

4.0 DISCIPLINE AND THE “BLAME-FREE” CULTURE

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OUR INDUSTRY FROM A MEDICAL PERSPECTIVE?

On October 12 of last year, Dr. Lucian Leape, a professor at the Harvard School of Public Health, briefed a US Congressional subcommittee on the state of human error management in the US medical industry.¹ Dr. Leape began his presentation by telling the subcommittee how prevalent human error is in the medical industry: one million people injured by errors in treatment at hospitals each year in the US, with 120,000 people dying from those injuries. It is a number 3 times greater than those who die in automobile accidents, he said, and 1000 times greater than those who die in commercial aircraft accidents. It is a problem with an annual \$33 billion dollar price tag.

After undoubtedly gaining the attention of the congressional subcommittee, Dr. Leape then shared his observations of the human error management culture within the US medical industry. Dr. Leape stated that only 2 to 3 % of major errors are reported through hospital incident reporting systems. As a result, he said, most hospitals are unaware of the extent of their errors and injuries. Because of the punitive work environment, he stated, health care workers would report only what they could not conceal. Hospital personnel, as well as most of the public, tended to regard errors as evidence of personal carelessness, the failure of an individual employee to meet an exacting standard of perfect performance.

Dr. Leape told Congress that health care organizations must make error prevention a major strategic objective, that hospitals should eliminate punitive error reporting systems so that reporting can be made “safe.” Systems should be established to track error and the effectiveness of corrective measures. Regulators should become a force for error reduction rather than a force for error concealment. Public and media perceptions should be changed from the idea that errors are best controlled by blame and punishment to an understanding of the central roles of systems redesign and corporate responsibility.

Ultimately, what did Dr. Leape say was the single greatest impediment to error prevention:

that we punish people for making mistakes.

So why do I tell you this? It is because of what Dr. Leape said next. Dr. Leape testified that “high reliability industries, such as *aviation, air traffic control*, and nuclear power, learned long ago the fallacy in this perfectibility approach.”

Dr. Leape’s comments raise a few questions for us in the aviation industry. Are Dr. Leape’s impressions of our industry correct? That is, do we endorse the tools of blame, train, and discipline or have we adopted a new human-centered approach that encourages the reporting of errors?

A MORE HUMAN-CENTERED CULTURE?

To check Dr. Leape's assertion, consider the US Federal Aviation Administration's current perspective toward maintenance error. The current standard of care for technicians working on US registered aircraft is as follows:

§ 43.13 Performance rules (general).

(a) Each person performing maintenance, alteration, or preventive maintenance on an aircraft, engine, propeller, or appliance shall use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or Instructions for Continued Airworthiness prepared by its manufacturer, or other methods, techniques, and practices acceptable to the Administrator...

(b) Each person maintaining or altering, or performing preventive maintenance, shall do that work in such a manner and use materials of such a quality, that the condition of the aircraft, airframe, aircraft engine, propeller, or appliance worked on will be at least equal to its original or properly altered condition (with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness).²

By these rules, one can easily argue that dispatch of an aircraft with a discrepancy caused by maintenance error is in fact a violation of the [FARs](#). This rule quite literally requires perfection. The problem is that roughly 48,800 air carrier and repair station technicians make mistakes that put them in violation of FAR 43.13 each year. This equates to roughly 100,000 aircraft dispatched each year into revenue service in an out-of-conformity (technically unairworthy) configuration. In the time that we all spend here at this conference, over 600 aircraft will be dispatched with technician errors on board. And like Dr. Leape's estimates, these are also conservative numbers.

So how do we view these errors? Is it a "blame-free" culture or is it something else? Based on the following [FAA Enforcement and Compliance Handbook](#) statement, each and every one of these errors, if known by the FAA, should result in a FAA investigation:

"Every apparent or alleged violation must be investigated [by an FAA inspector] and appropriately addressed. ... The agency has a wide range of options available for addressing violations ... from simple counseling and administrative action to formal legal enforcement."³

It should be clear by reading the [FARs](#) and the [FAA Enforcement Manual](#) that the basic duties of an airman do not anticipate or account for the inevitable human error. That is, each FAR 43.13 violation is viewed as a culpable and blameworthy event raising at a minimum the need for counseling by the regulatory authority.

Perhaps our human-centered approach that Dr. Leape refers to in the aviation industry is not embodied in the basic [FARs](#), but rather in the modern partnership programs and "enforcement-related incentives" of today. The Aviation Safety Action Program, authorized in January 1997, represents the latest advance in air carrier/[FAA](#) partnership. Through a partnership among the carrier, labor unions, and the FAA, the three groups can co-manage the contributors to safety-related mishaps.

In its efforts to facilitate reporting, [ASAP](#) has established its own immunity provisions, coined “enforcement-related incentives.” The pertinent provisions of its enforcement-related incentives follow:

“Administrative action may be taken in lieu of legal enforcement when all of the following elements are present:

- 1) Applicable law does not require legal enforcement action.
- 2) Lack of qualification or competency was not involved.
- 3) The violation was inadvertent and not deliberate.
- 4) The violation was not the result of a substantial disregard for safety or security and the circumstances of the violation are not aggravated.
- 5) The alleged violator has a constructive attitude toward complying with the regulations.
- 6) The alleged violator has not been involved previously in similar violations.
- 7) After consideration of items (1-6), a determination is made that administrative action will serve as an adequate deterrent.

