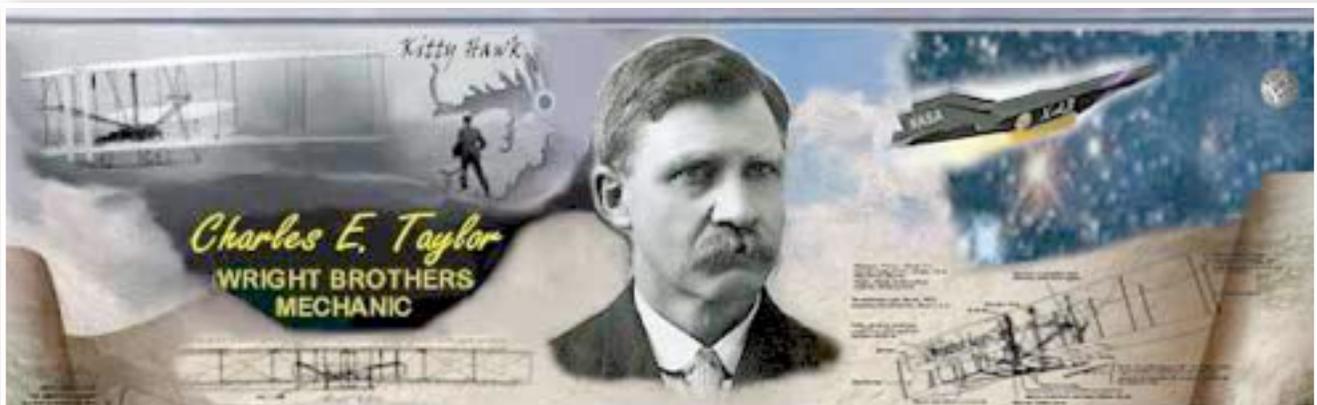


Aviation Human Factors Industry News

Volume XI. Issue 06, March 22, 2015



From the sands of Kitty Hawk, the tradition lives on.

Hello all,

To subscribe send an email to: rhughes@humanfactorsedu.com

In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

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A Poisoned Safety Culture

by Dr. Bob Baron
President,
The Aviation Consulting Group

A few years ago I was teaching a human factors course to a helicopter operator in the United States. About halfway through the course I was ready to teach the module about communication skills, specifically addressing the issue of assertiveness. At that moment there was a knock on the door and the Director of Maintenance (DOM) walked in asking if he could have a few minutes alone with the class. Though odd, I agreed and proceeded to sit in the waiting area for what I thought would be a few minutes. About an hour later the DOM exited the classroom and thanked me for giving him a “few minutes” with the class. Upon returning, I was told by the class attendees that the purpose of that interruption was so that the DOM could make it clear to employees that “[what he says goes](#)” and that the class should [basically ignore](#) what I was teaching regarding speaking up when acting in, or observing, unsafe conditions.



That DOM is no longer with the company but the event did illuminate the extreme end of a [poisoned safety culture](#). In my over 15 years of teaching human factors courses all over the world I had never, and have still never, experienced something quite as brazen as what occurred that day. Authoritarian, toxic leadership styles have absolutely no place in aviation, or, for that matter, in any other high-risk industry. How can you work on attaining, or maintaining, a generative safety culture when the role models of your organization are stuck in the Pathogenic mode? [Does any of this sound familiar?](#)

Pilot Experience or Pilot Proficiency?

Which pilot attribute would you choose for your Flight Department?

In the mid-1980s, President Reagan ordered the Navy and Air Force to send Libyan revolutionary Colonel Gaddafi a stern message regarding his support for terrorism.

Carrier Air Wing Thirteen, flying from the USS Coral Sea, was assigned targets in the now-famous city of Benghazi, and the USAF F-111 fighter wing based in England was assigned targets in Tripoli with aerial defense of the Air Force bombers provided by USN F-14s from the USS Saratoga.



