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In the last three weeks, six military aviation crashes have killed 16 pilots or crew a tragic development that has cast a spotlight on a growing crisis: Accident rates have soared over the last five years for most of the militarys manned warplanes. Through a six-month investigation, the Military Times found that accidents involving all of the militarys manned fighter, bomber, helicopter and cargo warplanes rose nearly 40 percent from fiscal years 2013 to 2017. Its doubled for some aircraft, like the Navy and Marine Corps F/A-18 Hornets and Super Hornets. At least 133 service members were killed in those fiscal years 2013 to 2017. Its doubled for some aircraft, like the Navy and Marine Corps F/A-18 Hornets and Super Hornets. tied, in part, to the massive congressional budget cuts of 2013. Since then, its been intensified by non-stop deployments of warplanes and their crews, an exodus of maintenance personnel and deep cuts to pilots flight-training hours. We are reaping the benefits or the tragedies that we got into back in sequestration, said retired Air Force Gen. Herbert Hawk Carlisle, referring to the 2013 cuts. The sharp increase in mishap rates is actually a lagging indicator. By the time youre having accidents, and the accident rates are increasing, then youve already gone down a path, said Carlisle, who led Air Combat Command until 2017. If we stay on the current track ... there is the potential to lose lives. The rise in aviation mishaps has not surprised former Defense Secretary Chuck Hagel, who led the Pentagon in 2013 when the cuts were enforced. We stopped training, for months, Hagel said. Of course, all of that affected readiness. Its had an impact on every part of our defense enterprise, he said. And that means, surely, accidents. Military Times has compiled and published online a database of individual reports of all Class A through Class C mishaps that have occurred between fiscal years 2013 and 2017. Of those 5,500 accidents, almost 4,000 were generated by the militarys fleet of manned warplanes all of its bombers, fighter aircraft, cargo aircraft, refuelers, helicopters and tiltrotors. In 2013, those aircraft reported 656 accidents per year. By 2017, the rate had skyrocketed to 909 per year, an increase of 39 percent. The accident data was obtained through multiple Freedom of Information requests to the Naval Safety Center, the Air Force Safety Center and the Army Combat Readiness Center. Collectively, the records offer unprecedented insight into the rise of aviation mishaps during the past five years. It shows that the problems in the Navy and Marine Corps appear far more severe than those in the Air Force. And the accident rates for individual aircraft platforms vary significantly. While hundreds of mishap reports involve life-threatening and fatal accidents, the database also reveals a steady rise in relatively minor incidents, such as a maintainer injured by falling airframe components, collisions on flight decks during taxi maneuvers or minor birdstrikes. Across the board, much of the increase was due to a spike in those less serious mishaps, known as Class Cs, which include any incident that costs at least \$50,000 and potentially up to \$500,000 to fix, or leads to injuries serious enough to cause lost work days. However, the rapid rise of minor incidents should not be dismissed, defense analysts said. That spike is your early warning, said Todd Harrison, the director of the Aerospace Security Project at the Center for Strategic and International Studies. Thats your warning that theres a problem and you need to do something before something crew, and destroyed six aircraft. Two Navy aviators were killed March 14 when their F/A-18F Super Hornet crashed during a training flight in Florida. A day later, seven airmen were killed when their F/A-18F Super Hornet crashed during a training flight in Florida. crashed during takeoff in Djibouti; the pilot ejected and survived. Later that day however, a Marine Corps CH-53E Super Stallion helicopter crashed during a training flight in California, killing the four crew members on board. The next day, April 4, there was another loss. An F-16 from the Air Forces Thunderbirds crashed near Nellis Air Force Base, Nevada, killing the pilot. On April 6, two soldiers were killed when their AH-64 Apache attack helicopter crashed during a training flight at Fort Campbell, Kentucky.While the causes of each crash wont be known until command investigations are completed, Congress will get a chance to ask about the crashes next week in hearings on Capitol Hill.On Thursday, Defense Secretary Jim Mattis and Chairman of the Joint Chiefs Gen. Joseph Dunford will testify before the House Armed Services Committee on their 2019 combat aviation request. Since March 14, six military aviation crashes have killed 16 pilots or crew. From left to right: March 14, Navy aviators Lt. Caleb Nathaniel King and Lt. Cmdr. James Brice Johnson were killed when their Super Hornet F/A-18F strike fighter crashed during a training flight in Florida. On March 15, seven airmen on a HH-60 Pave Hawk helicopter were killed during a routine transit flight in Iraq: Air Force Reserve Pararescueman Staff Sqt. Carl Enis, New York Air National Guard Staff Sqt. Carl Enis, New York Air National Guardsmen Capt. Christopher Zanetis and Master Sgt. Christopher Raguso. On April 3, a CH-53E Super Stallion helicopter crashed during a training flight in California killing the four Marines aboard: 1st Lt. Samuel D. Phillips, Lance Cpl. Taylor J. Conrad, Capt. Samuel A. Schultz and Gunnery Sgt. Derik R Holley. On April 4, two crashes occurred. An Air Force Thunderbirds F-16 Fighting Falcon crashed in Nevada during a training flight, killing pilot Maj. Stephen Del Bagno. Separately, a Marine Corps AV-8B Harrier jet crashed during a training flight at Fort Campbell, Kentucky, killing two, Chief Warrant Officer 3 Ryan Connolly and Warrant Officer 3 Ryan Connolly and Warrant Officer James Casadona. (Military Times composite photo)Its not clear how blunt each service will be, as Mattis has previously warned them not to talk publicly highlight readiness problems, we have to remember that our adversaries watch the news, too, Mattis directed through a memo obtained by Military Times that we are broken, or not ready to fight, invites miscalculation. Last week, Joint Staff director Lt. Gen. Kenneth McKenzie, in a weekly press briefing at the Pentagon, rejected the idea that the recent accidents were an indicator of a larger problem. I would reject wave and crisis, McKenzie said. Those are mishaps that occurred. Were going to look at each one in turn. Each one is tragic. We regret each one. Well look at them carefully. Im certainly not prepared to say that its a wave of mishaps or some form of crisis. Many service members, however, hope Congress wont buy that. Hopefully someone in Congress will wake up and realize things are bad and getting worse, said one active duty Air Force maintainer, who has worked on A-10s, F-16s and F-15s. The war machine is like any other machine, and cannot run forever. After 17 years