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[FAA International Aviation Safety Forum](#)

Third annual FAA International Aviation Safety Forum took place last week in Washington and some 500 aviation professionals from 50 countries shared their concerns about the **challenges in maintaining safety standards** in increasingly crowded skies. **"Right now, the commercial fatal accident rate in the US is about two fatal accidents for every 10 million takeoffs," FAA Administrator Marion Blakey said.** "The forecasts anticipate that we should expect a doubling or tripling of the amount of traffic in the system over the next 10 to 20 years." She noted that passenger numbers will climb past 1 billion by 2015. At the same time, there could be an **influx of 5,000 VLJs** and a substantial increase in the number of fractional ownership jets.



"I'm convinced that many accidents could have been prevented if ICAO safety standards had been implemented," ICAO Council President Roberto Kobeh Gonzalez said, adding that the organization will focus on safety programs that have had "identifiable results." IATA CEO and DG Giovanni Bisignani said, "We have to do more," citing particular concerns for safety in Latin America, Russia and Africa. "We have to recognize that we have a big problem in some areas of the world." **He emphasized the need for professional training and standardized rules and procedures along with new technology for ATC systems.**

Report: Half of U.S. commercial runways lack standard safety zone



More than half of U.S. commercial airports do not have a 1,000-foot (305 meter) margin at the end of a runway, an overrun area the U.S. government says is needed as a safety zone, according to a new report.

Some of the busiest airports at in the United States — including Los Angeles International Airport, Chicago's O'Hare International Airport and Hartsfield-Jackson Atlanta International Airport — have more than one runway that does not meet safety standards, according to statistics supplied by the Federal Aviation Administration.

"Our runways are out of shape, and the Bush administration has failed to move to correct the problem," Sen. Frank Lautenberg, a Democrat, said Thursday. "If we don't get serious about runway problems, the result could be disastrous."

The FAA says it is diligently upgrading the runways. The agency expects that all of them will meet the standard by 2015, when they are legally required to do so, according to FAA spokeswoman Laura Brown.

"Today, 70 percent of commercial service runways have a runway safety area within 90 percent of the standard," Brown said. She said 236 runways were improved as of Sept. 22.

At 325 airports — more than half of the 573 commercial airports in the United States — at least one runway lacks the 1,000-foot (305 meters) safety zone, according to the FAA's own figures. Almost half of all commercial runways — 507 of 1,017 — don't meet the safety standard.

Deadly airplane crashes can happen on runways because they are too short, improperly lit, poorly designed or lack safety equipment. A minor procedural error by a pilot or an air traffic controller can turn tragic if a vehicle or another airplane happens to be in the way.

Federal safety investigators are looking into three runway mishaps this week alone: An Alaska Airlines jet took off on the wrong runway at Seattle-Tacoma International Airport; two airliners clipped wings while taxiing at Newark Liberty International Airport; and another jet landed on a taxiway at Newark.

The wrong runway may have been used more frequently than the FAA previously thought. The agency searched 5.4 million records over 10 years and found flight crews said they were confused about runways 117 times, according to FAA spokeswoman Laura Brown.

As a result of the data search, Brown said, the FAA is exploring ways to prevent pilot confusion.

Within the past year, two fatal commercial airline crashes involved runways.

In August, 49 people were killed when a **Comair** regional jet took off on the wrong runway at Lexington Blue Grass Airport in Kentucky.

In December, a 6-year-old boy in a car was killed when a **Southwest Airlines 737** overran a runway at Chicago's Midway Airport and plowed into the street.

There have been 45 fatal crashes due to aircraft overrunning runways since 1983, according to Lautenberg.

Part of the problem is that some airports were built in congested urban areas and have no room to lengthen their runways.

One solution is to **install soft concrete beds at the end of a runway.** Called Engineered Material Arresting Systems, or EMAS, they slow an airplane that rolls off the end of a runway.

NTSB releases accident reports

HILO, Hawai'i — The National Transportation Safety Board is blaming **mechanical problems** for an accident in which a helicopter was forced to ditch in the ocean last year about 50 yards offshore near Honokohau National Historical Park north of Kailua, Kona.



Other reports released by the NTSB blamed **pilot error** for two other helicopter accidents this year, including one where a helicopter rolled on its side at the Kailua, Kona, airport, and another where a pilot landing in a wooded area on Maui allowed the helicopter's main rotor blades to strike a tree.

