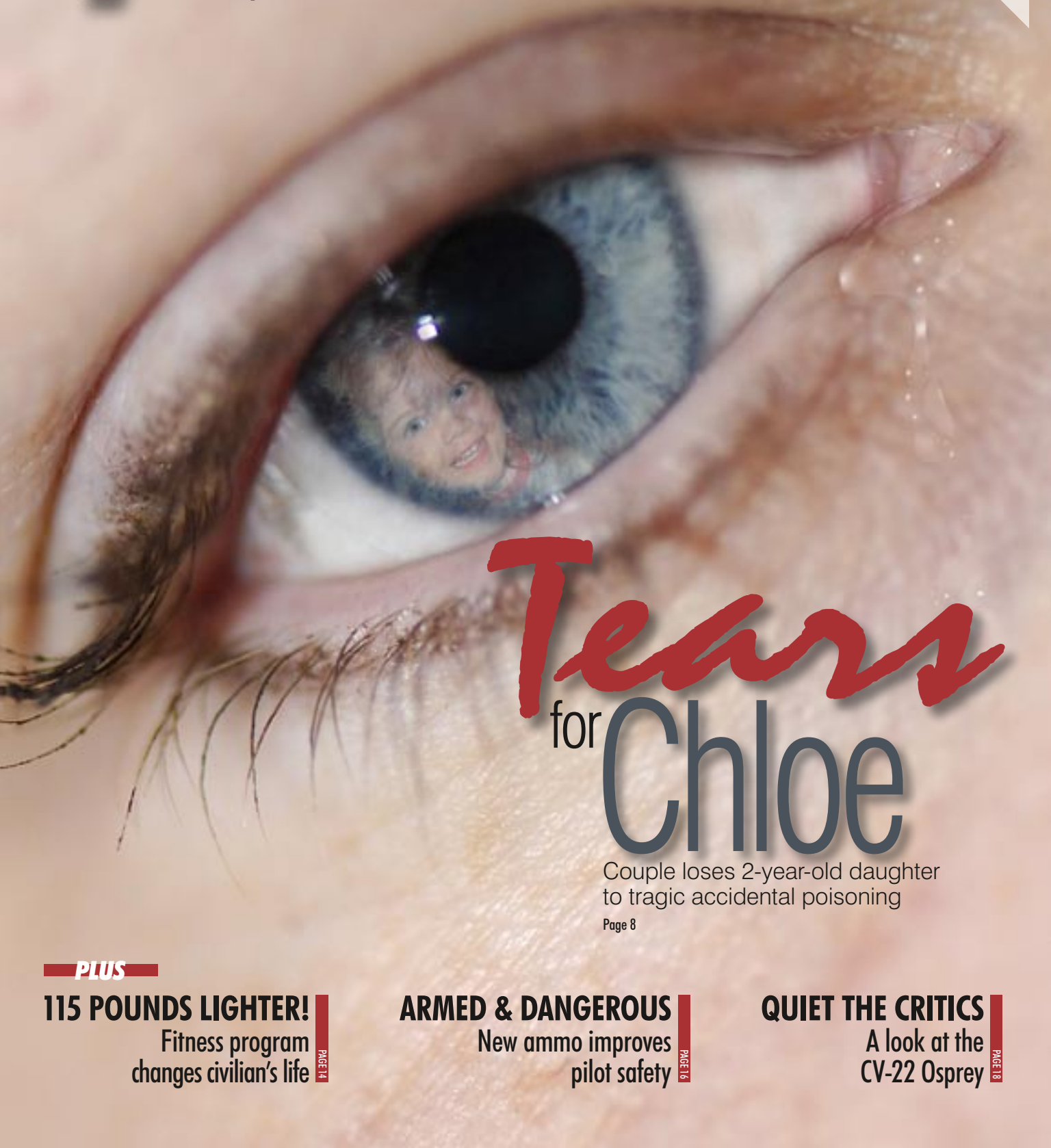


Air Education and Training Command's
TORCH
March/April 2007



GETTING DIRTY
C-17 tests performance on dirt runways
PAGE 22



Tears
for **Chloe**

Couple loses 2-year-old daughter to tragic accidental poisoning

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PLUS

115 POUNDS LIGHTER!

Fitness program changes civilian's life

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ARMED & DANGEROUS

New ammo improves pilot safety

PAGE 16

QUIET THE CRITICS

A look at the CV-22 Osprey

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8 Tears for Chloe

When an Air Force couple's 2-year-old twins managed to climb onto a countertop and pry open a child-resistant cap on a bottle of medication, one survived, the other did not. Still mourning the loss of their daughter, the parents want to ensure her death was not in vain by warning others of the dangers of accidental poisonings.



14 115 POUNDS LIGHTER!

It took her two years, but by using a program designed by the Health and Wellness Center at Brooks-City Base, Texas, this mother of two safely lost more than 100 pounds. Also, get some tips on how you can drop pounds ... the healthy, safe way.

16 Armed & Dangerous

Air Force F-16 Fighting Falcon pilots at the 332nd Air Expeditionary Wing at Balad Air Base, Iraq, are employing a new 20mm cannon round in their M61/A1 Gatling guns for the first time, improving pilot safety while reducing collateral damage.



18 Quiet the Critics

The CV-22 Osprey has taken a lot of hits over the years, as the unique tiltrotor aircraft has been shrouded in controversy for its high price tag and some well-publicized mishaps and deaths. But it has survived its critics and is now receiving rave reviews from where it matters most – the people who fly and maintain it.

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Readers discuss DOD task force crackdown on military drivers, the "Cool School," driving under the influence, pilot error and aircraft crashes, flight fuel planning, the 2007 Torch Calendar and more

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Don't find "old" ways to crash "new" airplanes ... Pilot, crew error cause C-130 mishap ... Several factors lead to KC-135 accident.

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Volume 14, Number 2

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www.torch.aetc.af.mil



FROM THE DIRECTOR

By Col. JOHN W. BLUMENTRITT