of running this machine at near capacity, the tank is approaching empty. The 2013 climbThat the spike began in 2013 is significant. That was the year sequestration, the automatic budget cuts agreed to by Congress and former President Barack Obama, took effect. We had to cut \$50 billion over 10 months that had not been planned for or budgeted for, Hagel said. At the time, the militarys aviation mishap rates were improving, after getting some relief due to the 2011 drawdown of forces in Iraq. Then sequestration hit. Instead of a well-funded reset, each service was mandated to execute steep budget cuts. To absorb the cuts, each service had to make hard choices. Personnel were much easier to cut than weapons programs; which often have three- or five-year spending obligations, with expensive fines for canceling. The services decided to cut people in order to protect aircraft platforms like the F-35 joint strike fighter dealing a self-inflicted wound that made things worse. Look at the federal budget and tell me that the money isnt there, the Air Force maintainer said. Its how they choose to spend it that needs to be analyzed and micromanaged because military leaders have failed us, in more ways than one.ISISA year after the sequester cuts, the global security landscape changed dramatically. In summer 2014, Islamic State militarized man-made islands in the South China Sea, and Russian forces invaded the Ukrainian territory of Crimea. U.S. air power responded in each case. There was a lot going on at the time, recalled Col. Anthony Bianca, head of Marine Corps aviation plans and programs. And then sequestration hits. Morale was low between 2013 and 2015. Mishaps rose 13 percent from 2013 to 2014, and kept climbing through 2017. Notably, the number of mishaps climbed despite the fact that overall, the military flew those manned warplanes 170,000 fewer hours in 2017 than it did in 2013. In interviews, military officials acknowledged readiness was hurt by the sequester cuts, but they cautioned against tying the rise in mishaps directly to the cuts in funding. Still, they did not have an answer for what caused the spike. I dont want to speak to any correlation or causality of an increase in mishaps, said Capt. David Koss, the Navys top aviation readiness officer. But from a readiness, which does increase undue risk. Across all platforms, manned and unmanned, Class C mishaps rose from 808 in fiscal year 2013 to 1,055 in fiscal year 2017. Thats worrisome, defense analysts said. A Class C has the possibility of quickly becoming a Class A the worst type of mishap if a pilot has not had enough flying time to have it ingrained how to react. A Class A mishap means death of the pilot or crew, damage of \$2 million or more, or loss of the aircraft. Class A mishaps, across all platforms, climbed 17 percent in the same time frame, from 71 accidents per year in 2013 to 83 accidents per year in 2017. Based on a review of accident reports and open records, at least 133 service members deaths were attributed to those Class A accidents. Stats since 2013All four military services have reported a rise in mishaps over the past five years. Marine Corps mishaps jumped 80 percent, driven by a 108 percent increase in incidents or tools damaging aircraft engines. Navy mishaps jumped 82 percent, driven by a 108 percent, driven b mishaps rose 16 percent, driven by a rise in Class C incidents such as physical injuries in C-130H and C-17A cargo aircraft, gun-related mishaps in the F-16. Army mishaps overall rose 6 percent but declined for its most-used manned rotary aircraft. By percentage, the mishaps hit the Navy and Marine Corps the hardest because their air fleets are about half the size of the Air Force and Armys, so each individual incident made a bigger statistical impact. However, the spikes in Class Cs, then your chances of having more Class Bs or Class As go up ... Im not sure I agree with that math, but if its preventable, then we need to prevent it. Certain airframes were hit harder than others. For all variants of the H-60 the Armys Black Hawk, the Air Forces Pave Hawk and the Navys Seahawk the services flew 39,400 fewer hours in 2017 than they had in 2013. Mishaps rose from 80 to 90 in that same time frame. The Air Forces F-16s flew 190,000 hours in fiscal 2013, reporting 54 mishaps. The hours held steady F-16s recorded 189,000 flight hours in 2017 than they did in 2013. Mishaps rose from 80 to 99 in that same time frame.Navy and Marine Corps F/A-18 Hornets flew 39,000 hours less in 2017 than they did in 2013. Hornet mishaps rose from 19 to 31 per year in that same time frame.That mishaps spiked as flight hours fell isnt surprising, analysts said. The less frequently a pilot flies or a maintainer works on an aircraft, the less current their skills are. That adds risk, said Dan Grazier, a former Marine Corps captain who is now a military fellow with the Project on Government Oversight in Washington. The lack of flight hours that is the big thing I am hearing from my friends still in the service, Grazier said. What if they run into one of those situations where there is a minor issue with the aircraft, or where they run into an emergency situation. That is where experience comes into play. The sequester impactIn the months before sequestration took effect, military leadership gave lawmakers plenty of warning on the fallout. Theres not going to be any operations and training money left for the [non-deployed] force, warned Gen. Martin Dempsey, the former chairman of the Joint Chiefs of Staff, in January 2013. That March, DoD lost about \$37 billion from its base budget and received about \$30 billion less in overseas contingency funding. The services responded by reducing training and exercises, then cutting the number of experienced maintainers and pilots. However, military officials made those personnel cuts without tracking what qualifications and skill sets were walking out the door. Anyone with 15 years in service was eligible to retire with benefits, which meant the military lost upper mid-grade, highly trained personnel. The services cut more junior service members, too.We were cutting billets and those positions that are very important as you build into the future, Hagel said. The consistency of that quality of people, the consistency of the training and preparation, it matters, and it will show up later. In the Air Force, which shed almost 1,400 maintainers to address budget shortfalls, the increased workload generated by older, more maintenanceheavy warplanes was carried out by a smaller and less experienced workforce. In my career field, experienced maintainers are a thing of the past, the Air Force maintainers are a thing of the past, the Air Force maintainers are a thing of the past, the Air Force maintainer said. fleet. It has found that mid-grade enlisted maintainers now have an average 1.5 years less experience than their predecessors. It also found a continued degrade in the number of supervisors, meaning chief petty officers, senior chief petty officers, senior chief petty officers, as the years have gone by, said Navy Capt. John Fischer, who heads naval