The agency blamed a fourth accident, a hard landing near McGregor Point on Maui in 2005, on **contaminated fuel.**

In the April 23, 2005, accident in Kona, a single-engine Robinson Helicopter Co. R22A had just departed the Kailua airport with a flight instructor and a student aboard when the pilot was forced to ditch in the ocean.

The helicopter, owned by Mauna Loa Helicopters, was climbing above the 1,300-foot level when the engine "just quit," the pilot told the NTSB.

Neither the instructor nor the student was injured, and the helicopter ended up in about eight feet of water.



The NTSB listed the probable cause of the accident as failure of one of the engine's exhaust valves, adding that "failure of maintenance personnel to adequately check" portions of the exhaust valve assembly contributed to the accident.

In a second mishap, the NTSB said the rotor blades of a Hughes 369D were ruined on July 7 in Kihei when a Windward Aviation Inc. pilot allowed the blades to strike a tree while attempting to land to retrieve an animal.

The flight was a reconnaissance and eradication mission by the Tri-Isle Resource Conservation and Development Council, which is under the U.S. Department of Agriculture, according to the NTSB report.

The three people aboard were uninjured, and the helicopter landed a short distance away after the mishap near Kihei. The helicopter was later flown back to Kahului for repairs, according to the NTSB.

Pilot error was also blamed in another accident at the Kona airport on March 23, when a Robinson R-22B helicopter rolled onto its left side while hovering above the tarmac during an instructional flight.

The aircraft was operated by Mauna Loa Helicopters, and the pilot and student were uninjured. The NTSB ruled the accident was caused by the instructor's "delayed remedial action" when an inexperienced student encountered problems.

Contaminated fuel was blamed for a hard landing by a Windward Aviation Hughes 369D near McGregor Point on Maui after the aircraft lost power on May 16, 2005. The pilot and four passengers were not injured.

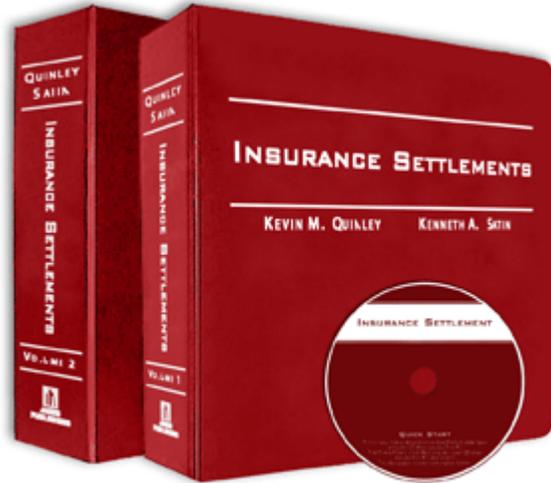
According to the NTSB, a contaminated fuel sample was discovered two days before the accident, and the maintenance crew examined the helicopter but did not examine and clean the entire fuel system.

That accident was attributed to maintenance personnel who failed to check out the entire fuel system and to make daily quality assurance checks on a fuel storage tank. The tank had a broken cover that allowed water and contaminants to mix with the fuel, according to the NTSB.

Chalk's Settlement Deadlines Loom

If the court-appointed mediator decides on an equal split of the insurance settlement, each of the families of the 20 victims of Chalk's Ocean Airways Flight 101 crash could get \$2.5 million in compensation.

Attorneys in the settlement hope to have the matter wrapped up before a status conference with the judge set for November 6, but lead plaintiff's attorney Robert L. Parks told the Journal that each individual estate must be settled by December 15.



Mr. Parks confirmed that private mediations with all the lawyers involved are complete, and court-appointed mediator James Chaplin is "expected to make his findings concerning the distribution of the \$51 million settlement this week."

"There is a status conference with the judge set for Monday, November 6, to bring her up to date on where we are, and I would hope as lead counsel on the case that by that date all or 99 percent of the matters would be resolved," he said.

The lead counsel laid out a prospective timeline for the settlement to be completed.

If all the matters are not resolved by the November 6 conference with US District Court Judge Patricia Seitz, there is a hearing with the Florida Probate Court scheduled for November 15.

