# Zero Tolerance

The health care community, including pharmacy, has been forced to face the issues of errors, medication errors, and fallibility. Unfortunately, the stimulus was not from within, but from a government study: the Institute of Medicine's (IOM's) report, *To Err is Human. Building a Safer Health System.*[1] The world of health care was alerted by payors, patients, and the government that it was expected to perform like other industries that abhor even one error. Their expectation is that health care is too important to be practiced within a system that is not dedicated to perfection, and that demonstrates its disdain by delivering poor service. Health care providers have answered the IOM study not by rapidly embracing a culture of change, but by debating the accuracy of the numbers. Is health care really so different from other industries?

We are surrounded by systems that are designed to deliver accurate services every time. We expect telephones to deliver a dial tone, computers to boot up every time, and automatic teller machines to deliver the correct amount of cash. We expect waiters to give courteous and excellent service, service stations to repair a car correctly the first time, and accountants to provide error-free tax forms. Unfortunately, in the health care arena errors in service delivery happen routinely. The difference is that other industries and organizations have a policy of zero tolerance for error. They design and implement their processes to always deliver outstanding performance.

Health care is unique. Patients are complicated biological organisms with frequently unpredictable problems. The management of medical problems requires years of study and practice treating numerous patients. Patients and payors accept the inevitable consequences of individualized care and unpredictable patient problems. Yet while emphasis is placed on the clinical aspects of health care, little attention is paid to the processes of care. Are there organizations that are as complex as health care that have learned how to manage processes to deliver uncompromising service every time?

**Organizations develop processes to minimize risk once they have developed a culture of zero tolerance.**

Organizations do exist that manage systems every bit as complex as health care. They employ high-risk technologies that must be operated with maximum accuracy. Errors and "bad luck" in these organizations can lead to disrupted operation, destruction of major equipment, and even death. Two researchers studied such organizations and identified the elements of their success. Health care can learn a great deal from their research.

Todd La Porte of the University of California at Berkeley studied the operations of nuclear-powered aircraft carriers, air-traffic control, large power-distribution grids, and nuclear power plants. These systems are as complex as any you can find. They cannot afford errors, bad luck, or statements of "It's not my job," or "It's not my responsibility." As a result, they have developed management systems that minimize errors (i.e., one error is too many). These systems work because of management systems that morph between traditional hierarchical systems and loosely organized structures based on collaboration. For example, La Porte studied how aircraft carriers can launch so many fighter planes, so quickly, with so few errors. He learned that while the military is still highly regimented and is the quintessential hierarchical organization, each and every member of the team has the power and the responsibility to shut down operations immediately if the circumstances warrant. Team members are continually talking to one another, sharing what they have done and what they will be doing. Youths in their early 20s are constantly trained in their very specialized jobs. Training is based on years of experience that have produced collections of best practices, defined by thick manuals of standard operating procedures, whose purpose is to extend the organization's control over as many eventualities as possible.[2]

How do these systems respond to dynamic situations? They train, train, and train some more. They encourage "people to work together across the system to anticipate and avoid problems, so that events that cannot be controlled in advance by following the rules are effectively dealt with on the fly."[2]

Kathleen Eisenhardt of Stanford University studied organizational characteristics that help companies make more effective decisions in rapidly changing environments. Eisenhardt's organizations share common elements with health care. She found that these organizations divided jobs into highly specialized areas, emphasized constant communication and monitoring of information, and were organized around composites of centralized and decentralized styles. These systems provide examples of complex, dynamic systems that have learned to function, thrive, and minimize error through constant communication, training, and evolving procedures.[2]

Additional examples of the commitment to zero tolerance are provided by Perot Systems, siteROCK, Applied Information Technologies, and NOCpulse. Even though these companies operate under strict military-style top-down procedures, they are committed to a zero tolerance for errors. In their world, customer security is paramount. They emphasize training, process rules (strict processes or standard operating procedures), war games (detailed planning blueprints and troubleshooting sessions), and mettle testing (interrogating managers to see

how they handle themselves under pressure).[3]

Organizations develop processes to minimize risk once they have developed a culture of zero tolerance. Six Sigma, or 3.4 defects-per-million (i.e., the quest for zero defects), is the latest quality trend in business. The emphasis is on continuous improvement in reducing waste, inefficiency, and variability. The results are higher-quality products and services at a lower cost. Six Sigma is being implemented with spectacular results by General Electric, Lear Corporation, American Express, 3M, Toshiba, General Motors, and Ford to name just a few companies for which it is a major emphasis of competitive strategy. The hallmarks of Six Sigma are training, DMAIC (define, measure, analyze, improve, control), and commitment. For example, 3M's quality program, PPU (process and product understanding), includes four phases: understanding the customer, understanding key quality characteristics, establishing capabilities, and improving continuously. Communicating concepts and information across 3M is the key to the program.

A blueprint for health care is provided in the elements necessary for any Six Sigma program. One of the Six Sigma training companies, Sigma Breakthrough Technologies, Inc., has summarized these elements as:

- clear need, strategy, and monetary goals for improvement;
- management that is involved;
- procedures for selecting strategic improvement projects;
- good improvement methodology;
- user-friendly software to implement the improvement methodology;
- dedicated and trained resources;
- periodic reviews by various levels of management;
- communication of need and benefits; and
- recognition, rewards, and celebration.

The lessons to be learned from these organizations are to establish a culture that is dedicated to driving error, inefficiencies, and waste out of the system; and to ensure that outstanding customer service is an expectation from which any variance is not tolerated. Health care must adopt similar philosophies, and in this cannot differ from these organizational examples.

Managed care could do worse than to commit to improving health care by changing the culture from cost containment to zero tolerance for anything short of perfection in patient care. Cost improvements will then be a consequence, rather than a goal. ■

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