aviation safety for Commander Naval Air Forces.We compared that to the VFA [strike fighter] communitys mishaps over the same time period, and we were able to directly correlate an increase in mishap rates as the level of years of service in supervisors went down. Not causal, but definitely a correlation, Fischer said.The strongest correlation was found between lack of experience and the Class C mishaps, Fischer said. Maintainer trackingWhen the Marine Corps executed its cuts in 2013, Bianca said, leadership just looked at the occupational specialty codes to maintain this many corporals, sergeants, staff sergeants and gunnys, and tried to balance the manpower pyramid, which by law we are required to do. The Corps didnt take into account whether that maintainer had obtained more senior qualifications, such as a collateral duty inspector, someone with the skills and experience to examine others work and ensure safety standards. Now we record that, Bianca said, adding that a qualification like that can qualify a Marine for incentives. We lost a lot of that middle management, that salty, very experienced sergeant who can shoot the bull with you and knows exactly what is supposed to be happening, what you are supposed to be happening, what you are supposed to be happening, what you are supposed to be happening. The NCO that keeps things going the right way, Bianca said. The maintainer cuts are noticeable on the flight line, Air Force Chief of Staff Gen. Dave Goldfein told reporters last fall.When I started flying airplanes as a young F-16 pilot, I would meet my crew chief at the plane, he said. Wed walk around the airplane. Id taxi out. Id meet a crew that was in the runway, and theyd pull the pins and arm the weapons and give me a last-chance check. Id take off. At his destination, a new crew would be waiting to perform a post-flight inspection and any needed maintenance, Goldfein said. Today, what often happens is you taxi slow because the same single crew chief that you met has to get in the van and drive to the end of the runway to pull the pins and arm the weapons. Then you sit on the runway before you take off and you wait, because that crew chief has to go jump on a C-17 with his tools to fly ahead to meet you at the other end. Rise in riskBy 2017, the U.S. had expanded its air campaign in Afghanistan, conducted tens of thousands of airstrikes in Iraq and Syria, increased strikes against the Islamic State and other terror groups in Africa, increased its patrols and air power in response to North Korean missile tests and Chinese militarization, and beefed up security theater packages in Europe in support of Operation Atlantic Resolve. To meet the increased demand with less money and fewer people the services pushed readiness to the front lines. Pilots and maintainers stateside flew less, maintained less and lost proficiency. For lack of spare parts, maintenance backlogs and other issues, more and more warplanes couldnt fly. Fewer personnel also meant others deployed more, adding pressure on military families. For all of these reasons, many service members opted to leave the service. What happens then if the units arent adequately resourced? Theyre flying less, right? Because they dont have all the money and parts they need to keep the airplanes flying, and therefore, obviously, theyre maintaining less, said Koss. So if theyre flying less and therefore, obviously, theyre maintaining less, it puts more pressure on readiness. Class A mishap occurs, it is almost invariably resourced? the result of a chain of events, culminating with the pilots reaction to that chain. Its part of the reason why the services are paying close attention to the Class C mishaps from a maintainer standpoint. In January 2015, a fatal UH-1Y crash took the lives of Marine Corps pilot Maj. Elizabeth Kealey and co-pilot Capt. Adam Satterfield. Crash investigators found an improper installation of the filter, filter retaining ring and cover allowed oil to spill out during flight. The pilots incorrect assessment of the seriousness of the warning that oil pressure had dropped led to the fatal incident. The filter was a known issue. addressed. But the filters retaining ring had been installed upside-down, which prevented a proper seal of the cover. It is reasonable to surmise that if the aircraft waiver was never approved and the filter assembly had been previously replaced with the correct sealant, this mishap would have never occurred, the investigating board found. Neither pilot had flown 17.8 hours, the Marine Corps monthly goal, in the 30 days prior to the crash; Kealey had flown 11.2 hours; Satterfield, 10.7, but the report did not find that to be a contributing factor in the crash; Kealey had flown 11.2 hours; Satterfield, 10.7, but the report did not find that to be a contributing factor in the crash. Aeronautical judgement does get better with increased flight time, but [Maj.] Kealey had a sufficient amount of experience to offset the small deficit in flight time over the past 30 days, the investigation found. The investigation did recommend that the squadron take steps to ensure the proper supervision of flightline maintainers. Aircraft 205, a Navy F/A-18E Super Hornet was another mishap that could have been kept to a Class C but ended with the destruction of the aircraft. On that day, VFA 137, a strike fighter squadron attached to the aircraft carrier Carl Vinson, had 10 jets launching for an exercise near the Philippines. But in final flight checks, one of the two-ships couldn't depart one aircraft had just come back online after a fuel cell replacement. However, the check flight to return to operations had revealed other issues. The communications link that provided Aircraft 205 to the ship only worked after the Super Hornet was already overhead. The dump switch, which allows a pilot to dump fuel in an emergency, would not electronically stay in the dump position, according to the two-ship that day was a Navy captain with more than 4,100 flight hours, 3,800 of those in the F/A-18. The other aircraft pilot was a Navy lieutenant with 320 hours in the jet. Because 205 passed the check flight, all involved thought [the captains] experience was better suited for Aircraft 205, since it was common for long-time down jets to have minor issues. The junior officer was assigned to fly the more reliable jet. As VFA-137s Super Hornets flew back to the Vinson after the exercise, multiple systems on 205 failed. The communications link failed, leaving the pilot with no situational awareness of other aircraft as the jets approached the Vinson to land. Then, indicator lights began to flash, signaling he was losing hydraulic fuel. He lost rudder control and had to idle the right engine. Troubleshooting with the Vinson to land. ensued, but investigators found the tower representative in charge of bringing 205 in another Navy lieutenant with 237 flying hours in the Super Hornet was not experienced enough to handle the emergency situation. Over the next 18 minutes, the pilot became overwhelmed with flying the jet, the investigation found. Despite over 4,000 hours, he never had a situation where the