AETC Director of Safety

YOU'RE EITHER WITH US OR AGAINST US

"You're either with us or against us in the fight against terror." Who could ever forget these powerful words spoken by our commander-in-chief in November 2001? Indeed, President George W. Bush unabashedly put forward that neutrality has no place in the war against terrorism, and all must "fight this evil and fight until we are rid of it." Consequently, men and women around the globe continue to fiercely champion this noble pursuit.

Why launch this issue of Torch – a safety magazine – with these hard-hitting and uncompromising words seemingly more suited for a strategic studies journal?

To help answer this question, I'll share conclusions from a 2006 study on leadership and its effects on employee safety. In short, researchers found that when good leaders actively promote safety, organizations experience first-rate safety records and positive safety outcomes. In contrast, the opposite of good leaders who promote safety are bad leaders who strongly advocate "anti-safety" policies. Accordingly, a bad leader might direct employees to blatantly disregard safety rules and advocate carelessness.

Of course, very few leaders would actually verbalize this ridiculous position, so in the middle ground nests passive leaders, who don't advocate or criticize safety, but just sort of ignore it and let it happen. In fact, these laissez-faire leaders believe a work environment, if left alone, will be adequately safe by default.

What makes this study so interesting is that it refutes this middle ground idea. Specifically, researchers found that passive leaders, who simply ignore safety, negatively affect safety climate and safety consciousness within their organizations. In fact, this negative effect occurs at the same magnitude, but in the opposite direction, as good leaders, who actively promote safety.

There is simply no intermediary position on safety.

Consequently, there are good safety-centric leaders who actively promote safety and leaders who do not. As such, no in-between mishap prevention positions are feasible, and thus, there's no room for neutrality in the fight for safety. Therefore, all Airmen around the globe must fiercely champion the noble pursuit of safety by actively combating the evils of unsafe behavior and needless risk.

To be sure, and much akin to the war on terror, there is no compromise. ... You're either with us or against us in the fight against ... mishaps.