While unverified, the story that filtered through the Navy squadrons involved selection of

[what USAF F-111 crews should fly the mission](#): Should they be older pilots with combat experience in Vietnam but with limited recent flight time since their current staff assignments restricted flight activities? Or should younger F-111 pilots who trained daily in the latest tactics but had no combat experience fly the mission? Alas, the USAF leaders sent experienced USAF pilots as well as highly trained but younger, inexperienced pilots.

Which group performed better? The reports we received stated that the younger pilots with frequent recent tactical flight training performed better in target acquisition and accuracy of their bombs than the older pilots.

Two researchers have come to a similar conclusion regarding commercial airline pilots.

Research: Logbook Hours Don't Always Make Safer Pilots

For years, experts have wondered about the correlation—or the lack of one—between pilots' flight-time experience and how they perform in the cockpit. Two Australian [human-factors researchers](#)—Matthew Thomas and Melanie Todd—have tackled the question. When studying first officers already flying for the airlines, the two researchers concluded that there was not much difference between relatively experienced versus less experienced pilots. The study was conducted much like a line-oriented-safety audit, [in which evaluators observed](#) flight crews in action from the cockpit jump-seat to evaluate their technical and non-technical skills, situational awareness, task management and decision-making. About the only difference the research did show between high-time and low-time first officers was that low-time pilots [took longer to switch off](#) the automation than their higher-time colleagues during stabilized approaches. Thomas and Todd concluded that low-time first officers were just as capable as their higher-time counterparts.

Selecting Crews

When asked by my clients to assess a candidate pilot, I observe that experience is critical provided it is relevant and relatively recent. Total number of hours is not as important as quality, relevance and recency of flight time, including simulator-based training in emergencies and malfunctions that cannot be safely simulated in the aircraft.

Research also touched on a growing concern that pilots [have become too reliant on cockpit automation](#) – flight management systems, auto-pilot, GPS, flight directors, auto-throttles, HUD, etc. – at the expense of basic flying skills and situational awareness when presented with an unusual situation and/or system failure.

As a Navy FA-18 carrier pilot, when the weather cooperated, I routinely flew night instrument approaches to the ship with the HUD and primary MFD turned off in order [to challenge my instrument scan](#). I wanted to be up to the task should an actual system failure occur. Just like golf, 90% of instrument flying is mental and requires solid confidence to be done well when the chips are down.

Aircraft owners and their flight department leaders must embrace the training requirements to develop and maintain flying skills of the company's crews.

This ethos will require commitment and creativity on everyone's part to make the most of precious flight time and training opportunities.

I'm not suggesting aircrew should explore training scenarios when carrying passengers or encountering adverse weather conditions. Rather, [positioning flights](#) usually offer appropriate conditions for briefing, flying and debriefing some aspect of the flight that will contribute to honing skills. I know of one flight department that scheduled and paid for "back to basics" flying in tail-draggers at their local flight school. They are even considering adding a J-3 Cub to their hangar of jets!

Gray hair on the PIC in the left seat should only be comforting to the owner and passengers if it has been accompanied by recent and relevant flight training.

Navy: Repairs of Sea Dragons Didn't Always Follow Rules

The Navy is retraining sailors who work on its Sea Dragon helicopters after a Virginian-Pilot investigation revealed workers had **improperly filled out maintenance records**, an apparent violation of naval aviation policy.



At least 15 times over the past year, according to records obtained by The Pilot, sailors at Helicopter Mine Countermeasures Squadron 14 failed to properly document their work after taking a part off one helicopter to install on another -- a practice known as **cannibalization**, which the Navy tracks closely and tries to limit. A few sailors at the squadron told The Pilot they had been outspoken at the command about inaccurate record keeping, which they say is more common than what's shown in the documents. They said their **concerns were dismissed** by maintenance chiefs and quality assurance personnel

"We are hiding problems with our parts supply system to keep aircraft flying, instead of exposing our problems to get the help we need," said one HM-14 maintainer, who spoke on the condition that he not be named. "This is not a training issue; our maintenance controllers know the right way of doing business, they are simply choosing not to."

The newspaper presented its findings to the Navy early last week, allowing the service time to look into the matter. After a preliminary review, the Navy **confirmed** Thursday that the documents had been filled out incorrectly. Some appeared to be clerical errors, while others appeared to be more serious, said Lt. Cmdr. Jeff Brown, maintenance officer for Helicopter Sea Combat Wing Atlantic, which oversees the Navy's - Norfolk based helicopter squadrons.

