Communication in Crisis: The Importance of 'Verbal Dexterity'

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"Meant is not said,
Said is not heard,
Heard is not understood,
Understood is not done" [1]

Introduction

Human factors are the number-one reason for commercial jet planes to crash. Furthermore, of all possible human factors, communication is the number one offender [1–3]. Evidence suggests exactly the same for acute care medicine [4–12]. However, in contrast to aviation, medical curricula focus on factual knowledge and procedural dexterity but rarely address ingrained culture or its effect upon communication [4–11]. The airline industry felt compelled, as lives, and profits, were at stake [2]. With medical errors believed to cause almost 100,000 deaths annually in the USA, and representing the eight leading cause of preventable death [13–14], we ought to be similarly motivated. This chapter hopes to offer practical strategies so that our 'verbal dexterity' can match our procedural dexterity. This will be done primarily by translating lessons from the flight deck to the bedside. After all, if other high-risk industries such as aviation can do so, then at least as much should be expected of acute care medicine.

The Importance of Communication and Culture

The typical fatality rate for major first-world airlines is approximately one per 4 million flights [2, 3]; in the 1990s, the fatality rate for Korean Air was more than 17 times higher [2]. Other airlines considered suspending partnerships, and nations considered revoking landing privileges. Today it is an award-winning airline with an exemplary safety record. Aviation has offered many lessons for acute care medicine [10–12], but the first from Korean Air was that neither inexperience nor poor equipment were to blame. Korean Air did not succeed until it acknowledged the importance of communication, and specifically how it is influenced by culture [2]. If we accept the parallels between high-risk industries such as aviation and critical care medicine then we should also have the maturity to implement its lessons. Some medical specialty boards have now decreed that trainees and practitioners be proficient communicators. However, this laudable goal is difficult to capture using traditional educational methods [16]. Furthermore, these are difficult skills to master, as they require a change in interpersonal dynamics, organizational culture, and communication norms. This means that we need to be innovative. Practical strategies already exist and will be outlined below. How Korean Air, and others, transformed their culture and communication is therefore worth dissecting.

Airway, Breathing, *Communication*: The New ABCs of Crisis Management

Flight investigators concluded that cultural factors such as speech patterns, authority gradients, and the inability to handle ambiguity, were some of the most common contributors to plane crashes [2, 17–18]. Airlines from cultures that typically rely most upon rigid rules, regardless of circumstances, also experience the greatest number of crashes [17, 18]. Similarly, crashes are more likely for cultures with the greatest reluctance to question authority [17, 18]. Most pilots and aviation regulatory boards now support 'horizontal authority' [2, 17, 18]. Notably, physicians and hospitals typically still do not [10]. Similarly, pilots think it is appropriate to select trainees based upon their ability to deal with ambiguity and to function in teams. Medicine typically still focuses upon written grades, individual aptitude, or research productivity.

Several languages (including Korean) require different word choices and sentence structure based upon the hierarchy of the speaker and the recipient [2, 19]; this can complicate simple communication. This can also perpetuate unhelpful authority gradients. As such, most airlines use English in the cockpit. The message for medicine is categorically not that any one language is superior to another, but rather that 'verbal dexterity' means using speech that is appropriate to the situation. For example, we accept the importance of communication when dealing with families and colleagues. However, unlike aviation, medicine has yet to widely accept (or actively teach) its importance in more acute situations. Furthermore, in aviation, communication is taught to both supervisors and subordinates. This way, supervisors can appreciate that questioning their authority is not intended to be threatening, at the same time that subordinates understand how best to question.

"Say what you Mean, and Mean what you Say"

Some languages (again, Korean is a prime example) are 'receiver orientated' [19]. This means it is up to the listener to make sense of what is being said. Again, nobody is arguing for all medical care to be conducted in English, nor is anyone arguing that one language is inherently better than any other. Instead, the lesson is that a 'receiver orientated' style only works when the listener is capable of close attention, or if time exists to unravel the meaning. It does not work in a cockpit on a stormy night, or with an exhausted pilot. It is not likely to work in a crowded resuscitation bay, or with a tired physician. In contrast, western languages are typically 'transmitter orientated' [19], meaning it is the responsibility of the speaker to communicate clearly and unambiguously. This means that there is an expectation that the speaker will make the effort to be understood, and that if they fail then it is the speaker's shortcoming – not the listener's.

Cognitive psychologists talk of the 'framing effect', which suggests that different decisions may be made depending upon how information is presented [20]. For medicine, the message is that good resuscitators are also good communicators. For the revamped Korean Airlines it meant that flight crews were expected only to use 'transmitter orientated' language [2]. There is no reason why we should tolerate any less from critical care staff. However, we can learn far more from the misfortunes of the former Korean Air. This includes not just what should be said (i.e., verbal communication) but also *how* it should be delivered (i.e., paraverbal communication) (Table 1).