

Column: Error Prevention in a Just Culture System Design or Human Behavior?

by K. Scott Griffith



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Engineering good system design and managing safe choices are two of the essential building blocks of Just Culture.*

But first, we must start with our values. *Why does our organization exist? To what end or purpose?* Running a hospital does not come without imperatives, and in order to set our performance expectations, we must identify what we value. Patient safety often dominates our discussion on values, but it cannot be our *only* value: Access to care, privacy, and compassion must be supported as well. For airlines, safety sits alongside values such as price, schedule availability, on-time performance, and baggage delivery, among other customer service considerations. And whether you are running a health care facility or an airline, your level of fiscal responsibility will, in large part, determine how long your business stays in operation. Identifying these values and how well we balance each of them

will guide us in setting our expectations appropriately. Yes, we can optimize system design and human performance, but we must start with our values.

Once we've identified what we value, we can do no better than the limitations of the system with which we start. Airplanes are built to exacting specifications, yet no airplane has been designed to *never* malfunction. Here on the ground, in the delivery of health care, we establish protocols for prevention, diagnosis, and treatment of patient condition or disease, knowing that the patients we serve have entered into an imperfect system, with fallible human beings. Our task is to not simply rely on the physician or nurse to be perfect but to identify those areas where our systems and humans are vulnerable and work to improve reliability in those areas. An effective organization will recognize that a system design provides the framework for success.

So what role does human behavior play? In essence, humans become components within the systems we design. If we expect mechanical parts to eventually wear out and sometimes malfunction, shouldn't we consider the limitations of humans as well? A machine might not get fatigued, forgetful, distracted, rushed, overstimulated, or bored. Yet, each of us may go through these states of consciousness in any given day. Robust systems in high-consequence industries predict human variability in critical circumstances.

Success in building and operating a nuclear power reactor requires multiple layers of barriers, redundancies, and recovery strategies to ensure acceptable

levels of risk. Yet in health care, we often expect our providers to be perfect *without recognizing the importance of these system design strategies* and think that holding humans accountable for their outcomes through punishment will ensure that they never make mistakes or drift into at-risk behavior. Accountability requires an understanding of system design, human behavior, and how to achieve maximum reliability within each.

System design and human behavior are symbiotic—meaning that a relationship exists between the two that can be mutually supportive, or at other times complacent. The system we build around fallible human beings will depend on how often they will fail and how significant the consequences will be when they do. Similarly, the choices we make as humans depend, at least in part, on how reliable we view the system around us to be. Well-designed, high-consequence organizations recognize the importance of single-failure paths within their systems—that is, where they may be one human error or one mechanical failure away from causing harm. In health care, it could be a nurse administering a high-alert medication or a physician diagnosing a life-threatening condition.

In these circumstances, engineering controls such as barriers, redundancies, and recovery strategies are essential to achieving good outcomes. But just as important are system and personal performance-shaping factors, in which we look to how external and internal factors influence reliability. And finally, the perception of risk involved in a specific

* Just Culture refers to a values-supportive model of shared accountability. It's a culture that holds organizations accountable for the systems they design and for how they respond to staff behaviors in fair and just manners. In turn, staff are accountable for the quality of their choices and for reporting both their errors and system vulnerabilities.

activity will influence how well the human being performs.

Just Culture organizations recognize three major categories of human behavior and the importance of responding appropriately to each: human error, at-risk behavior, and reckless behavior.

Humans become components within the systems we design.

Human error is inadvertently doing other than what should have been done; a slip, a lapse, or a mistake.

When a human error occurs, the response is to console the human who made the mistake; work with him or her, when appropriate, assist the person in making better choices that will lower the likelihood of error; and consider re-design of our system to better manage the risks involved. We examine the human error rate of other individuals in these circumstances and seek to learn from reports, audits, and near misses before an accident occurs.

At-risk behavior is a choice that increases risk where risk is not recognized or is mistakenly believed to be justified.

Our response to at-risk behavior is similar to our response to human error yet here we see the opportunity to more closely examine the choices themselves. When at-risk behavior occurs, our response to the individual is to coach the person around their awareness of risk, remove the barriers or disincentives to compliance with rules and procedures, and promote incentives that produce the desired behaviors. We examine norms, both individual and group, and what role these may have played in the behavioral choice. Why don't we simply punish at-risk behaviors? Because we may have unwittingly contributed to its presence by rewarding outcome-based performance or by looking the other way

when no harm occurs. In addition, punishing at-risk behavior serves to drive admission or reporting of these choices below the surface. In many organizations, such behaviors are reported only when they cannot be hidden, if punishment is the likely consequence.

Reckless behavior is a choice to consciously disregard a substantial and unjustifiable risk


Our response to reckless behavior is to punish or discipline the person who consciously disregards a substantial and unjustifiable risk, regardless of the actual outcome. We must recognize the severity bias* and demonstrate a fierce intolerance for a reckless choice before actual harm occurs.

It's been estimated that the number of people who die annually in the United States due to a health care-acquired infection or iatrogenic error approaches 98,000.¹ This is the rough equivalent of two wide-body jetliners crashing each day of the year, killing everyone on board. Yet, interestingly, we don't respond to these aggregate deaths with the same sense of urgency, indignation, and resolve as when airplanes crash. Or when, miraculously, they don't. How many lives are saved everyday in health care that go unheralded, at least when compared to the attention given to the miracle on the Hudson? Inarguably, aviation has been made as safe as it is today due to advances in engineering and the management of human behavior. Robert T. Francis, former vice chairman of the National Transportation Safety Board, said this in a personal correspondence:

Much of what we have learned over the years of investigating transportation accidents has led us to embrace two emerging disciplines: system safety and human factors. At some level, most accidents in transportation are the result of a breakdown in

system performance. At the same time, advances in the field of human factors have led to a new understanding of how humans interact within complex systems.

Just Culture is the first approach I've seen that incorporates these two sciences simultaneously. Managing system design and human behavior are not mutually exclusive. In fact, both are necessary in order to prevent accidents.

A central message of Just Culture is that expecting perfection has its price in any industry or endeavor. The true path to success starts with understanding what we value, setting our expectations to align with those values, and designing robust systems and making safe choices to meet those expectations. Errors and adverse events will still happen, but rather than overreact to their immediacy, we should focus our limited resources on managing the risks around us, working to optimal reliability in the pursuit of our goals. So back to our original question: Is Just Culture more about system design or human behavior? The clear answer is both. World class organizations understand this imperative and work to excel in both of these areas. The challenge for us, then, is to sustain our Just Culture efforts over the long term and avoid the perception of another "flavor-of-the-month" initiative. 

Editor's Note

The views expressed in this interview are those of Mr. Griffith and not those of The Joint Commission or Joint Commission Resources.

Reference:

1. Institute of Medicine: *To Err Is Human: Rebuilding a Safer Health System* Washington, DC: National Academy Press, 1999.

* The severity bias is present when the severity of the actual outcome influences how we think about the person involved or how we respond to him or her if we have managerial authority.