"No in-between mishap prevention positions are feasible. ... There's no room for neutrality in the fight for safety."

Research for this article comes from: Kelloway, E. K., Mullen, J., & Francis, L. (2006). *Divergent Effects on Transformational and Passive Leadership on Employee Safety. Journal of Occupational Health Psychology, v. 11 (1). 76-86.*

John W. Blumentritt

OVER THE TOP

I understand the military services bringing down the hammer on drunk drivers, but I'm concerned about your article "DOD Task Force Considers Crackdown for Drivers" (January/February 2007 issue of Torch, page 4).

If I understand the article correctly, the Defense Department is considering penalties such as losing the ability to be promoted for irresponsible drivers in general. So if you get some speeding tickets or tickets for aggressive driving, that

data will be shared with your unit and your career might suffer? What is this ... Mother Russia?

I want people to drive safer too, but this just seems over the top.
Gus Wallace
Baltimore



A 'CRACK UP'

I enjoyed "The 13th Student" in the January/February 2007 issue, page 15. The writing was entertaining, and I have to admit, I cracked up more than once. Good lessons learned, fun article — keep up the good work!

Pat Bullock
Via e-mail



By Senior Airman Rachel Walters

SMEAR CAMPAIGN?

In Torch you run a lot of articles every issue on aircraft crashes that involve pilot error. In the November/December 2006 issue under "Clear the Runway," your target is two B-1B Bomber pilots who failed to lower the landing gear during the aircraft's approach and landing, which resulted in the aircraft crashing on the runway ("Pilot Error Causes B-1B Crash," page 24). Are you trying to embarrass or condemn the pilots by running these stories? I thought we weren't a "One Mistake Air Force."

A.L. Wilke
Via e-mail

No, we are not "trying to embarrass or condemn the pilots." On the contrary, we are trying to help all pilots by sharing this information, which is released to the public after the accident investigation board reports are complete. We run them in Torch because part of any strong mishap prevention program is to learn from past mistakes. In the B-1B crash, for example, there are many safety lessons to be emphasized: Beware of task over-saturation, avoid "get-there-itis," check instruments, use checklists, communicate better, etc. All are important lessons learned.

LETTERS TO TORCH

Have a comment or complaint? Letters to Torch may be sent via e-mail to: torch.magazine@randolph.af.mil. Or mail to Torch Editor, HQ AETC/SEM, 244 F Street East, Suite 1, Randolph AFB TX, 78150-4328, or fax to DSN 487-6982 or commercially to (210) 652-6982. For customer service, call DSN 487-5818, or commercially at (210) 652-5818. Please include your name, address and phone number.

SINS OF THE PAST

At Vance Air Force Base, Okla., (about 4 to 5 years ago), there was an incident concerning a Vance T-1 crew that landed at an abandoned airfield after not checking their fuel during a double low-level off station trainer. The instructor published an article in your magazine, but I can find no reference to it.

I would like to find this article because I am beginning to see the same trends as before with the lack of fuel planning during certain missions. It is an interesting article in that we may be repeating the sins of the past. I hope not, but I still want to show why there's a need for accurate fuel planning.

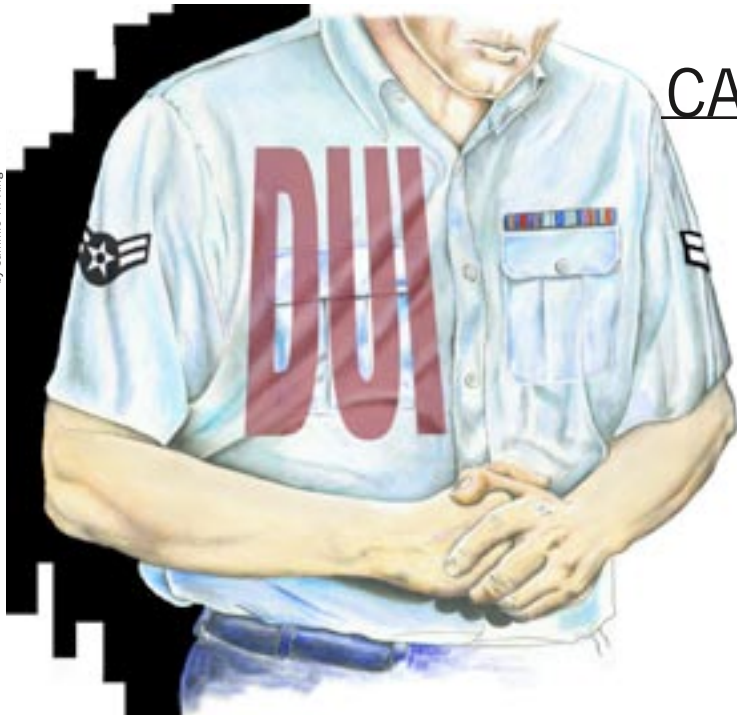
Could you please help me find this article?