"We're looking through all their outstanding (maintenance action forms), and **we're going to provide clear direction** on how these records should be done," Brown said. He emphasized that his team likely would have discovered the problems later this year, during a biennial audit of the squadron's books.

The Navy's MH-53E Sea Dragon program has been under scrutiny in recent years, first after a string of mishaps in 2012, and then again last year after a crash off the coast of Virginia Beach killed three crew members. That crash was caused by a [fuel line that chafed against an electrical wire](#), igniting an explosive fire.

The Navy ordered fleet-wide inspections after the crash to repair chafing wires and fuel lines in the Sea Dragons and a similar helicopter flown by the Marine Corps, the CH-53E Super Stallion. Last month, though, engineers found [evidence that those repairs were inadequate](#), and the risk of fire was not eliminated. The Navy called for a new, more thorough round of inspections, which are now underway.

Navy officials acknowledge that maintaining the 28 remaining Sea Dragons is a difficult task. The service had initially planned to retire the 1980s-era mine-clearing helicopters a decade ago but decided to keep them in service after a replacement plan fell through. For that reason, [parts are not always readily available and sometimes must be custom-made](#).

Navy policy allows sailors to take a part from another aircraft if a critical component is unavailable and the mission is essential. The service requires sailors to [closely document those cannibalizations](#) and to do everything possible to limit the practice, which requires twice as many man hours because they must first remove the good part, then re-install it.

If sailors don't document that work correctly, quarterly cannibalization rates provided to top brass and to Congress won't accurately reflect what's happening and could mask gaps in the parts supply system, said Rear Adm. J.R. Haley, commander of Naval Air Force Atlantic.

"We're not having a safety problem by taking a part out of one airplane and putting it in another," Haley said. ["What we have is a systemic issue long-term."](#)

Haley reviewed the maintenance records obtained by The Pilot and said he's confident his officers will take appropriate action -- just as they do after internal audits turn up discrepancies, which he said is not uncommon.

"I want to build a system that catches mistakes, fixes those mistakes, and then allows us to learn as we go, while having very minimal risk," Haley said. "And we do pretty good at that."

More than a dozen naval aviators and aircraft maintainers, including a former commanding officer of HM-14, reviewed the records on behalf of The Pilot. Most said the problems with the record keeping **should have been caught** by the squadron's quality assurance personnel.

They also noted the experience level of the sailors: Nearly all of the reports were filled out by chief petty officers or senior chief petty officers, sailors who typically have spent more than a decade in aviation maintenance.

In addition to creating more work for maintainers, there are other downsides to relying too heavily on cannibalization, especially if the same few helicopters are harvested for parts. According to experts on the matter, you run the risk of stripping an aircraft of so many components, a team of experts must be brought in to rebuild it.

All of the cannibalized parts cited in the records were taken from the same two helicopters, both of which have been grounded for about a year. Any work performed on those aircraft -- known in aviation parlance as **"hangar queens"** -- requires approval from the air wing, according to the Naval Aviation Maintenance Program manual.

But because sailors failed to record the work as cannibalizations -- and because many of the work orders were left open in the computer system -- the air wing was not alerted and was never asked to authorize the work.

Capt. Pat Everly, the air wing commander, said the Sea Dragon squadrons aren't under pressure to reduce cannibalization rates, so there shouldn't be incentive to take short cuts on documentation.

"That is essentially not the right way to do business," Everly said, adding that he is confident the record keeping has not had an impact on safety: "I am not concerned that they are doing unsafe maintenance or that they are willfully disregarding maintenance procedures."

Friday, the day after the Pilot met with Everly, sailors were poring through squadron maintenance records and correcting discrepancies. Moving forward, he said, the squadron will not be allowed to pull parts from the two grounded aircraft for troubleshooting purposes, and any cannibalizations from those aircraft will need to be approved by the air wing.