jet was fighting him so much. He ultimately ejected, surviving with injuries. Aircraft 205, worth \$57 million, crashed into the Celebes Sea and was a total loss. Light at the end of the tunnel? On Feb. 9, Congress passed a two-year budget deal. It provides \$700 billion to DoD for fiscal 2018 now six months into the spending year and \$716 billion for fiscal 2019. President Trump signed the spending pact into law the same day. Service officials should take mishaps into consideration as they determine how to spend that money, said John Pendleton, director of readiness, at its core, is the sum of equipping, manning and training, Pendleton said. If you have an increase in mishaps, you likely have an issue in either training, equipping or manning, or possibly all three. But officials also must determine whether the increase in mishaps is really tied to money at all, Harrison said. What worries me is people think they just need to throw money at the problem, he said. What they first need to do is really research what are the factors that are affecting these mishap rates. It could be issues with personnel, it could be issues with leadership. What this does tell you for sure is the readiness of the force to be able to operate safely is going down and this report. Tara Copp is a Pentagon correspondent for the Associated Press. She was previously Pentagon bureau chief for Sightline Media Group. Load MoreU.S. Navy aviation mishaps involving the F/A-18 E/F Super Hornet accidents rose from 45 to 94 per years. Those numbers were predominantly driven by Class C mishaps, which occur when aircraft damage costs between \$50,000 and \$500,000 or there are lost work days due to injury. And its not just Super Hornets. Across the Navys entire aviation fleet, mishaps jumped 82 percent mostly Class Cs during the past five years, the biggest spike in accidents among all four services, according to mishap data provided by the Defense Department. The Navy is trying to understand why. As much as we dive into the data, its hard to pick the smoking gun, right? said Capt. Dave Koss, force readiness officer for naval aviation. So [Class] A and B mishaps remain relatively at statistical norms, but Class Cs have increased. The mishap data was obtained through multiple Freedom of Information requests to the Naval Safety Center. The mishap narratives, one-liners that describe the incidents, do not reveal a common thread in the spike of Class Cs. Several Super Hornets were struck by lightning during carrier operations. There were engine fires, towing and flight deck collisions during taxi maneuvers, panels blown off aircraft by weather or the exhaust of other aircraft during shipboard operations, maintainer injuries and ground maintenance-generated damage, such as objects being closed within the Super Hornets canopy. The Navy also said that as its aircraft have become more expensive, it has meant that more relatively minor incidents have met the Class C threshold. And compared to the Army and Air Force, the Navys smaller number of aircraft means that it does not take many additional incidents to generate a larger percentage increase in mishaps. Common causesLike the other services, however, the Navys mishap spike began after 2013, the year automatic budget cuts known as sequestration took effect. To meet the budget caps, the Navy cut depot work and purchases of spare parts, which meant fewer available aircraft. It also let go of experienced mid-grade maintainers and their supervisors; losses that left fewer chief and senior chief petty officers on the flight line, even as the depth of experience of newer E-4s and E-5s dropped. With the events of sequestration and other pressures, weve seen a reduction in probably both of those [experienced maintainers and supervisors,] said Capt. John Fischer, head of naval aviation safety. For the next five years Congress was unable to pass a budget on time. Instead it passed 17 continuing resolutions, short-term budget patches at the previous years funding levels. Each CR had trickle-down effects, Fischer said. Change is the mother of all risk. When you do not have predictability in your training, your trainis, your training, your training, your training, your Super Hornet assigned to the "Stingers" of Strike Fighter Attack Squadron (VFA) 113 launches from the aircraft carrier USS Theodore Roosevelt (CVN 71). Theodore Roosevelt (CVN 71). Theodore Roosevelt and its carrier use and preserve the freedom of navigation and the free flow of commerce in the region. (MC3 Alex Corona/Navy)Global threats rise Then the pace of operations increased. In 2014, the Islamic State conquered a wide swath of Iraq and Syria. China built militarized, man-made islands in the South China Sea, and Russian forces invaded the Ukrainian territory of Crimea. U.S. air power responded in each case. and for the Super Hornets that meant more flying hours on fewer ready aircraft. Navy strike fighters had back-to-back deployments in 2015 and 2016 as the carrier air wings aboard the Roosevelt and Truman set records for the number of munitions dropped and sorties flown in airstrikes against ISIS. By 2017 Super Hornets had recorded 18,000 more flight hours than they did in 2013, according to Navy data. We had no idea we would be used to this extent and magnitude, Cmdr. Jim McDonald, Trumans weapons officer, said in 2016. Here's a look at the aviation mishaps for the F/A-18 Hornet and Super Hornet since 2011. That pace breaks airplanes, said a Super Hornet pilot who spoke on the condition of not being identified said. Flying each aircraft multiple times a day, on and off an aircraft carrier (cats and traps are hard on airplanes), in the 120 degree humid Persian Gulf, tends to break things more often than just flying short flights from Lemoore or Oceana, the pilot said. Making do To meet the pace, the Navy took parts from non-deployed aircraft to make deploying units whole, which risked breaking both aircraft that are in a different stage of that [deployment] cycle, and we send those parts to the air wings and squadrons that are getting ready to deploy, Fischer said.Or the Navy relocated entire aircraft, which further limited the time non-deployed pilots and maintainers had to train. Weve had to train. Weve had to train to say thats created a definite correlation to safety, what we can say is that it does bring in undue risk. The Navy commissioned a study last year to determine the cause of the rise in mishaps, with an eye toward the loss of experience that occurred after it cut mid-grade assets to give to forward-deployed assets. maintainers in 2013.So far, researchers have not found a correlation between the loss of maintainer experience and Class A and B mishaps. However, when the Navy looked at the loss of experienced maintainers and Class C mishaps. down. Not causal, but definitely a correlation, Fischer said. The way aheadAs it studies its younger workforce, the Navy is also taking steps to address its aged warplane fleet. It is planning to scrap scores of its older Hornets and add new Super Horn squadrons still flying the older A-D models to transition to the Super Hornet. And