"(On that date we will) get all the state approvals on all the cases, so we need to have everything done by that date," Mr. Parks said.

The settlement structure allows for persons dissatisfied with Mr. Chaplin's first offer to reject it, and go to arbitration. The arbitration process allows the person to bring evidence as to why they ought to get more money, but cross-examination is also a part of the process.



As a result, there is no guarantee that arbitration will increase the offer; depending on the evidence led, the offer may go down.

"The fact of the matter is, even if there are those people who wish to (go to arbitration), that doesn't change the deadlines – they still all have to be done by the 15th," Mr. Parks explained.

However, he said that the deadline set by the insurance company on the funds is December 15, making that date the ultimate deadline in this matter.

"We're hoping that it can be done without the usual last minute racing around, but we're toeing the line on the 15th, and the court's advised of that date and I believe the court will step in and make sure that that's the date it gets done by," Mr. Parks told the Journal.

"And hopefully all of these folks will have a settlement within a year of the anniversary date of the crash, which is pretty remarkable."

Eleven Biminities, three children, a former Bacardi executive and an American missionary were among the 20 people who died when Chalk's Ocean Airways Flight 101 crashed just after takeoff from Florida on December 19.

The right wing of the 58-year-old Grumman Mallard seaplane separated from the fuselage as the plane took off, causing the craft to slam into the Atlantic, killing all aboard.

An investigation by the National Transportation Safety Bureau (NTSB) revealed allegedly shabby maintenance practices at the airline. In fact, three pilots had quit in 2004 after their maintenance concerns allegedly went unaddressed.

That investigation continues.

[Chalk's To Resume Service To Bahamas Nov. 9](#)

Nearly one year after a seaplane crash killed 20 people, Chalk's International Airlines received federal approval to resume service to the Bahamas using leased planes that will land on ground runways.

Chalk's plans to begin flying to the Bahamas on Nov. 9 on planes leased from Billings, Mont.-based Big Sky Airlines, the company said.

It's a positive step in the rebirth of Chalk's, which also announced plans to lease additional planes to fly from Fort Lauderdale and Palm Beach County to Tallahassee, Gainesville, Orlando, Tampa and Key West and to other Bahamas destinations.

The carrier is also working with the Federal Aviation Administration to rebuild its Mallard aircraft seaplane to resume service from Miami's Watson Island, general manager Roger Nair said.

The airline, known previously as Chalk's Ocean Airways, has been grounded since one of its signature Grumman G-73T Turbo Mallard seaplanes crashed shortly after takeoff near the Port of Miami on Dec. 19, 2005, killing 18 passengers and both pilots. The right wing broke off in flight and investigators immediately focused on [fatigue cracks found in both wing structures](#).

All 37 Mallard seaplanes in the U.S. were grounded by the Federal Aviation Administration following the crash, including the four remaining ones operated by Chalk's. [The FAA is still awaiting an adequate procedure to check those planes for wing cracks](#).

Chalk's hired an FAA-approved engineer to guide them through the process of rebuilding troubled section of the seaplanes.

["Rather than just poke away at a small inspection, we are going to go through and make sure these planes have all new parts in that section so nothing can happen again like that,"](#) Chalk's owner and president Jim Confalone said.



The wreck from last December's Chalk's plane crash was pulled up not too long after the tragedy.

The National Transportation Safety Board still has not released its probable cause report on the crash. In June, the NTSB released much of its investigative findings, showing in part that many pilots were worried about maintenance of the World War II-vintage airplanes.

Meanwhile, negotiations continue between Chalk's lawyers and attorneys for the families of the crash victims over how to divide a proposed \$51 million settlement. A filing in U.S. District Court said both sides have reached a deal that would allow for all claims to be settled by Dec. 15.

NTSB: Improper Loading Led To Teterboro Accident

Operator Also Failed To Maintain Control Over Part 135 Ops.

In its final report adopted Tuesday, the National Transportation Safety Board determined the probable cause of a February 2005 corporate jet accident at New Jersey's Teterboro Airport, **was the flight crew's failure to ensure the airplane was loaded within weight and balance limits and their attempt to take off with the center of gravity well forward of the forward takeoff limit, which prevented the airplane from rotating at the intended rotation speed.**



The investigation revealed that neither pilot used the available weight and balance information appropriately to determine the airplane's weight and balance characteristics for the take off.