Meanwhile, personnel continue to perform a second round of fuel line and wiring inspections mandated last month by Naval Air Systems Command. So far, eight of the 28 Sea Dragons have been re-inspected.

On some of the aircraft, sailors and engineers [have found several hundred instances](#) of fuel lines or wiring bundles that must be repaired, replaced or repositioned to prevent chafing.

Until repairs are made, those helicopters can't be flown.

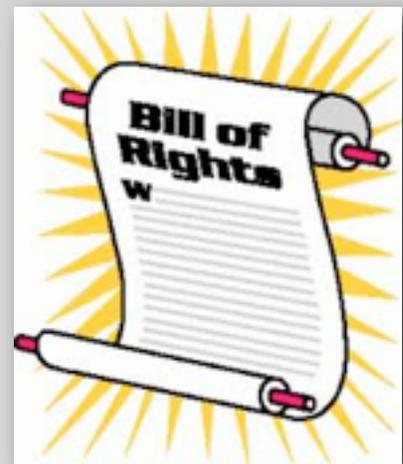
Why Proposed Pilot's Bill Of Rights Could Affect Air Safety

by John Goglia

The introduction in the House and Senate of proposed legislation – known in the aviation community as PBOR 2 or Pilot's Bill of Rights 2 – has received huge support among private pilots. Yet not much attention has been paid to this proposed legislation in the general media. Perhaps that is because the title of this proposed law is so misleading. It is not just about pilot rights. It potentially affects a broad swath of regulated aviation industries, including [airlines, repair stations and aircraft manufacturers](#). And I think passengers and consumer groups should be aware of what this proposed law could mean for aviation safety. At least so that they can review the proposed legislation and comment on it.

Some background. The first Pilot's Bill of Rights was signed by President Obama on August 3, 2012. It also had a misleading title as this law applies not just to pilots [but also mechanics, aircraft dispatchers, air traffic controllers and other individuals who hold FAA certificates](#). Among other things, the law requires the FAA to give written notice to these individuals of their rights when the FAA is investigating them. This includes notice of the right not to respond to the FAA and that the failure to respond cannot be used against them. It also informs individuals that anything they say could be used against them. This part of the law is similar to the Miranda warnings we're all used to hearing on Law & Order and other police shows.

Now an expanded version of this law has been introduced in the House and Senate. Among other things, and the reason the proposed law is wildly popular among private pilots, is that [it would take away the requirement for a medical certificate](#) for many private pilot flights in small aircraft.



I support this aspect of the proposed bill because in my opinion the cost of administering the medical certifications has not delivered a meaningful safety benefit. But I am concerned about other provisions in the proposed legislation that would expand the applicability of the prior law to corporate certificate holders such as airlines, repair stations and aircraft manufacturers and I believe make it harder for the FAA to take action for safety violations. For example, the proposed law would limit the ability of the FAA to request documents from entities under investigation and limit the information available to the public on a pending investigation. The proposed law would also allow appeals of FAA enforcement cases involving the suspension or revocation of corporate certificate holders, as well as pilots and mechanics, [to be brought in federal district court instead of exclusively before the NTSB](#). I am concerned that this would not only make it more difficult and time-consuming for the FAA to prosecute safety violations by corporations but also remove the NTSB's aviation expertise from the review. This is legislation that passengers and consumer groups [should study carefully and comment on](#). This is the Senate version of the bill which was also introduced in the House of Representatives in February.

<https://www.opencongress.org/bill/s571-114/show>

NTSB: Pilot, company, FAA at fault in 2013 North Slope plane crash

The National Transportation Safety Board took [the unusual step](#) this week of citing not only errors committed by the pilot, but also company practices and Federal Aviation Administration oversight as factors in the November 2013 crash of a Hageland Aviation flight at a landing strip on Alaska's North Slope.

Neither of the aircraft's pilots nor the single passenger were injured in the accident that saw the Beechcraft 1900 touch down short of the landing strip at the Badami oil field airstrip, but the plane sustained substantial damage in the crash, according to a final report on the accident issued Tuesday by the NTSB.