Maj. Paul R. Begansky II
Vance Air Force Base, Okla.

The article you refer to was in the "Hangar Flying" section of the September 2002 issue of Torch, page 22. It was titled: "One More Thing Went Wrong, and 'It Got Ugly': T-1 Pilot Has to Make an Emergency Landing at a 'Ghost Field.'" It was written by 1st Lt. Jordan Lee with a T-1 aerial photo by Steve Thurow. Thank you for your interest in Torch.



By Steve Thurow



A CAREER KILLER

I always applaud people who bravely tell their story to the public after getting caught drunk driving in the hope that others won't make the same mistake (reference, "Scarlet Letters ... DUI" in the November/December 2006 issue of Torch, page 16). However, I'm always perplexed at how they get themselves in that predicament in the first place, especially in the military. As the author indicates, getting a DUI is bad enough, but getting a DUI in the military can be a career killer.

In the Air Force, they discuss this subject a lot and even have initiatives such as Airmen Against Drunk Driving and other designated driver programs. All people have to do is take advantage of these prevention programs, which don't cost them a cent and keep them out of trouble. But I guess common sense isn't a key player when your judgment is impaired by alcohol.

*Retired Master Sgt. "Buzz" Dowling
Via e-mail*

2007 TORCH CALENDAR



I just wanted to send a quick note to let you know we have received our calendars, and they look great! My office loves your calendars. We really like the T-38C picture in May!

*Karen Shelley
Wright-Patterson Air Force Base, Ohio*

The calendars really went FASSSSST! We use them every day.

*Marvin Beck
Randolph Air Force Base, Texas*

Your calendars look great as usual. Our office — the Scientist & Engineer Career Program — has been using them (and your great magazine) for years. Many thanks for your excellent products.

*Deene Gott
Randolph Air Force Base, Texas*

Wow! Great calendar! Thanks for making them available to us.

*Airman Cindy Jamison
Via e-mail*

I personally enjoy reviewing the factoids in your calendar for educational awareness.

*Tech. Sgt. Michael A. Kelley
Kirtland Air Force Base, N.M.*

I'm the commanding officer of Company E, 5th Infantry, Fort Montgomery, Greystone Hill Irregulars (Detached), and the Torch Calendar is in my office in a place of honor. Every time I glance at it, it gives me a little lift. Torch Magazine continues to be well designed and well written. In addition, the photography for the magazine and the calendar is exceptional. My congratulations to all of those involved.

*E. Stanley Canevari
Santa Rosa, Calif.*

Nice touch adding the historical photos to your awesome calendar to commemorate the Air Force's 60th birthday.

*Retired Lt. Col. "Max" Ritchie
Via e-mail*

I enjoy the calendar. By the way, Torch Magazine is a great publication with many great articles applicable to both instructors and students.

*2nd Lt. Patrick Faudree
Laughlin Air Force Base, Texas*

I work for Lockheed Martin in security operations. We support the 58th Training Squadron on Kirtland Air Force Base, N.M. Thank you for the calendars. ... Everyone really liked them!