"This accident clearly shows what can happen when crucial operating steps are not adhered to," said NTSB Chairman Mark Rosenker. "When it comes to transportation safety there are no shortcuts and it is important that operators and flight crews ensure that proper procedures are followed at all times."

As Aero-News reported, On February 2, 2005, a Bombardier Challenger CL-600-1A11, during takeoff, ran off the departure end of runway 6 at Teterboro Airport, Teterboro, New Jersey; through an airport perimeter fence; across a six-lane highway (where it struck a vehicle); and into a parking lot before impacting a building. The two pilots were seriously injured, as were two occupants in the vehicle. The cabin aide, eight passengers, and one person in the building received minor injuries.

The Safety Board found that contributing to the accident were Platinum Jet Management's (PJM) conduct of charter flights without proper Federal Aviation Administration (FAA) certification and its failure to ensure that all for-hire flights were conducted in accordance with Part 135 requirements.



According to federal regulations, an operator must hold an appropriate air carrier certificate to operate as an air carrier and to advertise its services to the public for compensation or hire. **Although PJM did not hold an appropriate certificate, the company advertised its charter services and represented itself to the public as an authorized charter operator, the Board found.**

Another contributing factor was Darby Aviation's (operating certificate holder) failure to maintain operational control over Part 135 flights being conducted under its certificate by PJM, which resulted in an environment conducive to the development of systemic patterns of flight crew performance deficiencies like those observed in this accident. An example of this was the Board's findings that PJM pilots routinely improperly modified the airplane's weight and balance forms, using a variety of invalid airplane empty weights to ensure that the form indicated that the airplane was operating within its limitations.

Also contributing to the cause was the failure of the Birmingham, Alabama, FAA Flight Standards District Office to provide adequate surveillance and oversight of operations conducted under Darby's Part 135 certificate, the report states. The Board noted that although FAA personnel reviewed Darby's record, they did not ensure that PJM's airplanes were operated and maintained in accordance with Darby's company requirements or that charter trips flown by PJM were controlled by Darby.

Finally, contributing to the accident was the FAA's tacit approval of arrangements such as that between Darby and PJM. The Board stated in its findings that without clear and specific guidance on agreements between certificate holders and other entities that provide airplanes and/or flight crews for charter flights, unauthorized entities could still be performing most, if not all, of the functions of an on-demand charter operator without controls, oversight, and demonstrations of fitness imposed by a Part 135 certificate.

As a result of the investigation of this accident, the NTSB's recommendations to the FAA includes:

Reviewing all charter management, lease, and other agreements between Part 135 certificate holders and other entities to identify those agreements that permit and/or enable a loss of operational control by the certificate holder and require revisions of any such arrangements requiring all Part 135 certificate holders to ensure that seatbelts at all seat positions are visible and accessible to passengers before each flight.

Requiring that any cabin personnel on board Part 135 flights who could be perceived by passengers as equivalent to a qualified flight attendant receive basic FAA-approved safety training in a least the following areas (incomplete safety briefing was giving on accident flight): preflight briefing and safety checks;

emergency exit operation; and emergency equipment usage. This training should be documented and recorded by the Part 135 certificate holder.

Crash pilot 'ignored storm advice'

ABUJA, Nigeria (AP) -- The pilot of a Nigerian airliner that crashed a day earlier did not heed air traffic controllers' advice to wait for stormy weather to clear before taking off, the minister of aviation said Monday. The pilot was among 96 people killed in the crash; nine people survived.



While Aviation Minister Babalola Borishade did not directly blame pilot error in the third mass-casualty jet crash to hit this West African nation in less than a year, he said officials would move to try to curb pilots' power to ignore advice from the control tower.

Late Sunday, investigators found one of two black boxes from the Boeing 737 owned by a private Nigerian airline, Aviation Development Co. Borishade said all of ADC's planes were grounded indefinitely and its flying license was suspended. (Watch the scene at hospital near crash site -- :55)

The airline last suffered a crash in November 1996, when one of its jets plunged into a lagoon outside Nigeria's main city, Lagos, killing all 143 aboard.

