need. It is the connection that matters.

I recently was notified that a patient had complained about my care. I remember talking to her. She clearly remembered me and the fact that I sat on the bed and spoke directly to her. I treated her as I treat all my patients. I could not identify the problem. However, it does not matter what I said, what matters is what she heard.

Approximately 10 years ago, I cared for a 16-year-old girl with a terrible brain injury. She developed cardiogenic shock and severe acute respiratory distress syndrome. She had intractable intracranial hypertension. I kept telling her parents if this maneuver failed, we had something else to do. We were now out of options. We actually cannulated her for extracorporeal membrane oxygenation with her standing straight up on a tilt table. She taught me what multiple compartment syndrome is.

That illness fundamentally altered her life. She became a nurse practitioner. Each year at Christmas, she and her parents come to visit. I was discussing this address with her. We chatted about patient satisfaction and took a picture. Later that day, she sent me the picture with the heading "this is patient satisfaction." When I called her, she said "you cared for me, but I did not know it at the time. More importantly, you cared about my parents." They were profoundly vulnerable. I do not recall doing anything special. I hope what I did was show them that I was invested in them and their daughter at the highest level.

Talking to patients and their families is relatively easy when the news is good. When the news is bad, however, I am usually alone. It is a task I try not to delegate to junior people. The patients and families deserve better. Attitude, message clarity, privacy, the ability to answer questions, and showing sympathy are most important to the families. The seniority and attire of the news giver, and follow-up contact information are unimportant.²¹ I remember this, also supplied to us by Dr. Jurkovich, every time I have to give bad news.

Maryland is a small state, made up of a number of smaller communities. Recently, two deputies were murdered in Harford County. For us, this is a big deal. I cared for the one admitted to us, as I do for all police officers, and then Deb Stein and I went to tell the family he had died. We were short, clear, and attempted to convey emotion. The wife was crushed, the sons enraged. One son began punching the chairs and the walls, and we just let him. We let him grieve as he needed to. I escorted them up to spend time with their father/husband.

Several hours later, as the body was being transported to the medical examiner's office, the angry son, now just sad, asked me to join the police escorting his father to an ambulance. Police officers lined the halls saluting as we walked by. They reached out to touch me. I do not know why; perhaps to connect us in case the next time it was them. The officers lined the street to salute as EMS drove by. It was emotionally powerful, and I returned to the office shaken, very upset. In Maryland, the police are our family, we had just lost one.

Stevie then walked in and handed me a letter. She always knows exactly what to do, particularly when I am upset. The letter was from Dr. Mike Davis. Dr. Davis is the father of Matt Davis, the WTA member who fell to his death September 3, 2015 while rock climbing. Matt was a shock trauma fellow, and he and I had stayed close after he returned to Temple, Texas. I sponsored Matt for membership in the WTA. In the letter, there were reflections about his early days in Baltimore. He recounted the first time I addressed his class. He wrote that I said "This will be the most difficult year of your life. Physically, mentally, and emotionally, you will never be tested more than you will be this year. However, this will also be the best year of your life. You will learn more, do more, and experience more this year than any other time in your life. All I ask from you is excellence. Each and every time you set foot in this building, I want nothing less than excellence. It is not just that I dislike mediocrity, I refuse to accept it." Matt said he never wanted to disappoint me. That is word for word I said. I say it every year. I do not want to scare them; I just want them to know they are now in the big leagues. I had touched him, and he then touched me back. His words comforted me. He helped heal me. Why did that letter arrive that day? I have no idea. My

mother always said that things happen for a reason. The older I get, the smarter she seems. Two examples where reaching out and touching inspired and healed.

Why this for the WTA? For 30 years, I have attended the WTA meetings, missing only one since my first year in Jackson Hole in 1987. It is odd that I get to be President both of the AAST and the WTA in the same year. They are different societies. The AAST has helped me learn to cure. The WTA is where I remember how to heal.

The WTA has changed over 30 years. The meeting has gotten bigger, and the disparity in ages of the members more marked. To paraphrase David Livingston, we need to preserve the fellowship of the snow.²² When Jerry "painted the ceiling," he asked the WTA to remember each year, and we have. We must wrestle with the issues of meeting size, location, and program structure so that 50 years from now, the WTA will still be teaching people how to heal.

Real patient safety and patient satisfaction are at the core of taking care of patients, particularly those who are critically ill and injured. Like pornography, we know it when we see it, but defining what they are is not as easy. We see them every day in each of our centers. However, our ability to measure them in any meaningful way is primitive at best. There is no question that they are here to stay. Anyone who objects will simply be regarded as having something to hide. The second question was asked by Jessica Jurkovich, Jerry's then young daughter. He struggled with his address as I have with mine. When he could not come out and play, clearly annoyed, she said, "So dad, what is the point you are trying to make?" Indeed, what is the point?

While it is hard to remember in a digital world of computerized medicine, Press Graney scores, and health care executives, many of whom know little about health and less about caring, we cannot allow ourselves to be placed in a position where anything other than the finest patient care is the goal. Sadly, the health care machine has worn us down, physicians, nurses, all of us. The fear of litigation driven by the malpractice climate has made us all change our practice, and not for the better. We must rise above that to ensure a healthy future for the profession we all love. Preparing this presidential address has allowed me to shed some of the ennui I was feeling. I am again energized. I am again at least a little hopeful.

We must remain true to the ideals we all had when we started this journey. I cure with my hands, but for me, I dream of the day that I may heal with my radiance and presence, like the lapis lazuli Buddha. While I may not ever really get there, I pledge to try. I further pledge to be the best role model I possibly can be in the hopes that others will be inspired by my example. Finally, I promise to repaint the ceiling every day. If I am able to do that, I will leave this world a happy man.

I thank you for your attention, I thank you for the years of friendship and support, and I thank each of you for inspiring me to heal.

DISCLOSURE

The author declares no conflict of interest.

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