Substantial disregard means:

- a) In the case of a certificate holder, the act or failure to act was a substantial deviation from the degree of care, judgment, and responsibility normally expected of a person holding a certificate with that type, quality, and level of experience, knowledge, and proficiency.
- b) In case the violator is not a certificate holder, the act or failure to act was a substantial deviation for the degree of care and diligence expected of a reasonable person in those circumstances.”[4](#)

While it is an improvement over the basic [FARs](#), one must question what goals this program was developed to address. If the error is already known to the organization - for example, as I stand near a jack stand that has pierced the skin because I improperly jacked the aircraft - then the “enforcement-related incentive” will ensure that I get better treatment than spelled out through the basic FARs. Yet, as Dr. Leape described in his testimony to Congress, a typical hospital might see only 2 or 3 percent of its errors due to effective concealment by health care professionals. If active reporting of errors is a goal, I ask you to evaluate whether you would come forward under the provisions of this program? Does the enforcement-related incentive give you enough confidence to report your own violation of the FARs?

SO WHERE DO WE GO FROM HERE?

I think it is safe to say that we have not come as far as Dr. Leape might think. Currently, we seem more similar to, than different from, his description of the medical industry. And what we have both been unable to determine, is just where we should draw the disciplinary line and just how we should communicate that line to our employee workforce. Consider the following options:

Do we establish the truly “blame-free” system and tell our employees that, unless you intended the damage, no disciplinary action will be taken against you if you report your error and participate in its investigation?

Do we continue with punitive systems that essentially outlaw human error, resign ourselves to the fact that employees will never self-report, and restrict our learning to only those errors that cannot be hidden?

Do we create confidential reporting systems to collect error data, leaving the technician to fend for himself under current punitive disciplinary policies?

Do we draw a line in the sand, educate our workforce to know where the line is drawn, and ask for reporting by those who have not crossed the line?

The Research Data

Over the last 18 months, I have been conducting research into where aviation professionals would ideally draw the disciplinary line. That is, what disciplinary approach is in the best interests of safety. Over 100 professionals, primarily within the US, responded to the survey. Their disciplinary approach is as follows:[5](#)

Table 4.1 The “Ideal” Disciplinary Criteria As Seen by Aviation Professionals
Employees who intend the mishap to occur, are under the influence of drugs or alcohol, or are reckless will be subject to disciplinary action.
The severity of the outcome will impact the decision to take disciplinary action, with an accident mandating disciplinary action.
Lying about your involvement in a mishap or refusing to supply urine or blood specimens will result in disciplinary action.
Attempting to hide the mishap or refusing to participate will weigh strongly in the disciplinary decision.
Intentional violations of either the Federal Aviation Regulations or internal company policies will mandate disciplinary action.

A history of insubordination, a habitual attitude of job dissatisfaction, sloppy work habits, and horseplay will weight toward disciplinary action.

Supervisory pressure to partake in risky behavior will strongly mitigate any decision to discipline.

These are the opinions of your peers. But what does the data really mean? The most important conclusion about where the line must be drawn is the line between negligence and recklessness.

Table 4.2 Comparison of Culpability Levels and Their Relationship to System Objectives

Culpability	Human factors learning more important than discipline	Discipline more important than human factors learning
No culpability	372 (99%)	30 (9%)
Negligence	462 (66%)	240 (34%)
Recklessness	181 (37%)	311 (63%)

What is the difference between negligence and recklessness? Consider the official response to the US Air Force's recent accident in northern Italy, where a fighter pilot clipped a ski gondola cable and killed 20 people. An Air Force spokesperson, Major Joe LaMarca, said in response to the accident that "there is a fine line between being aggressive and being reckless."⁶ I do not agree with Major LaMarca's view. As described by an [NTSB](#) Administrative Law Judge, negligence is equivalent to ordinary human error.⁷ Recklessness, on the other hand, is intentional risk taking. It is conscious disregard of a substantial and unjustifiable risk that the mishap will occur. Consider the following example.

On the overnight a technician is assigned to do a detailed inspection for cracks around rivet heads on a portion of the external side of a 737 fuselage. It is night and the aircraft is parked on the tarmac. In accordance with his airline's policy, he diligently brings out a work stand to get close to the structure and brings out large lamps to provide adequate lighting. Now consider that even though the technician followed all applicable procedures, he has still made an error by missing a crack that ultimately led to an in-flight depressurization. Should the technician be punished for merely making the error? Should he be punished for making an error that led to an in-flight depressurization?

Yet, would our attitude change if we knew that the technician stood on the ground to do this same inspection with his flashlight pointed up at rivets that were six feet away? This technician made the same error, missing the crack, as the technician who diligently followed the procedure and used an adequate work stand and the proper lighting. In neither scenario did the technician *intend* to miss the cracked structure. Yet, while theoretically not guaranteed of failure, the flashlight-equipped technician standing on the ground significantly, unjustifiably, and consciously increased the risk that the error would occur.

ACCOUNTABILITY AND PROFESSIONALISM

The question really boils down to what do we want in our human centered culture? If we are to embrace human factors principles, how does it translate into the post mishap setting? Is human factors merely a tool for better aircraft design or can its philosophies be applied to make post-mishap response more human centered?

The disciplinary research showed that a line must be drawn where one leaves mere human error behind and enters more culpable and blameworthy behavior. Not all actions should be blame free. Some human errors involve culpable, blameworthy conduct that, in the interests of safety, *do* warrant disciplinary action. It is a notion that I believe most in our industry support.

To many today, accountability and professionalism mean that an employee should never make a mistake. This, I believe is the wrong objective. Professional airmen should work to their maximum reliability, with some errors expected. Additionally, when errors do occur, they should report those errors so that we may learn of their contributors, and drawing upon that knowledge, prevent future accidents.

This is not a “blame-free” system. It is a system of accountability and professionalism that recognizes human error as a natural and expected element of human behavior.

REFERENCES

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4. Engen V. Chambers and Lansford, 1986 WL 82575 (N.T.S.B.).
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