Sunday, the aircraft was carrying 100 passengers and five crew when it went down just moments after taking off from Nigeria's capital on Sunday. The airline said 96 people died, including the pilot, and nine were hospitalized in Abuja. (Map)

"The pilot of the unfortunate accident refused to take advantage of the weather advice and the opinion of the (control) tower to exercise patience and allow the weather to clear for a safe take off," Borishade said at a news conference.

"The discretionary power of the air crew to override advice from the tower has been largely responsible for unfortunate consequences in the history of air mishaps in this country," Borishade said. "The federal government has directed the National Civil Aviation Authority to look into this and prepare appropriate guidelines to stop this reckless abuse of crew discretionary power ... to ensure safety."

The minister said conditions at the time included rain, gusty winds, thunder and lightning, and that controllers thought the weather would worsen.



"The air traffic controller re-emphasized the deteriorating weather condition and gave wind checks, which they (crew) acknowledged," he said.

Rowland Iyayi, head of the National Air Space Management Agency, said a Virgin Airlines flight that had been on the runway at about the same time as the ADC flight did not take off because of strong winds.

Asgus Ozoka, who heads Nigeria's Accident Investigation and Prevention Bureau, said one of the plane's black boxes was recovered late Sunday and handed over to police officials involved in the investigation. It was not immediately known whether it was the flight data recorder or the cockpit voice recorder.

Among those confirmed dead was Nigeria's top Muslim leader, Muhammadu Maccido. Maccido was sultan of the northern state of Sokoto and headed the National Supreme Council for Islamic Affairs in Nigeria, which announces when Muslim fasts should begin and end, and decides issues of policy for Nigeria's overwhelmingly Sunni Muslims. About half of Nigeria's 130 million people are Muslims.

Maccido's body was flown to the northwest city of Sokoto, about 800 kilometers (500 miles) northwest of Abuja, where thousands of people were gathered at the airport, and buried late Sunday in accordance with Islamic custom. The Sokoto state government declared six days of mourning.

The plane bound for Sokoto crashed at 10:29 a.m. (0929 GMT), one minute after taking off from Abuja airport, said Sam Adurogboye, an Aviation Ministry spokesman.

Rescue workers at the scene Sunday found debris from the plane, body parts and passengers' luggage strewn over an area the size of a soccer pitch. The plane went down in a tree-filled field inside the sprawling airport compound about 3 kilometers (2 miles) from the runway. Smoke rose from the aircraft's mangled and smoldering fuselage. Its tail, hanging from a tree, was one of the few recognizable parts of the [23-year-old Boeing 737-2B7](#).

[Nigeria's air industry is notoriously unsafe](#). Last year, two planes flying domestic routes crashed within seven weeks of each other, killing [224](#) people.

On October 22, 2005, a Boeing 737-200 plane belonging to Bellview airlines crashed soon after takeoff from the country's main city of Lagos, killing all [117](#) people aboard. On December 10, a McDonnell Douglas DC-9 plane operated by Sosoliso Airlines crashed while approaching the oil city of Port Harcourt, killing [107](#) people, most of them school children going home for Christmas.

[Earlier this month, authorities released a report blaming the Sosoliso crash on bad weather and pilot error](#). The investigation of the Bellview crash is still continuing.

After last year's air crashes, President Olusegun Obasanjo vowed to overhaul Nigeria's airline industry, blaming some of the industry's **problems on corruption**. Airlines were subjected to checks for air-worthiness and some planes considered unworthy were grounded.

Report faults pilot over Nigeria's Sosoliso crash

The pilot of the Sosoliso plane which crashed last year in Port Harcourt **should not have attempted to land because run-way lights were not on**, an investigation has revealed. The Accident Investigation and Prevention Bureau (AIPB), yesterday **blamed the crew of the Sosoliso plane and airport authorities for the crash**.



The probable cause of the accident was the crew's **decision to continue the approach beyond a safe altitude without having the runway and airport in sight**, investigators said yesterday. **But the AIPB team led by its Director, Engineer Angus Ozoka also sharply criticised the Federal Airports Authority of Nigeria (FAAN), for allegedly preventing the airport control tower from turning on the runway lights**. Ozoka who recommended the airfield lighting presently under FAAN's Electrical Department should be transferred to NAMA, so it could be controlled by the tower.