Officially, the cause of the accident was determined by the NTSB to be “the captain’s decision to initiate a visual flight rules approach and attempted landing into an area of instrument meteorological conditions...” **But also contributing** were Hageland Aviation's “inadequate procedures for operational control and flight release and its inadequate training and oversight of operational control personnel” and the FAA’s “failure to hold the operator accountable for correcting known operational deficiencies and ensure compliance with its operational control procedures.”

The Badami accident was one of **a string of accidents and incidents** involving aircraft operated by Ravn Alaska members between 2012 and 2014.

Ravn includes Hageland Aviation, now known as Ravn Connect, Era Aviation, now known as Corvus Airlines, and Frontier Flying Service. Following fatality accidents in St. Marys and near Bethel, both of which are still under investigation, the NTSB issued two safety recommendations directing the FAA to conduct audits of flight operations, training, maintenance and inspection, and safety management programs of Ravn Alaska members. The NTSB also recommended the FAA audit its own oversight of the carriers.

Recently, the FAA has placed investigators in Bethel seven days a week on four-day rotations and is also providing continuing surveillance in Nome, Kotzebue, Barrow and Deadhorse.

Weather concerns

The Beechcraft in the Nov. 22, 2013 accident was carrying its single passenger the 29 miles between Deadhorse and the private oil field support airport at Badami. The flight departed at about 1:15 PM when the latest weather from Badami’s private weather observer reported 1 1/2 miles visibility, scattered clouds with blue skies above and blowing snow, according to NTSB interviews with the flight’s first officer.

The accident occurred about 15 minutes later.

While en route, the flight’s first officer told investigators he contacted the Badami weather observer again and learned the weather had deteriorated to 3/4 miles visibility in blowing snow. At that point, the first officer told the NTSB that the captain took over all radio communications.

The captain told investigators that a few minutes later the weather observer informed him he had 1 mile visibility, but the weather observer told the NTSB that he notified the pilots he could “...occasionally see the cold storage camp, which was located ‘1 1/4 miles away,’ but he did not consistently have 1 mile visibility.”

The observer further described the weather as “bad” and that he could sometimes not see the runway. He told investigators he advised the pilots to “use their own judgment”.

The captain told the NTSB his visibility “...was unrestricted and that he had the runway environment in sight 20 miles from the airport.” He asked the first officer to load the instrument approach into the GPS, although he did not use it. He described the approach as normal until he realized he “was too low.”

The first officer told investigators he voiced concerns multiple times while on approach, finally saying “watch out,” just prior to impact. The aircraft then touched down short, with the main landing gear impacting the elevated edge of the runway surface. The right main gear separated and the aircraft slid along the runway.

Cockpit Voice Recorder not secured

The flight was equipped with both a flight data recorder and cockpit voice recorder, the latter of which provides a record of the most recent 30 minutes of radio communications aboard the aircraft.

On the day of the accident, NTSB investigators requested that Hageland secure the FDR and CVR and the company's director of maintenance assured them both recorders would be secured by maintenance personnel on scene.

But on Dec. 5, 2013, it was discovered that the CVR was never secured and engine maintenance runs had subsequently been performed on the aircraft. The NTSB vehicle laboratory in Washington, D.C. later determined that the pre-accident audio had been completely overwritten by maintenance personnel rendering the CVR useless to investigators.

In an email, Bob Hajdukovich, CEO for Ravn Alaska, provided the following explanation for how the CVR data was lost:

This particular CVR issue had to do with the configuration of our BE1900C aircraft, some of which have both a CVR and an FDR and some of which only have a CVR. When the mechanic was dispatched out to retrieve the CVR, he accidentally retrieved the FDR only thinking that he had sent in the CVR. Weeks later, when it was discovered that we had pulled the FDR, the engine runs had already been completed after the replacement of the propeller. The CVR and FDR are both in similar orange boxes and everyone thought the CVR was secured.

Without the CVR, the NTSB was unable to verify the account of communications between the pilot, first officer and weather observer at Badami.

NTSB Alaska Region Chief Clint Johnson said last week that the loss of the voice recorder "does not allow the NTSB to know the sequence of events leading to the accident."

