Adopting the Right Culture before Residency: Lessons from the Aviation Industry

John J. Nance
Founding Board Member and Executive Committee Member
National Patient Safety Foundation

John Nance began with the premise that American medical schools have focused on preparing students to be “perfect practitioners” – practitioners who will never make a serious medical error. Training for perfection makes physicians intolerant of their mistakes and blinds them to the reality that perfection is unachievable.

Borrowing a quote from Donald Berwick (“Every system is perfectly designed to produce the results that it consistently achieves.”), Mr. Nance cautioned that if we try to improve patient safety without changing the culture we are destined to fail. He shared his “three basics of patient safety”:

1. Improvement in patient safety will depend primarily upon physician leadership.
2. Most medical tragedies and near-misses result, to a substantial degree, from communication problems.
3. No physician, nurse, or other healthcare provider can avoid making mistakes. The only reliable defense is constant expectation of errors.

Mr. Nance made a convincing case that the lessons learned by other industries can be adapted and effectively applied to medicine. “Think of physicians as pilots and operating room nurses as copilots.” The problems, he suggested, are not ones of technical ability but ones of human relations and teamwork issues. The “societal pathogen” in the case of patient safety is a collection of “killer assumptions”:

1. **Human perfection.** Re-shaping the goal from, “I will never make an error,” to, “I know how to minimize my chances of making an error.”
2. **Flawless communication.** Studies show that communications between people who speak the same language are not understood 12.5 percent of the time. The rate goes up in high stress situations.
3. **Flawless handoff.** Handoffs tend to be viewed as charting activities rather than patient care. It should come as no surprise that 33 percent of medical error reports contain stories of botched handoffs.
4. **Intelligent control of technology.** Too often, the technology is permitted to control the user.
The aviation industry learned its safety lessons in the wake of spectacular events that killed hundreds of people at one time. Mr. Nance delivered riveting accounts of a series of airline disasters that precipitated an in-depth analysis of aviation culture and the ensuing changes in aviation culture. Acknowledging that even the best pilots are not perfect, the industry dissected its culture and discovered how crucial information failed to be passed and acted upon. The end product is a nonhierarchical aviation culture that is collegial, with every team member sharing responsibility for solving problems and preventing errors.

The risk for error is reduced when all team members work in collegial fashion toward a common goal. An effective leader (i.e., chief resident or attending) leads with participation from the team, listening before making decisions. The standard for other team members is “assertiveness with respect”. In an atmosphere of assertiveness, personalities and egos are subverted and the welfare of the patient becomes the common goal.

Once we accept the reality that even the best practitioners are not perfect, we can eliminate “blame” (i.e., which doctor or nurse is at fault) from the culture. The question is not, “Who did it?” but rather, “What, in the underlying system, contributed to it?” Because errors are usually wired into the system design, isolated changes made by individuals and departments are rarely effective in improving safety. According to Mr. Nance, the most dangerous phrase in medicine is, “This is the way we’ve always done it.”

In summary, we must work toward a culture in which physicians are judged by how well they work in, or lead, a team approach to achieving an optimal, safe, outcome for the patient. Someone on the team usually has the necessary information, and the culture should facilitate sharing information at all levels. “As students of medicine, it is your duty to be part of the team. As future practitioners, it is your duty to become angry if team members do NOT speak up.”