Controllers have to contact the FAAN electrical department to switch on or control the intensity of the airfield lighting. Ozoka said: "This is unacceptable, it is not in consonance with the recommended practice." He also announced that there has been no progress in the investigations into last October's Bellview air crash because the black box has not been found. The investigators briefed journalists yesterday on the final report of Sosoliso flight 1145 which crashed on landing at Port Harcourt airport last December killing 108.

Most of the dead were children from an Abuja secondary school. The ill fated aircraft allegedly encountered adverse weather with changes in wind speed and direction while the visibility was reducing in thunderstorm and rain, the investigators said.

Ozoka said the pilot went too low too quickly and couldn't see the runway. Ozoka, while presenting AIPB's findings and recommendations on the crash, said the crew **delayed their decision** to carry out an emergency climb and **did not follow proper procedures** while turning the plane to come back and try again.

The investigation found the aircraft crashed into an exposed drainage concrete culvert. The plane disintegrated and burnt up on impact. The black box and cockpit flight recorder were recovered. They were taken to facilities of the National Transportation Safety Board (NTSB), in the United States of America where they were read and analyzed. AIPB according to him, has also submitted the final report of the accident to the federal government some months ago.

[New revelations about plane crash killing Peruvian football team 19 years ago](#)

Almost twenty years after the entire team of Peru's most famous football club, Alianza Lima, was killed in a plane crash, an investigative TV report puts Peru's Navy in a bad spot.

On December 8th, 1987, a Peruvian Navy plane, type Fokker-F27, carrying players, coaches, journalists and some fans, crashed into the Pacific Ocean off the coast of Peru's capital, Lima.



The report which aired last night on the Peruvian television program "Indiscreet Window" sheds new light on the tragedy and its cause.

The pilots lack of experience flying at night, misreading the manual for procedures in emergency situations, and also the airplane's bad condition, were the main causes for the crash, according to the report which had access to the final conclusions of the Naval Aviation Commission in charge of the investigation at the time.

According to the report, this document remained locked in a safety deposit box at a bank in the United States for sixteen years, in order to avoid that Peruvians it is known in Peru.

It presumably reveals that the pilot of the airplane, Lieutenant Edilberto Villar, the only survivor of the accident, **recorded only 5.3 night-flight hours in the last 90 days before the accident, 3.3 hours in the last 60 days; and none in the last 30 days.**

The records of the co-pilot, Cesar Morales, showed a similar situation: only 90 minutes of night-flight experience two months before the crash.

More seriously, the pilots thought that the front landing gear was stuck and reported the problem to flight controllers. The controllers in the flight tower (Corpac) however observed that that this was not the case and responded accordingly.

According to the report, the pilot then ordered his copilot to look for the emergency procedure documented in the flight manual, in order to find a solution.

But the manuals were written in English and, reportedly, the copilot's foreign language skills were limited to about 40 percent. Instead of reading the correct instruction, paragraph 1.4.3 marked in orange, he read the instruction paragraph 1.3.1.7 of the manual marked in red.

“A faulty cabin indicator for the front landing gear is a manageable situation, as long as the correct procedures in the manual are executed”, is one of the report's conclusions.

In addition, the plane's maintenance log book given to the pilot before take off showed a series of mechanical deficiencies which, according to witnesses, raised the pilot's concern to a point where he initially refused to fly under these conditions.



For example, the airplane did not have an inertial guidance system; UHF communication had low reception; the very high frequency omni-directional range (VOR number) had low sensitivity; the radius altimeter oscillated preventing the pilots from seeing the exact altitude; and finally, the actuator for the front landing gear had worn down.

“Nevertheless, the report concludes that **human error** was the main cause of the accident, **not following flight procedures and not executing the check list**. This is outrageous, a military pilot obeys orders”, commented the host of the TV program Cecilia Valenzuela. According to the journalist, the team captain of Alianza Lima, Alex Berrocal, listened to the discussion of the pilots not to fly the plane in that state.

Valenzuela also showed a letter of the Fokker company dated October 16, 1986, - more than a year before the accident- which indicates that the pilot, Edilberto Villar, **had not passed a special training course which could have prevented “his disorientation while operating under pressure, the excessive demand of work in a cabin”, but in spite of the failed test he was regarded as a pilot.**

The copilot of the airplane, Cesar Morales, had never been trained by the Fokker company.