Changes in flight management

In 2014 Hageland made a change in its dispatching procedures when the company opened an operational control center in Palmer. But at the time of the Badami accident, per the company's FAA-approved procedures, flights in the area were managed by a flight coordinator who was responsible for completing a flight risk assessment with pilots before takeoff, including weather conditions.

Such an assessment wasn't completed in the case of the accident flight.

The flight coordinator, a longtime employee, told investigators she had not completed required company training concerning her job. She also did not discuss weather or any risks associated with the flight with the crew. This was contrary to requirements in the Hageland's Operations Manual, which required eight hours of initial training and three to four hours of recurrent training.

Out station flight coordinators no longer participate in flight decisions and instead concentrate on filling out load manifests, coordinating with ramp personnel and customer service with passengers. They do not contact the operational control center in Palmer, nor are they part of those discussions.

Now, according to operational control center manager Greg Tanner, every single Hageland pilot departing from an out station must contact dispatchers in Palmer to receive a flight release. Based on a company-developed risk level assessment, the departure is either approved or may require discussion with upper management. The flight release is active for 30 minutes and if the flight hasn't departed by then, the pilot must contact Palmer again. According to Tanner, the center averages 140-160 flight releases each day.

"This system takes the pressure [to fly] away from the local stations," Tanner said in a recent phone interview. "Here at the center, our only job and motivation is that the flights be safe and legal."

There are still four open accident and incident investigations involving Ravn Alaska air group members.

<http://www.adn.com/article/20140501/ntsb-issues-urgent-safety-recommendation-directed-ravn-alaska>

Many pilots 'medically-impaired' due to toxic cabin air

The Global Cabin Air Quality Executive heard at its annual conference in London recently that at least 3% of airline pilots are flying with **degraded physical and mental performance** caused by repeated exposure to neurotoxins in the aircraft cabin air, and may actually become incapacitated during flight if their exposure continues.



This assessment was presented to the conference by Dr Michel Mulder, a former KLM airline captain and medical doctor who now specializes in helping pilots whose health has been damaged by their work. He also reported that a KLM internal communication concedes that “incapacitation in the cockpit is a regular occurrence”. Mulder is the primary expert behind the medical assessment and treatment of British Airways senior first officer Richard Westgate, whose health was seriously impaired and died in December 2012 aged 43. The Westgate case is being examined by a Coroner’s Court in the UK, and the Court has recently demanded that BA and the UK Civil Aviation Authority state what they intend to do to prevent such deaths in future.

Mulder has developed a test program for pilots that can determine how much their **performance has been degraded** by organophosphate neurotoxins from engine oil, which are present at low levels in pressurized cabin air, and occasionally at high levels when a “fume event” occurs. He says the test can predict each pilot's risk level, forecasting approximately how long it will be until the affected individual suffers actual incapacitation during a flight.

Mulder has found that the pilots' tested performance corresponds remarkably with the results of blood tests. He has found a correlation between the significant reduction in naturally occurring essential biochemical markers like the enzyme butyrylcholinesterase – which experts relate to the body's immune-system response to organophosphates – **and the degree of degradation of physical and mental response.**

The research is part of the Federal Aviation Administration's Center of Excellence Partnership to Enhance General Aviation Safety, Accessibility and Sustainability (PEGASUS). The program is providing \$750,000 for ISU's studies, and the university is matching the funds.

Ceylan said international airports like the Des Moines and the Minneapolis-St. Paul International airports are already expressing interest in the new methods. He hopes [that within two years](#), some of the methods will be put to use.

But the technology could eventually make it to driveways across the country, said Ceylan, noting that each method could be implemented on any slab of concrete.

"Our goal is to get the technology mature with commercial airports. O'Hare and Minneapolis are big, they have the infrastructure and know how to deal with snow and ice," he said. "But general aviation airports like the one in Ankeny don't. If they can get one of these systems, [you don't need snowplows.](#)"

6 Ways Smoking Affects Your Sleep

Sure, the recent news that the number of U.S. adults who smoke has reached an all-time low is music to our ears. But all of our tobacco-related health woes are not solved quite yet.