finally, six months into this fiscal year, the Pentagon has a two-year budget deal that gives the services some predictability. We have the best budget deal that gives the services some predictability. We have the best budget deal that gives the services some predictability. reporters. Some of that money will go toward healing readiness woes, but it wont happen in a flash, he said. Itll take years, Mattis said. When you say, I want an F-18 Super Hornet, they start building it. It wont come to us for many, many months. But thats the reality when youre starting to bend metal and do more than click a mouse. Tara Copp is a Pentagon correspondent for the Associated Press. She was previously Pentagon bureau chief for Sightline Media Group. Load MoreLast spring Military Times reported that the Navy, Marine Corps, Army and Air Forces aircraft were in deep trouble. Manned aviation accidents had spiked almost 40 percent over the past five years, killing 133 service members since 2013. More catastrophic crashes followed and Congress got laser-focused on the problem. After multiple hearings, lawmakers injected \$39.4 billion into this years budget to begin to overcome the crisis in military aviation by getting more aircraft in the air. Capitol Hill also passed legislation creating a National Commission on Military Aviation Safety.No one expected a quick fix. The 2013 budget cuts known as sequestration had contributed to a hollowing of the maintainer force, an exodus of skilled pilots and had left aircraft without spare parts, rendering them unable to fly. At the same time, intensified air operations against the Islamic State and back-to-back years when Congress was unable to pass a budget on time compounded the problem. The accidents climbed. So now, a year later, and again through multiple Freedom of Information accident that has occurred during the past year to answer the question: Are things getting better?For too many military families, the answer was no. Military aviation accident deaths hit a six-year high in fiscal year 2018, killing another 38 pilots or crew.Of those most recent deaths, 24 were killed on training flights. Two were crew killed by rotor blades; another died when an HH-60H Navy Pave Hawk fuel tank dropped and struck him Eleven died in non-hostile aviation accidents that occurred while they were deployed. For comparison, in that same time frame, 25 service members died in attacks in Iraq, Syria and Afghanistan. Those 38 aviation fatalities in 2018 brought the total number of service members killed since 2013 in aviation accidents to 171. But there was good news, too The total number of military aviation accidents fell last year for the first time since the 2013 budget cuts. Total accidents involving the nations manned warplanes fighters, tankers, helicopters and bombers decreased 12 percent last year, dropping from 903 mishaps in fiscal year 2017 to 794 in fiscal year 2018, according to data updated through fiscal year 2018 and obtained by Freedom of Information Act requests to the Army Combat Readiness Center, the Air Force Safety Center and the Naval Safety Center and the Naval Safety Center. Across all platforms, manned and unmanned, the number of accidents fell 10 percent, from 1,239 in fiscal year 2017 to 1,125 in fiscal year 2018. Military Times has re-published that data in a searchable database which now contains the almost 8,700 manned and unmanned mishaps from fiscal year 2011 through fiscal year 2018. The database can be searched by year, type of aircraft, service and location. The drop in the number of accidents was welcomed, with caution. It seems to me we have turned the corner, said House Armed Services Committee ranking member Rep. Mac Thornberry, R-Texas.But Thornberry worried that the improved mishap rates would convince lawmakers that military aviation has fully recovered and no longer needs the increased spending and attention.All the service chiefs said it takes time to recover from a readiness hole like this,' Thornberry said in an interview with Military Times. Its just that we in Congress seem to be impatient, and think OK, Ill fix that, Ill put some money on it and move on to another problem. We cannot afford to do that. If we move to another problem, well make a 180 [degree turn] and go back downhill, fast.But others questioned whether accident rates, which will never be perfect, should justify another large increase in defense spending. In light of a \$164 billion overseas contingency operations budget request that has little transparency and the administrations decision to tap into billions of dollars in military construction funds to build a border wall, priorities may be shifting. Many are asking: is there really a crisis? We got a \$750 billion budget request from the president, House Armed Services Committee chairman Rep. Adam Smith, D-Wash., said at a budget hearing last week. We could throw money at [DoD] all day long and youre going to come back at us and say theres still an unacceptable level of risk."That message comes as House Democrats prepare a key vote this week on lifting spending caps for both defense and non-defense programs in next years budget. The idea that the services are no longer in an aviation crisis is dangerous, one current Air Force pilot told Military Times on the condition he not be named. The pilot said he has seen Air Force pilot told Military Times on the condition he not be named. The pilot said he has seen Air Force pilot told Military Times on the condition he not be named. The pilot said he has seen Air Force pilot told Military Times on the condition he not be named. during this last year addressing safety issues. Hes seen specific improvement, but unfortunately senior leadership across many commands have stopped talking about the crisis or have told us there isnt a crisis, he said. But there still a lot of vulnerability. New pilots are too inexperienced and are getting qualified without the same level of skills or requirements in order to build up the ranks. That fuels skepticism that things will continue to improve. The Air Force is happy to attempt to grow themselves out of the situation, which will only further exacerbate our situation by flooding squadrons with young pilots, the pilot said. Heres an update by service: Marine Corps This year the Marines registered their first annual decrease in aviation accidents since 2013. The Marines reported 101 total accidents in 2017, this year theyve got the numbers down, reporting 85. They arent out of trouble yet though. Total accidents are still up 50 percent from 2013, a number they hope to bring down through continued attention to ground operations and maintainer retention. The Marines are also targeting their Class C mishaps for improvement. They realized a lot of those were occurring due to flight line sloppiness. In response the Marines had every wing implement stricter towing policies. reduced visibility landings and shipboard landings, said Col. Byron Sullivan, director of the Marine Corps safety division. To begin to heal from the 2013 cuts to high-skilled personnel, the Marine Corps also began investing heavily in their