The TV program promised for next Tuesday to reveal the names of the officials who decided to keep this report hidden. And the victim's relatives were kept in the dark for almost 20 years.

[What Pilots Can Teach Hospitals About Patient Safety](#)

Wearing scrubs and slouching in their chairs, the emergency room staff members, assembled for a patient-safety seminar, largely ignored the hospital's chief executive while she made her opening remarks. They talked on their cell phones and got up to freshen their coffee or snag another danish.



But the room became still and silent when an airline pilot who used to fly F-14 Tomcats for the Navy took the lectern. Handsome, upright and meticulously dressed, the pilot began by recounting how in 1977, a [series of human errors](#) caused two Boeing 747s to collide on a foggy runway in the Canary Islands, killing 583 people. Riveted, a surgeon gripped his pen with both hands as if he might break it, an anesthetist stopped maniacally chewing his gum, and a wide-eyed nurse bit her lip.

An attention grabber, yes, but what does an airplane crash have to do with patient safety?

A growing number of health care providers are trying to [learn from aviation accidents](#) and, more specifically, from what the airlines have done to prevent them. In the last five years, several major hospitals have hired professional pilots to train their critical-care staff members on [how to apply aviation safety principles to their work](#).

They learn standard cockpit procedures like [communication protocols, checklists and crew briefings to improve patient care](#), if not save patients' lives. Though health care experts disagree on how to incorporate aviation-based safety measures, few argue about the parallels between the two industries or the value of borrowing the best practices.



Spurred by a 1999 report by the [Institute of Medicine](#), an arm of the National Academies, titled “To Err Is Human,” which estimated that as many as **98,000 patients die annually from preventable medical errors**, and by more recent bad publicity from mistakes like amputations of the wrong limbs, many health care providers are redoubling their efforts to improve patient safety.

“We’re where the airline industry was 30 years ago” when a series of fatal mistakes increased scrutiny and provoked change, said Dr. Stephen B. Smith, chief medical officer at the Nebraska Medical Center in Omaha, the teaching hospital for the [University of Nebraska](#).

It is well established that, like airplane crashes, the majority of adverse events in health care are the result of **human error, particularly failures in communication, leadership and decision-making**.

“**The culture** in the operating room has always been the surgeon as the captain at the controls with a crew of anesthesiologists, nurses and techs hinting at problems and hoping they will be addressed,” Dr. Smith said. “**We need to change the culture so communication is more organized, regimented and collaborative, like what you find now in the cockpit of an airplane.**”

After the Canary Islands accident, [NASA](#) convened a panel to address aviation safety and came up with a program called Cockpit or Crew Resource Management. The Federal Aviation Administration requires that all pilots for commercial airlines and the military undergo the training. They learn, among other things, to **recognize human limitations and the impact of fatigue, to identify and effectively communicate problems, to support and listen to team members, resolve conflicts, develop contingency plans and use all available resources to make decisions**.

Work-Related Roadway Deaths

Roadway crashes remain the leading cause of work-related fatalities, by far. Here are some grizzly statistics that document the dimensions of the problem:



*Death on wheels :
truck wreck in Lawyer, TN*

4:

The average number of civilian workers who die in road crashes each day. (Source: *Bureau of Labor Statistics, Census of Fatal Occupational Injuries*).

22:

The percentage of work-related deaths caused by roadway crashes between 1992 and 2001 (as compared to 13% from homicide and 10% from falls). (Source: *BLS, Census Fatal Occupational Injuries*).

\$61 billion:

The total amount of lost wages and benefits for crash victims (occupational and non-occupational) in 2000. (Source: *National Highway Traffic Safety Administration*).

Vehicles Involved:

- * Semi-trucks—28%
- * Automobiles—24%
- * Pickup trucks—12%

(1992-2001 figures. Source: *National Institute for Occupational Safety and Health*).

Industries Involved:

- * Transportation—33%
- * Services—14%
- * Construction—11%

(1992-2001 figures. Source: *National Institute for Occupational Safety and Health*).

Accident Characteristics:

- * 49% were collisions between vehicles
 - * 54% occurred between 7 a.m. and 4 p.m.
 - * 38% took place on U.S. and state highways
 - * 89% of fatally injured workers were male
- (1992-2001 figures. Source: *NIOSH*).

END