Scientists have linked the smoking of cigarettes specifically to the development of several serious cancers, heart disease, routine infections, anxiety and depression. While the toxic chemicals and heavy metals consumed during smoking are to blame for these destructive health risks, nicotine -- the substance that makes smoking so addictive -- is often disruptive to another aspect of health entirely: sleep. Smoking regularly can wreak havoc on the body's natural sleep routine, and some of that damage cannot be undone.



Here are six ways smoking destroys the quality of your sleep.

Smoking changes your natural circadian rhythm.

A 2013 study from researchers at the University of Rochester Medical Center found that smoking tobacco can alter the expression of clock genes in both the lungs and the brain, thus ruining a restful night's sleep.

After exposing mice both chronically and acutely to cigarette smoke, the researchers noticed a substantial disruption of their natural circadian clocks, which only worsened with increased tobacco exposure. The consequences of this disruption of circadian rhythms moved beyond poor sleep to include risks of developing depression, anxiety and various mood disorders.

Smoking increases your risk of developing sleep apnea.

According to a 2011 study, people who currently smoke are 2.5 times more likely to also suffer from obstructive sleep apnea, the most common type of sleep apnea caused by the collapse of muscles in the back of the throat during sleep. Smokers experience this repeated cessation of breathing more often because the smoke they inhale irritates the tissues in the nose and throat, causing swelling that further restricts air flow.

Smokers wake up more frequently during the night.

In 2008, scientists at Johns Hopkins University studied the sleep patterns of 40 smokers and 40 nonsmokers. Of the nonsmoker participants, 5 percent said they commonly experienced restless sleep, whereas 22.5 percent of the smokers said they struggled with restless sleep. Then, using an electroencephalogram (EEG) to monitor participants' sleep at home, the researchers found the smoking group accumulated more light sleep than the nonsmoking group, while the nonsmoking group experienced more restorative, deep sleep.

Smokers have trouble falling asleep, and feel restless in the morning.

Similar to caffeine, nicotine is both a drug and a stimulant, meaning it can substantially affect the quality of your sleep if consumed in high quantities and too close to bedtime. According to a 2013 University of Florida study, the average person loses 1.2 minutes of sleep for every cigarette they smoke, due to nicotine's stimulating and subsequent withdrawal effects, Men's Health reported. People who smoke within two hours of bedtime struggle to fall asleep because the nicotine disrupts their natural sleep-wake cycle, and withdrawal symptoms set in before the morning alarm goes off, often leaving smokers feeling even more restless and agitated.

Smokers are more likely to suffer from insomnia.

According to the National Sleep Foundation, insomnia can be caused by an array of psychiatric and medical conditions, as well as lifestyle habits. Because nicotine is a potent stimulant, cigarette smokers can easily develop insomnia if they smoke frequently and close to bedtime. And one study found that women in late mid-life who smoke are even more susceptible to developing insomnia.

Once you start smoking, your sleep will never be the same again.

Putting an end to your smoking habit will do wonders in recovering the quality of your sleep. However, let it be known that people who have never smoked at all prove to be the soundest of sleepers. Yes, there's room for improvement after quitting, but, for many reasons, it's best never to start.

http://www.huffingtonpost.com/2014/01/06/smoking-circadian-rhythm-lungs_n_4532049.html

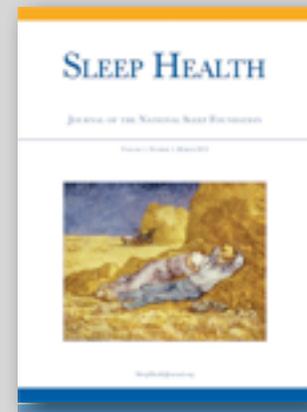
<http://www.tandfonline.com/doi/abs/10.1080/13548506.2013.832782#.VPY8SbPF911>

<http://www.menshealth.com/health/the-bad-habit-that-hurts-your-sleep>

Sleep Health

Journal Of The National Sleep Foundation

Sleep Health, the National Sleep Foundation's new peer reviewed journal focuses on the population health benefits of sleep, spanning anthropology, psychology, sociology, pediatrics, public policy and [transportation studies](#).