maintainers with new personal protective equipment, new workstations and a \$20,000 bonus for qualified maintainers who signed up for another four years of service. They was the only service to get worse, not better over last year. Total accidents climbed from 226 in 2017 to 232 this year, and the Navys accident rates are still 83 percent higher than they were in 2013. The Navys F/A-18E Super Hornet was again a primary contributor to the increase. Class B mishaps involving the Super Hornet was again a primary contributor to the increase. Super Hornets similarly spiked, from 36 in 2017 to 45 in 2018. When the Navy first saw its end of fiscal year totals last October, they were blunt. "The holes a little deeper than we thought, Vice Adm. DeWolfe Bullet Miller III, the commander of Naval Air Forces, said at a Washington think tank event shortly after the final numbers were out. "We didnt get here overnight and were not going to get out of it overnight. In response to the spiked accident rates, the Navy undertook multiple reviews. Based on that feedback, the Navy revised flight regulations to better protect against aircrew fatigue. It began deep dives with the Center for Naval Analyses on identifying the impact of decreased maintainer experience. Going forward, all Naval aviation will conduct safety stand-downs once a quarter, said Naval Air Forces spokesman Cmdr. Ron Flanders. What the Navy needs is time for the many safety initiatives it has undertaken to take effect, and its already seeing some improvement in its fiscal year 2019 rates to date, Flanders said. Air ForceWhile Air Force numbers overall improved, the number of Class A mishaps the highest level, meaning destruction of the aircraft, death of a crew member or damage totaling more than \$2 million jumped. There were 17 Class A mishaps in 2017; 27 Class As in 2018. For many of those cases, the incident rose to the level of a Class A because of the cost of the aircraft. For example, when the landing gear on an F-35 collapsed at Eglin Air Force Base last August, it caused \$2.3 million in damage. There were nine such Class A mishaps involving either their advanced F-22 or F-35A fighter aircraft, none of which were fatal. But they still meant a downed warplane as it went through repairs, which means fewer aircraft available to fly and train on.That was one of the things that got our attention, Maj. Gen. John Rauch, chief of safety for the Air Force, said in an interview.But there was a high-profile increase in fatal accidents, too. In May a string of Air Force crashes killed Air Force crashes killed Air Force, said in an interview.But there was a high-profile increase in fatal accidents, too. In May a string of Air Force crashes killed Air For airmen were killed during a transit flight on an HH-60 Pave Hawk in Iraq. Then, in an accident caught on camera, a Puerto Rico Air National Guard WC-130 crashed violently in Georgia, killing all nine crew aboard. The Air Force ordered a service-wide operational safety review. A series of blunt but private conversations among units about individual safety cultures followed, Rauch said. They were discussion and looked for trends. What they heard: high operations tempo had taken a toll. Pilots did not have enough time to focus on flying basics. There was pressure to always execute the mission, despite risk. There werent enough available aircraft, and crews had become complacent during routine tasks. The Air Force took some initial actions, such as cutting the amount of non-flying tasks assigned to air crews. Its also working with the other services and the Defense Department on potentially adjusting the cost criteria for what counts as a Class A, to better reflect the number of advanced aircraft they now operate. Not that we discount those mishaps, at all, Rauch said. But they end up in a different category than they would be otherwise. ArmyCompared to the other services, the Armys mishap rates have held relatively steady since 2013, where draw downs in Iraq in 2011 and the phased reduction in forces in Afghanistan provided the Army some relief from operational strain. For 2018, the Army was the only service to bring its total number of mishaps including all manned aviation mishap rates, the numbers do not look as good. Manned aviation accidents jumped from 71 incidents in 2017 to 85 in 2018, largely because of an increase in Class C mishaps involving UH-60 Black Hawks. The Army has already targeted those Black Hawk incidents through additional training and animated vignettes that recreated to teach lessons learned from each one. The incidents are called near misses, because they could have been much worse, said Army Col. Chris Waters, deputy commander of the Army Simprovement was primarily driven by a sharp drop in accidents with the RQ-7 Shadow UAV. Over the last several years, Shadow mishaps have steadily contributed to a rise of dozens of lower-level accidents for the Army RQ-7s, because of their dollar value, dont ever reach the Class A threshold, Waters said. But they were registering plenty of Class Cs. The Army looked for trends in the Shadow mishaps and saw that propulsion system errors were a frequent contributor to the mishaps. That system is now getting a block upgrade. They also decided that UAV operators would now be trained specifically to one platform. Military Times Deputy Editor Leo Shane and Air Force Times reporter Steve Losey contributed to this report. Tara Copp is a Pentagor correspondent for the Associated Press. She was previously Pentagon bureau chief for Sightline Media Group. Load MoreFlying can be one of the most exhilarating things that youll ever do. But it can also be incredibly dangerous if things go wrong. How many pilots die every year? According to information published by the US Bureau of Labor Statistics, there are an average of 52.2 deaths per every 100,000 pilots; this is a fatality rate of 0.0522%. Combined with information from the Federal Aviation Administration, an average of 383 pilots die every year in the US.If something goes catastrophically wrong while flying any type of plane, the results can be devastating. Some people are afraid to become a pilot because of the fear of something going wrong and potentially losing their lives. In this article, well take a look at how many pilots die every year, what the main causes of these deaths are, and how you can as a pilot to reduce the chance of death. If youre unsatisfied while reading anything on this site, we will be disappointed in ourselves. Our main goal at SkyTough is to provide the most accurate information on the web so when you can trust what you read. To ensure this, we thoroughly research all topics and everything is vetted before being written and published. With an article like this, we get the statistics from reputable sources and link to relevant information so you can trust what you read. Many people are afraid to fly in an airplane simply because they e afraid that something to think about if youre planning on flying in any capacity, much less if youre planning on becoming yourself. That said, I wouldnt let the fear of dying be enough to prevent you from