*Sharon Martinez
Kirtland Air Force Base, N.M.*

Your 2007 Torch Calendar rocks! It looks like something you'd buy from Barnes & Noble — very professionally done. Everyone who sees my copy wants to know how to get one. Thank you, and keep up the great work!

*Phil Hammons
Via e-mail*

BUZZED DRIVING IS DRUNK DRIVING

WASHINGTON — Despite recent reductions in fatalities, impaired driving remains one of America's deadliest social problems, according to the National Highway Traffic Safety Administration.

In their latest report on alcohol-related vehicle mishaps, NHTSA officials state that nearly 13,000 drivers or motorcycle operators died in crashes with a blood alcohol content level of .08 or above the illegal limit in all states over a one-year timeframe.

"Most people don't intend to drive home

Do not drink and drive. If you do drink...

Be Smart

0	To avoid alcohol-related incidents...	
1	limit yourself to one drink an hour...	
3	and no more than three drinks max!	

All Force News Agency

drunk," officials said, "but too many find themselves at the end of the night without a sober designated driver."

Unfortunately, many of these drivers convince themselves and friends that they are able to drive with the comment, "I'm OK; I'm just buzzed." That's why the NHTSA emphasizes that "buzzed driving is drunk driving." Administration officials say their goal is to convince drivers that "buzzed" means they are too impaired to drive, so they will have to give up the keys.

AIRMAN SAVES 7-YEAR-OLD FROM CHOKING TO DEATH

ANDERSEN AIR FORCE BASE, Guam (AFNEWS) — An Airman here earned the Air Force Achievement Medal last month for saving the life of a 7-year-old boy choking on a piece of candy.

Airman 1st Class Kyle Thomas, an aerospace ground equipment mechanic with the 36th Maintenance Squadron, credits the life-saving skills he learned in basic training at Lackland Air Force Base, Texas, for saving the boy's life.

The Airman was bowling while on leave in Norman, Okla., after completing eight weeks of basic training and six months of technical training. Suddenly, he heard a man call for help.

A boy was choking on a jawbreaker, and the father didn't know what to do.

"It was a scary moment," Thomas said. "It stunned me, but I just dropped my (bowling) ball and ran."

The boy's face turned blue as he lay on the ground.

"His dad tried to pry the jawbreaker out with his finger," Thomas said. "I told him not to because the candy could get lodged deeper in his throat."

Thomas picked Nick Cardenes up under his arms and began administering the Heimlich maneuver. He said after four compressions the candy fell from the child's mouth.

"At first the boy went limp, but then he began gasping for air," Thomas said. "His mom cried, and his dad became emotional too. Both thanked me."

Thomas said he learned the Heimlich maneuver in basic training.

"Because of the training, I just reacted," the 19-year-old said. "You can't take (life-saving skills) for granted. ... You never know when you'll need (them)."

According to Thomas' wife Nicole, "Basic (training) matured him a lot — it changed him for the better. ... I'm so proud of him."

— Tech. Sgt. Brian Bahret
36th Wing Public Affairs



Praised for saving a boy choking on a jawbreaker, Airman 1st Class Kyle Thomas credits basic training for teaching him the Heimlich maneuver that saved the 7-year-old's life.

AIRMEN ATTEND ARMY GROUND COMBAT SKILLS TRAINING

KEESLER AIR FORCE BASE, Miss. (AETCNS) — Hundreds of Airmen are attending Army ground combat skills training, preparing them for operations Enduring Freedom and Iraqi Freedom deployments. The Airmen require the training because they will be assigned duties outside their normal Air Force specialties. In the near-term, these numbers are expected to increase substantially.

Commonly referred to as “in-lieu-of,” or ILO, taskings, Airmen, Sailors, Soldiers and Marines from a cross-section of all military specialties are performing nontraditional missions to provide temporary augmentation.

The 2nd Air Force staff was tasked by Air Force Chief of Staff Gen. T. Michael Moseley to add to its technical training responsibilities oversight of Airmen throughout their ILO training cycle.