<http://www.sleephealthjournal.org/current>

ARSA to Congress: You Can't Fly Without 300,000 American Aviation Workers

On Mar. 18, the Aeronautical Repair Station Association (ARSA) hosted a dual-premiere event on Capitol Hill to provide both visual and quantitative evidence for [the importance of the aviation maintenance industry](#) to American lives and livelihoods.

At a congressional briefing in the Rayburn House Office Building, Rep. Carlos Curbelo (R-Fla.) helped the association unveil [You Can't Fly Without Us – The World of Aviation Maintenance](#). The seven-minute documentary was developed as part of a series of informational public-television features and is intended to provide a foundational introduction to the work of the men and women who keep the world safely in flight. [The video can be seen](#) on AVMRO.arsa.org, the aviation maintenance industry's information portal.



After the screening, ARSA released the 2015 Global Fleet and MRO Economic Assessment, prepared by CAVOK, a division of Oliver Wyman. David Marcontell, CAVOK's vice president, presented an overview of the report's findings, noting that the total worldwide market for commercial aviation maintenance activity will surpass \$100 billion by 2025. On American soil, Marcontell noted that the industry employs nearly 300,000 men and women and generates more than \$43 billion in economic activity, while producing more than \$5 billion in federal corporate and individual income taxes.

[The full report](#), as well as a fact sheet illustrating U.S. state-by-state employment figures, can be found in ARSA's economic data center at arsa.org/news-media/economic-data.

"Each year, [the Global Fleet and MRO Economic Assessment] continues to paint a clear picture of a complex, but vibrant industry," Marcontell said before the event. "People across the world are becoming more connected with each other and demanding even more from the aviation industry to carry them and their products safely and cost-effectively around the globe. As air carriers and other aviation businesses respond to this demand, the already-dynamic aviation maintenance market will march right along in step."

"The message here is pretty simple," said Christian A. Klein, ARSA's executive vice president. "Every single time you land safely, or pick a loved-one up at the airport, or have a package arrive on your doorstep, [there's a maintenance provider somewhere for you to thank](#)."

These repair stations, maintenance facilities and component shops – the businesses that ARSA represents every day – are part of a complex global network of services that are vital to our national and global economy. We can tell those stories in many different ways, and this report and our documentary make key points in the overall discussion: You can't fly without us.”

<http://avmro.arsa.org/about/>

<http://arsa.org/news-media/economic-data/>

Argus Audit Report Finds Internal Evaluations Lacking

Internal evaluation programs (IEP) and risk assessments were the **two weakest points** in business aviation operators' **safety management systems (SMS)** last year, according to an annual review of audits performed by Argus Pros, the Argus International subsidiary that specializes in safety audits. The firm's 2014 SMS audit report, released this week, details the top areas that needed improvement. Based on 84 audits, the report reveals that Argus made IEP recommendations in 81 percent of the audits and sought improved risk assessments in 79 percent of them. “As an industry, business aviation does not do well with internal evaluation programs,” Steve Witowski, vice president of business aviation safety systems, told attendees at the Air Charter Safety Foundation's Safety Symposium last week. Witowski, discussing the 2014 report, underscored the importance of IEPs, saying they uncover “latent deficiencies.” But Argus' audits have made more recommendations in this area since 2008 than any other area. Risk assessments followed closely in 2014, with three times the number of recommendations made last year than on average in the past seven years.



Other problem areas were SMS training, noted as a deficiency in 68 percent of the audits; general operating manual, 52 percent; fatigue risk management system, 51 percent; and hazard reporting, 49 percent.

TED: Ideas Worth Spreading

Guy Winch: Why we all need to practice emotional first aid

We'll go to the doctor when we feel flu-ish or a nagging pain. So why don't we see a health professional when we feel emotional pain: guilt, loss, loneliness? Too many of us deal with common psychological-health issues on our own, says Guy Winch. But we don't have to. He makes a compelling case to practice emotional hygiene — [taking care of our emotions, our minds](#), with the same diligence we take care of our bodies.



http://www.ted.com/talks/guy_winch_the_case_for_emotional_hygiene