What Health Care is Learning From the Aviation Industry

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The Institute of Medicine Report To Err is Human, published in 1999, reported that an estimated 98,000 patients died annually as a result of preventable errors in hospital settings (Kohn, Corrigan, & Donaldson, 2000). As astounding as this figure was, the findings of the Institute of Medicine were based on data that were originally collected in 1984. Last year, a study published in the Journal of Patient Safety reported that this figure may be up to four times greater than originally thought and that anywhere from 210,000 to 400,000 patients die annually from preventable medical errors such as surgical mishaps, medication errors, and preventable infections (James, 2013). That would be the annual equivalent to losing passengers on two jumbo jet crashes per day.

Whatever the actual number of preventable deaths, the analogy to potential airline errors and accidents is one that is commonly made, and in reality, the chances of dying in an airplane crash are about one in 10 million. So, is there anything that health care can learn from the aviation industry? Both industries are similar in that they are high risk and highly complex enterprises that are essentially dominated by a single profession.

This question has been fully explored in Beyond the Checklist: What Else Health Care Can Learn from Aviation Teamwork and Safety, a book written by health journalist Suzanne Gordon, commercial airline pilot Patrick Mendenhall, and medical ethnographer and educator Bonnie Blair O’Connor, with a forward contributed by Captain Chesley “Sully” Sullenberger, the pilot in the “miracle on the Hudson” airplane incident in 2009. In Beyond the Checklist, the authors maintain that the human and financial costs of medical errors and injuries could be substantially reduced by adapting the lessons of aviation safety, teamwork, and effective communication to the health care environment (Gordon, Mendenhall, & O’Connor, 2012). Specifically, the airline industry has developed a comprehensive system of job training and professional communication known as Crew Resource Management in which pilots, flight attendants, and ground crews communicate and cooperate in ways that have greatly decreased the hazards associated with air travel. The authors illustrate how the interactions among airline staff once suffered from the same dysfunction that often undermines safe and effective teamwork in health care. They provide case studies of three institutions that have successfully incorporated Crew Resource Management–like principles into their clinical culture by adopting practices that promote common patient safety knowledge and skills. In these case studies, health care systems also addressed the problems inherent in toxic hierarchies, which can result in dangerously ineffective communication. As a result, steps were implemented that allowed team intelligence to flourish and enhanced mutual respect and cooperation among co-workers.

More and more hospitals are now implementing such training programs for their employees, with the goal of being able to designate the medical center as a High Reliability Organization, which is an organization that has succeeded in minimizing catastrophes in a complex and high-risk environment where normal accidents could be expected. In such training, there is an emphasis on clear communication, effective handoffs, attention to detail, effective mentorship, and the expectation that everyone should practice and accept a questioning attitude. All members of the health care team should be empowered and encouraged to speak up at any point in the care continuum, to repeat directions back with clarifying questions, to say, “I have a concern” or “I need clarity,” or to implement a time out.
Admittedly, one may easily assert that there is much that aviation can learn from the health care industry, particularly with regard to providing passenger-centered care with roomy seats, facilitating better passenger flow in airports, and holding down costs. Nevertheless, it will be interesting to see how the tenets of safe flying can be further implemented in health care settings and what the outcomes will be. More importantly, all members of the health care team should be expected to speak up if they have a question or concern about patient medications or procedures, without fear of retribution or even losing their jobs. The safety of our patients depends on such a professional culture.

REFERENCES