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Workarounds and Resiliency on the Front Lines of Health Care

*by **Anita L. Tucker, DBA, MS***

Perspective

Frontline health care providers are challenged by poorly performing work systems. Required equipment is broken, patient medications are in the wrong dose, key information fails to get communicated, and essential supplies are out of stock.(1-4) Research suggests that hospital nurses experience an average of one of these "operational failures" per hour. Dealing with them takes valuable time away from patient care—an average of 33 minutes per nurse per 7.5-hour shift in my study.(4) To put this in perspective, for every 15 nurses working on a unit, the equivalent of one nurse has been removed from patient care to work full-time obtaining required supplies, information, and equipment. In effect, work system problems increase a hypothetical ward nurse's workload from 5 patients to 5.3 patients, which research suggests contributes to staff burnout and may increase patient mortality by 2%.(5) To make matters worse, other health care professionals, such as surgeons and anesthesiologists, also experience operational failures. The cumulative time spent tracking down necessary items quickly becomes staggering. More importantly, operational failures disrupt patient care, leading to uncompleted tasks and medical errors.(1,6)

How can poor work system performance exist in hospitals that nevertheless manage to provide high-quality care? Ironically, the true magnitude of work system problems remains hidden because frontline health care professionals are so good at working around them. Workarounds are nonstandard methods for accomplishing work blocked

by dysfunctional processes.(7,8) Health care has a workaround culture that values expertise in overcoming obstacles to get the job done.(8,9)

Workarounds are part of health care's culture because they offer benefits.(7,10) They are a source of organizational resilience, the ability to improvise with materials at hand to fashion a solution to an unexpected problem or situation.(11) Resilience on the front lines of health care organizations enables patient care to be delivered safely despite obstacles. Most significantly, workarounds benefit the nurse's or doctor's current patient, who receives the intended care. This can be gratifying to individual caregivers, which reinforces the positive aspect of workarounds. One nurse expressed satisfaction when she was able to resolve issues that prevented her from caring for her patients, "I have a lot of job satisfaction when I go home and I feel like I did everything that a patient needed and was entitled to, even the little things."(12) Workarounds also enable people to complete tasks without interrupting other harried staff who might otherwise be called upon to help rectify the situation. Finally, some individuals develop workarounds that are superior to existing procedures. If organizations could spread these improved practices to other staff, overall performance could be improved. In summary, workarounds tend to be viewed positively as creative, patient-centered care by both care providers and managers.

Unfortunately, there are unintended, negative consequences of workarounds. My study (4) found that health care professionals typically work around the immediate issue without engaging in additional steps to prevent recurrence. This pattern of behavior, called first-order problem solving, seems successful because patient care continues in the short term. However, the downside of first-order problem solving is lack of communication, which hinders real improvement from occurring for several reasons. First, workarounds often merely transfer the problem to another location, such as one unit's secret hoard of equipment that causes shortages in other locations. Second, the lack of communication about failures keeps managers and relevant personnel unaware of the need for change, and therefore problems are not investigated to find and remove underlying causes.(12) Thus, similar problems are likely to recur. For example, staff

repeatedly work around safety-related warnings to obtain and administer excessively large doses of medications rather than contacting the pharmacist or the physician.(13) Finally, when a workaround is superior to the current standard practice, a lack of discussion about the need for change limits its diffusion.

What can organizations do to move from a workaround culture to a culture that uses operational failures as opportunities for learning and systems improvement? First, managers should encourage staff to go beyond first-order problem solving by taking action to prevent problem recurrence. These behaviors, called second-order problem solving, include communicating about the problem to people in a position to remove underlying causes, suggesting countermeasures, or experimenting with solutions. Second-order problem solving is necessary for lasting improvement.(12)

Second-order problem solving requires managers and coworkers to change their view of the behaviors that they consider beneficial. Rather than hoping that staff can handle issues on their own, managers will need to actively seek out and be grateful for information about work challenges that their employees have experienced. Managers can foster such communication by being physically present in the work area and responsive to messages. My ethnographic research found that frontline staff were unlikely to document a problem in a "near miss" or "good catch" log. However, they would take the initiative to verbally mention the situation to a manager or physician who was on the unit and who had demonstrated commitment to resolving issues to prevent recurrence. Even this meager form of second-order problem solving was rare, occurring in only 7% of the situations.(12)

However, staff communication by itself is insufficient. Managers must resolve identified failures, provide feedback to staff about the actions taken, monitor that the fix worked, and resolve any unintended consequences.(14) Health care organizations need to create capacity in both time and capability for second-order problem solving. Several organizations, such as Johns Hopkins Hospital (14), Pittsburgh Regional Health Initiative (15,16), and Beth Israel Deaconess Medical Center, have successfully done this by using real-time problem solving to improve their systems. Real-time problem solving

is examining a specific problem as close as possible to the location and time it occurred.(9,15) This approach can be powerful because important information about underlying causes erodes over time. Thus, examining a specific incident shortly after it occurs (e.g., Why didn't Ms. Jones get her 10 AM dose of insulin today?) can be more productive than examining a broad category of problems months after their occurrence (e.g., Why did 10% of our patients miss medication doses last April?).(9) Finally, successful organizations harness latent problem-solving power at the bottom of the organizational pyramid: customers and frontline staff. These individuals have intimate knowledge of systems' weak points, motivation to improve reliability, and feasible solution ideas. Furthermore, they vastly outnumber designated problem-solving staff typically tasked with systems improvement. Thus, it can be powerful to engage this army of creative minds and hands to improve work systems. At the same time, managers should ensure that problems are solved at the most effective level. For example, inherent deficiencies in equipment design are best resolved through collaboration with the equipment manufacturer rather than through idiosyncratic efforts to work around common failures.(17) To illustrate, David O'Regan, a consultant surgeon in Leeds, UK, had recurring problems with cardiac pacing leads failing after placement. Historically, surgeons had worked around this problem by searching for another, hopefully functioning lead and replacing it. Although patients were not harmed, searching for and replacing faulty leads unnecessarily prolonged surgery. Instead of relying on the workaround, O'Regan engaged in second-order problem solving by communicating the deficiencies to the manufacturing representative and suggesting changes to improve reliability (D.J. O'Regan, MD, MBA, personal communication, 2008). More research is needed to understand which types of problems are best resolved at the individual, unit, organization, or industry levels.

The challenge of workarounds is to capture their positive aspects—frontline resiliency and creativity—while simultaneously avoiding pitfalls from relying too heavily on ad-hoc solutions to long-standing problems. Health care organizations must solve this challenge if they are to deliver care as efficiently and safely as possible.

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