becoming a pilot in and of itself! Thats because dying as a pilot is actually very rare; but then again dying in anycareer is actually very rare. It just comes down to what the actual numbers are and what level of risk youre comfortable with. So lets take a quick look at the raw data and see just how many pilots really do die every year. As a note, we are of course only interested in pilot deaths that result directly due to something that happened thats related to flying. While significantly more people likely die every year with a pilot be relevant here! With that out of the way, lets dive into the data. You just might be surprised with what the fatality rate truly is.What Is The Pilot Fatality Rate In The US?For the sake of transparency, I will be pulling the following data directly from the United States Bureau of Labor Statistics (BLS). The BLS published an article in 2019 with raw data over a six year period from 2012 through 2017 with information about pilot fatality rate and how it compares to other occupations. Heres what the report from the BLS has to say. Heres the breakdown of the number of fatality rate for pilots over that six year span was 52.2 deaths per 100,000 pilots. That comes out to a fatality rate of just 0.052%. Perhaps an easier way to imagine this number is like this: at this rate, this suggests that 1 out of every 1,923 pilots in the US died due to workplace related incidents. Depending on what you were expecting to see, this rate might either seem higher or low. But how does that actually relate to the total number of pilots that die per year? That requires us to know how many pilots there are. Thankfully, the Federal Aviation Administration (FAA) compiles a survey every year with this information. According to the Civil Airmen Survey for 2020, there are currently 691,691 civilian pilots in the United States. If we include the total number of military pilots, the number rises to 734,911 pilots, and a significant number of student pilots. So the fatality rate of 0.052% is only the rate for commercial pilots, not the total number of pilots in the country. Based on the information from the FAA survey, we know there are 103.879 commercial pilots in the US. With the fatality rate from the BLS in mind, this means that roughly 54 pilots die every year. If we were to extrapolate further and use the same rate for the total number of pilots in the United States, the number of fatalities would seem fairly high. With a total of 734,991 pilots, this fatality rate of private pilots, this is hard to confirm or deny. But this should give you an idea of how many pilots die per year. How Does Pilot Fatality Rate Compare To Other Careers? No matter how you personally feel about the fatality rate associated with being a pilot is. And thats to compare the fatality rate seen here to the rate of other occupations in the country. Using the same information provided by the Bureau of Labor Statistics, this is the average fatality rate per 100,000 full-time workers of alloccupations per year during the same timespan was 3.4 deaths per 100,000 workers. This comes out to a rate of 0.0034%. To make the same comparison that you saw above, this means that 1 out of every 29,412 full-time workers in the United States dies every year due to a workplace related accident or injury. This means that being a pilot is a little more than 15x more dangerous than the national average in terms of fatality rate. Its also worth noting that many plane crashes and deaths are caused by pilot error for some sort. That means that much of the risks associated with being a pilot. In my humble opinion, its well worth any additional risks as being a pilot is simply the best careerin the world. But I might be just a little bit biased! An independent commission is recommending that a new safety czar be installed at the Pentagon after a survey of nearly 200 military aviation deaths over five years found fatigue and training and manning shortfalls were key factors in many mishaps. The National Commission on Military Aviation Safety this week released a report on aviation accidents, some of them deadly. "Old jets and often-overlooked shortfalls in training and experience can be tied to a surge in accidents, some of them deadly." make us work our people harder. We have to work them to death. That's a safety issue. We burn them out," one Navy official said, describing the chronic fatigue and burnout associated with supporting aging aircraft year after year. "So much is being required of [instructor pilots] at the unit, and we have a shortage of IPs, and they are getting burned out. That's why our retention rates suck," added an Army pilot, speaking to the reason pilots weigh leaving the service. A Marine Corps aviator was perhaps the most candid: "My kids don't know who I am" due to deployments, exercises, and perpetually long work days. "They don't know when I am going to be home. That stuff leads to the burnout and distraction while flying." These were some of the uncensored comments military aviators and crewmembers offered within the commission's comprehensive report, released Dec. 3. Read Next: The Marine Corps Is Considering Merging All Infantry Jobs Into Just One MOS The congressionally mandated commission -- formed following a spike in deadly crashes in 2018 -- found that military aviation accidents claimed the lives of 198 pilots and aircrew between 2013 and 2018 as a result of multiple contributing factors such as a lack of flight hours and fatigued maintenance crews. The mishaps occurred during more than 6,000 routine training events, and cost the government more than \$9.4 billion in damages, including 157 destroyed aircraft, the report said. The news of the study was first reported by McClatchy. "We had a high [operational] tempo, which had a tremendous impact on the workforce," Richard Healing, vice chairman of the commission, said during a Thursday phone call with reporters about the study findings. As officials compiled the report, military aviation mishaps "claimed another 26 lives, 29 aircraft" at the cost of \$2.25 billion, according to a letter accompanying the study. Investigators traveled to 80 different bases, depots and safety and test centers, and spoke with members of 200 units ranging in seniority from lower enlisted to the command level, who offered their feedback anonymously, added retired Army Gen. Richard Cody, the commission's chairman. "Many of them have stayed with us, and reenlisted, and stayed on after 16 to 17 years of war," Cody said Thursday. The intent of the report was to gain insight into how past accidents can shine a light on current missions, and even help prevent the next accident, he said. "They know what 'right' looks like. But they're frustrated with the tempo, they're frustrated with the unpredictable funding, and they're also frustrated with the tempo, they're frustrated with the tempo, they're frustrated with the unpredictable funding. commission studied a variety of factors in accidents and mishaps, including the underlying causes contributing to unexplained physiological effects, or UPEs, delays in aviation safety over the five-year