

Top Flight Communication Can Save Patient's Health

By BILL LEWIS
Staff Writer

As doctors, nurses and other Vanderbilt University Medical Center caregivers quietly watched, a home movie from an Air Force base showed a giant B-52 bomber crashing and exploding into a ball of fire.

The highly experienced crew died while attempting a sharp turn that the eight-engine Air Force bomber was not designed to handle, but no one on board spoke up to stop the risky maneuver.

Another film showed an Air Force F-16 jet fighter being shot down by a surface-to-air missile during the first Gulf War as a pilot failed to respond to instructions barked over the radio by three others in his flight group.

Other images showed airplanes in pieces on the ground. Sometimes there were survivors. Other times, as in the B-52 crash, everyone on board was killed.

A casual observer might not have been able to tell this was a class on hospital patient safety.

The message for the Vanderbilt medical team members was that when pilots are fatigued, communication isn't clear, teamwork breaks down and important procedures aren't followed - sometimes with disastrous results.

For many of the same reasons, hospitals can become deadly places. The Institute of Medicine reported in 1999 that medical errors in hospitals kill between 44,000 and 98,000 patients each year.

The military and the airlines have found ways to keep airplanes from falling to the ground as often as they once did. The Navy saw an 81% decrease in the accident rate for one type of aircraft, and U.S. airlines finished 2002 without a single passenger fatality.

Those statistics are the reason that every person who cares for patients at Vanderbilt Medical Center is being offered a dose of the training program that has worked so well for pilots.

"We were taking perfectly good airplanes, and we were running them into the ground," said Ray Popp, a former F-16 pilot who flies for Northwest Airlines.

Popp and Linda Wightman, a former crew member on board an Air Force Airborne Warning and Control System plane, were the teachers for the eight-hour course. Both are employed by Crew Training International, a Memphis company

founded by former military pilots, including graduates of the Navy's "Top Gun" fighter-pilot training school.

CTI provides safety training for the aviation, construction and medical industries, as well as the U.S. military and the air forces of several other countries. Other hospitals that have hired CTI include St. Francis Hospital and Methodist University Hospital in Memphis and Cincinnati Children's Hospital.

Popp said he and Wightman teach the techniques of Crew Resource Management, also known as Cockpit Resource Management. The course teaches medical staffers how to recognize problems, known to pilots as "adverse events," and how to offer solutions.

The medical teams read case studies and played the roles of doctors and nurses who gave patients the wrong operation or otherwise hurt someone. Like pilots training in a computerized flight simulator, they could learn from their mistakes without anyone getting hurt and see how to avoid similar situations in real life.

Bringing aviation-style training to Vanderbilt makes sense at a facility that has two astronauts on its medical team. Vanderbilt physicians Rhea Seddon and Andrew Gaffney both flew on the space shuttle.

"Operating rooms look a lot like a cockpit," Seddon said, with all of their dials, gauges and other high-tech equipment.

It made sense, she added, that the same communications skills that help pilots fly jets without crashing could help doctors, nurses and other staff members at the hospital care for patients.

"In aviation you have checklists, and you know everything is done, so everybody's on the same page and speaking the same language," Seddon said. But hospitals weren't using those kinds of standardized procedures.

The results could be tragic, said Gaffney.

"It's unusual that we gave the wrong operation or decided to give the wrong medication, but it happens," he said.

The roots of cockpit resource management were planted in the 1980s, when the airlines started encouraging captains, who had unquestioned authority on any airplane, to communicate better with crewmembers. It turned out that captains and crewmembers who practiced teamwork were less likely to crash airplanes, Wightman said.

After studying 37 accidents, NASA and other organizations came up with the ideas that led to cockpit resource management.

Wightman calls it "what you should do before you wind up a smoking hole in the side of the mountain."

Medical teams have to work together the same way as crews on airplanes, she and Popp said, even when that means questioning a doctor or another authority figure. And those authority figures need to welcome those questions.

Some participants in the training doubted that such an open dialogue could develop. Others had no doubts.

"In an operating room, you have a lot of aggressive personalities," said Billy Yeager, a licensed practical nurse, or LPN. "I had one of those situations yesterday."

But Kathy Sloan, a nurse for 35 years, said patient safety matters more than someone's rank.

"It's sort of like preaching to the choir," she said of the CRM training. "I'm a patient advocate. I'm not going to back off just because a doctor says."

Carolyn Watts, an advanced-practice nurse, agreed.

"If a patient tells me something's wrong, I put the brakes on," she said.

Popp acknowledged that some medical professionals are skeptical that a pilot and a former AWACS crewmember can help improve patient safety.

As operating room nurse Leisa Epps said, "This isn't aviation."

But medicine and aviation can involve fatigue, heavy workloads, imperfect information and flawed decision-making, Popp said.

"We have a lot of things in common," he said. "The errors we make are very similar. If we talk to each other, it helps."

Bill Lewis can be reached at 259-8075 or bilewis@tennessean.com.

© Copyright 2002 The Tennessean
A Gannett Co. Inc. newspaper Use of this site signifies that you agree to our
terms of service (updated: 08/01/2001).
Associated Press content is Copyrighted by The Associated Press.