Aviation community lessons learned applied to patient safety

By Cmdr. Todd Stein, USNH Yokosuka

It has been described as the worst plane crash in history and it could have been avoided. On March 21, 1977, Royal Dutch Airlines (KLM) flight 4805 collided with Pan Am flight 1736, resulting in the death of 583 passengers. Sadly and ironically, the KLM airliner had the company's most respected pilot at the helm the day of the crash and a magazine with an article and picture of the chief pilot, Capt. Jacob Veldhuyzen van Zante, was in the pocket of every seat on the plane at the time of the crash. The lessons learned from this and other disasters have made a strong impact on how safety is ensured, both in the aviation industry and in the health care industry.

What was learned from this situation and others like it is that such disasters are not caused by one error alone and that even the most experienced individuals are not immune from bad outcomes. Research such as the U.S. Air Force Safety Center's 2003 10-year study of aviation mishaps has shown that it is usually a series of seemingly minor unrelated errors that spell disasters like the KLM and Pan Am scenario. In light of this realization and to improve safety, the airlines adopted a new philosophy of training called crew resource management (CRM). This type of training focuses on team-training skills and communication. The airlines have learned that every member of the team, regardless of rank, needs to be empowered to participate in problem solving and to volunteer information that may be crucial to resolving a problem.

Lt. Eddie Barnet, a nurse in the USNH Yokosuka multi-service and ambulatory procedure unit, uses the situation, background, assessment, recommendation (SBAR) communication technique during a patient transfer to ensure patient safety.
Photo by Richard McManus

Taking a cue from the aviation industry, the health care industry has also begun to realize that teamwork is critical to safety and must be taught industrywide. Many times, teams are depended on for their knowledge, skill, attitude and ability to achieve high reliability, all of which is particularly important in a health care setting. Team training has become an essential component of health care, particularly because of its effectiveness in reducing medical errors and improving patient safety. Teams make fewer mistakes than individuals do, especially when each team member knows his or her responsibility. In 1999, Dr. John C. Morey, completed the year-long MedTeams Project, a historic team training study conducted on emergency department staff organized into caregiver teams. The study evaluated the effectiveness of training and institutionalizing teamwork behaviors drawn from aviation CRM programs in the hospital environment and found that 43 percent of errors resulted from problems with team coordination, reinforcing the importance of training staff on teamwork skills.

To ensure its staff is equipped with these critical teamwork skills, in 2005 U.S. Naval Hospital (USNH) Yokosuka adopted a teamwork training model called Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS). This evidence-based framework optimizes team performance across the hospital's health care delivery system. Developed and launched throughout Department of Defense (DoD) hospitals, it focuses on leadership, situation monitoring, mutual support and communication. These crucial skills are the primary focus of the training and appear repeatedly throughout the curriculum, drawing connections between them and critical performance, attitude and knowledge-based outcomes.

The TeamSTEPPS training program resulted in tremendous steps forward in patient safety at USNH Yokosuka. As part of the program, the hospital implemented a standardized communication technique known as SBAR, or Situation Background Assessment Recommendation, which can help to ensure the precise exchange of information, began utilizing the World Health Organization surgical check list that confirms that the right surgery is performed on the right person, and staff now consistently uses de-briefs, check-backs and callouts so that everyone on the team is informed and in agreement.

Incorporating TeamSTEPPS has enhanced performance improvement reporting at the hospital by 50 percent and USNH Yokosuka was praised for its commitment to building high performing teams that lead to a culture of patient safety during a December 2009 DoD patient safety program contractor site visit.

USNH Yokosuka is committed to providing medical, operational and contingency support for active duty, family members and other eligible beneficiaries in Japan, Korea and Diego Garcia. As it moves forward with its goal to sustain quality patient and family centered health care and be prepared for crisis and contingencies, its number one focus remains patient safety.

Herbal drug Spice poses threat to health, military, civilian career

By Lt. Cmdr. Gregory Jones, USNH Yokosuka

Drugs claiming to be all natural continue to appear on the market, tempting consumers with promises of safe and legal use. Unfortunately, the definition of all natural is not well-established and the harmful substances the drugs truly contain are not always known.

In Japan, one drug in particular that is causing concern among the military is Spice. Spice is an over-the-counter drug that is legal in Japan and is sold as an herbal smoking blend of medicinal herbs as a legal substitute for marijuana; however, an analysis by pharmaceutical companies in Europe found no such plant-like substances in the drug. Instead, the study identified synthetic marijuana-like substances. These synthetic compounds have the effect of lowering inhibitions, resulting in impaired judgment and loss of control. These effects can be especially harmful in situations where you may be vulnerable such as driving a car or in a club or bar where people may be looking for an easy target.

Aside from putting yourself at risk for endangering your life and others' behind the wheel, or for being taking advantage of in a club, other effects of Spice and similar drugs can pose a serious risk to your health. These effects include paranoia, depression, anxiety, impaired memory, increased appetite, dry mouth, fast heart rate and high blood pressure.

Because few human studies exist, the chronic and long-term effects of Spice are not well known. It is likely that effects will be similar to long-term marijuana use such as emphysema, decreased testosterone levels and sperm counts in men, increased rates of schizophrenia, depression and the reduced ability to establish or obtain goals in life. There may also be an association with lung and head or neck cancers.

Some data also suggest these "legal drugs" act as gateway drug to even more dangerous agents such as cocaine and heroin. These drugs remain legal in many countries because legal systems and medical research organizations cannot keep pace with properly reviewing and banning them as quickly as they are appearing on the market.

Because of the health and safety concerns surrounding the use of Spice, the Secretary of the Navy (SECNAV), Commander U.S. Naval Forces Japan and Commander Fleet Activities Yokosuka (CFAY) ban the use of the drug. SECNAV instruction 5300.28D prohibits the use of substances with the intent to induce intoxication, excitement or stupefaction of the central nervous system. CFAY instruction 5830.1 specifically prohibits the purchase, use or possession of Spice by all members of the U.S. Navy, civilian components and family members on board CFAY. Military members may be punished for violating these instructions under the Uniform Code of Military Justice and civilian employees and family members may face administrative action.

Just because a drug claims to be all natural or safe does not mean it is. Beware of these traps and remember that drug abuse and dependence, even with natural drugs, can cost you not only your military career, but also your health.

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USNH Yokosuka welcomes home IAs

- Cmdr. Todd Stein – Afghanistan
- Lt. Cmdr. Jonathan Locke – Iraq
- Lt. Cmdr. William Brown – Afghanistan
- Lt. Angela Rood – Iraq
- Lt. Layra Avalos – Djibouti
- Lt. Efland Amerson – Afghanistan
- HM1 Arnulfo Catungal – Honduras
- HM1 Ernani Lindain – Afghanistan
- HM2 Fred Rhoads – Afghanistan
- HM2 Iandave Estrada – Afghanistan
- HM2 Benjamin Murphy – Afghanistan
- HM2 Sergio Rodriguez – Afghanistan
- HM2 Ronald Tello – Afghanistan
- HM3 Jeeksak Choksiri – Afghanistan
- HM3 Fredrick Valenzuela – 3rd Battalion, 3rd Marines
- HM3 Davis Llanes – Iraq
- HA Christian Mewes – Honduras