span included the following: Increased operational tempo Lingering effects of budget shortfalls due to sequestration Insufficient flight hours "Distracted" and overworked maintainers saddled with excessive administrative duties Inadequately prioritized safety requirements Insufficient data collection to analyze increasing risksLow morale took its toll, too, according to Healing. "What we found was that morale was generally degraded," said Healing, also a former member of the National Transportation Safety Board and retired Coast Guard pilot. "Pilots were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not being able to fly enough; the maintainers were demoralized by not capable," he said. Instead of increase proficiency in the cockpit, pilots instead were granted waivers to bypass requirements. "Except for the trainers and evaluators, everyone in my flight company had minimums waived," one Army pilot told the commission. Waivers are an indicator that not enough aircraft are available for flight, often due to maintenance issues or too few instructor pilots, Cody said. "If you're having to issue waivers too much, it ought to be reported and tracked [efficiently]," he said. Maintainers, meanwhile, found themselves either "saturated" by constant work or lacking staff with enough experience to carry out the mission. Skilled maintainers from each service said they found themselves spending more time reteaching basic skill sets to less-experienced crew. "A lot don't know what a ratchet set, they bring a socket." Other maintainers said they were overwhelmed or burned out from picking up slack because of dwindling manpower in their unit. "It is just being tired," said a senior Air Force maintainer in an F-16 Fighting Falcon wing. "Knowing that with task saturation, work performance suffers. We see human factors and an increase in mishaps. They don't have experience and are tired. They are tired and are crying for help. The response is, 'shut up and color.'" "We came away deeply troubled by the chronic fatique we saw among these brave servicemembers," the commission said. What the data said In 2018, before the commission said. What the data said In 2018, before the commission said. including bombers, fighters, cargo, refueling and rotary aircraft, had increased 40% between 2013 and 2018. The newspaper reported that 133 service members had been killed in aircraft mishaps in that timeframe. In 2018 alone, the military saw a six-year high of 39 aviation-related fatalities across all the services, according to data from Military Times and Task & Purpose. Throughout 2017 and 2018, the Air Force and Navy also separately ordered indefinite operational pauses for their trainer aircraft after pilots at several bases experienced UPEs while in flight. The spate of physiological events and trend of aviation accidents prompted lawmakers in the 2019 National Defense Authorization Act to establish the independent commission found that most mishaps were at the Class C level, which includes those causing damages totaling between \$50,000 and \$500,000 and nonfatal personnel injuries still serious enough to result in lost work days. "One of the things that popped up to us was class C's -- they were the biggest bucket," Cody said, adding the Class C investigations often do not receive as much scrutiny as the most severe Class A ones. "We feel that the Class Cs are kind of the canary in the coal mine," he said. In its review of Class A mishaps, which include those totaling \$2 million or more in damage or resulting in permanent disability or loss of life, the commission found that 43% of them were attributable to human error, Cody said. Those errors included failure to follow procedure and improper coordination between pilots or between air and ground crew, he explained. About 38% of the mishaps were due to preconditions to include weather or environmental factors, while the remaining 19% were the result of improper manning, lack of appropriate supervision, the report said. The Army, Air Force and Navy had "moderate fluctuations" in Class A mishap rates between 2013 and 2018, while the Marine Corps had consistently higher rates in that period, the commission found. Meanwhile, Class B mishaps, including those with damages totaling between \$500,000 and and \$2 million, and which could include personnel hospitalizations or permanent disabilities, saw stable rates -- with the exception of the Navy, which saw increases. By comparison, nearly every service saw a steady increase in Class C mishaps, as well as an escalation in costs to repair the damage. Overlapping issues "are uniquely interconnected," and the result of 'domino effects' on the force. While budget uncertainty, the commission found, adversely affects "maintenance, the ability to purchase parts, aircraft availability, and pilot proficiency," it also emphasized that existing resources needed to be maintained properly. "Increasing spare parts inventories does little good if there are not enough experienced maintainers to install them," the report said. "Fixing one issue may require fixing several related issues." The imbalance across the many "different factors that you can point to; there [are] several things that over time accumulate that put the risk higher on particular crew," he said. Recommendations During a closed hearing this week, commission members briefed lawmakers from the House Armed Services subcommittee on readiness on its findings, and 25 steps it recommended for the Defense Department. One of the commission's primary recommendations was for lawmakers to establish a joint safety council that reports directly to the defense secretary. Another key correction, Healing said, would be to standardize and streamline data collection for both UPEs and mishaps so the services could accurately analyze information to discover root causes and respond effectively. Predictable budgets would help ensure proper flight hours as well as aviation support, the report noted. It urged lawmakers to "stop using continuing resolutions to fund national security, military readiness, and aviation safety." The commission said any other tasks added to the workload of aviators and maintainers, aside from their primary function, should be eliminated, and encouraged rewarding and incentivizing "the professional achievements of aviation maintainers with recognition and professional development throughout their careers." "We really focused on four areas where we think Congress, the Department of Defense, and the services can take immediate steps to reduce aviation mishaps," Cody said. "That is, pilots need to fly, maintainers need to maintain, data can save lives, and funding should be consistent." -- Oriana Pawlyk can be reached at oriana.pawlyk@military.com. Follow her on Twitter at @Oriana0214. Related: After Fatal Jet Crash, the Pilots Got Blamed. Then the Air Force Banned the Flight Maneuver Story Continues

How often do navy pilots get deployed. How often do navy pilots fly. How long do navy pilots serve. How many navy pilots die each year. How often do navy pilots died. How often do navy pilots deploy. How often do navy pilots move.