“Our goal is to take care of our people as our Air Force mission requirements continue to evolve,” said Maj. Gen. Michael C. Gould, 2nd AF commander. “We want to ensure Airmen can perform safely and effectively in combat alongside our sister services while maintaining their Air Force identity.”

The aim of ILO training is to prepare Airmen for nontraditional combat environments in support of the combatant commanders’ requirements where Airmen are deployed to assist Army personnel. Second Air Force wants to support all Airmen engaged in this enhanced, realistic training and address their current and future service needs.

Gould emphasized Airmen deploying in support of Army mission requirements must maintain an Air Force chain-of-command.

“Airmen will continue to have readily available Air Force leadership eager to address any concerns,” the general said. “I’m grateful that we have such high-caliber Airmen in our Air Force who can step up to these challenges, and their continuous feedback is essential for leadership to be able to respond to any training or personnel issues that might arise. Second Air Force will ensure all Airmen have an Air Force chain-of-command throughout their time in ILO training.”

ILO training is designed to develop a population of Airmen who are combat-ready and able to fulfill duties outside their normal Air Force specialty. Before deploying, Airmen tasked to augment certain Army missions receive combat skills training at one of 14 Army training locations now designated as Power Projection Platforms. Those include: Camp Shelby, Miss.; Fort Hood and Fort Bliss, Texas; Fort Sill, Okla.; White Sands, N.M.; Fort Riley, Kan.; Fort Lewis, Wash.; Fort McCoy, Wis.; Camp Atterbury, Ind.; Fort Dix, N.J.; Aberdeen, Md.; Fort Monroe, Va.; Fort Bragg, N.C.; and Fort Benning, Ga.

Typical skill sets taught during ILO training include enhanced combat weapons proficiency training, land navigation and Global Positioning Satellite training, expanded self-aid and buddy-care called “combat lifesaver” training, detecting and responding to improvised explosive devices and a host of other relevant tactics. Theater-specific training might vary.



by Tech. Sgt. Caedric M. Ricardo Jr.

While “under fire,” Maj. Cristen Lesperance radios in coordinates of simulated insurgents during the contingency skills training course held Nov. 14 at the Air Mobility Warfare Center in Fort Dix, N.J.

“We want to ensure Airmen can perform safely and effectively in combat alongside our sister services while maintaining their Air Force identity.”

— Maj. Gen. Michael C. Gould,
2nd Air Force commander

“What we are trying to do here is train Airmen to do missions and roles they weren’t traditionally used to, because they’re helping their buddies in another service,” said Army Col. John Hadjis, commander of 3rd Brigade, 87th Division Training Support, at Camp Shelby, Miss.

“We developed this training out of what is commonly called ‘theater immersion,’ which is a philosophy of take the Soldier, take the Sailor, take the Airman, and train him or her to fight in the same conditions and same missions as they would expect to see in-theater,” Hadjis said.

“When you get down here, things are a little hectic, but as time moves on, you’re getting into the training,” said Staff Sgt. Matt Leas, a marketing information manager for the 364th Recruiting Squadron in Sacramento, Calif. “It’s good to work with the Army to find out what we’ll be doing down-range. The instructors really know their stuff.”

Hadjis said the training was designed to improve competencies in essential combat skills. He added

that the training exemplifies the concept of taking care of people, as servicemembers face non-traditional combat environments with “no front lines.”

“I think it’s the best possible example of taking care of folks,” the colonel said. “Because we’re making them as ready as they possibly can be to succeed at their mission, safeguard their people and come home in good shape.”

— Master Sgt. Roger Drinnon, 81st Training Wing Public Affairs

WATCHING TOO MUCH TV CAN BE FATAL?

WASHINGTON, D.C. — You've probably heard more than once in your lifetime that watching too much TV is bad for you. But according to the U.S. Consumer Product Safety Commission, it's turning fatal for some.

CPSC is warning parents and caregivers about the dangers of televisions and heavy furniture tipping over and killing young children. The number of TV tip-over deaths reported to CPSC during the first seven months of 2006 was twice the typical yearly average.

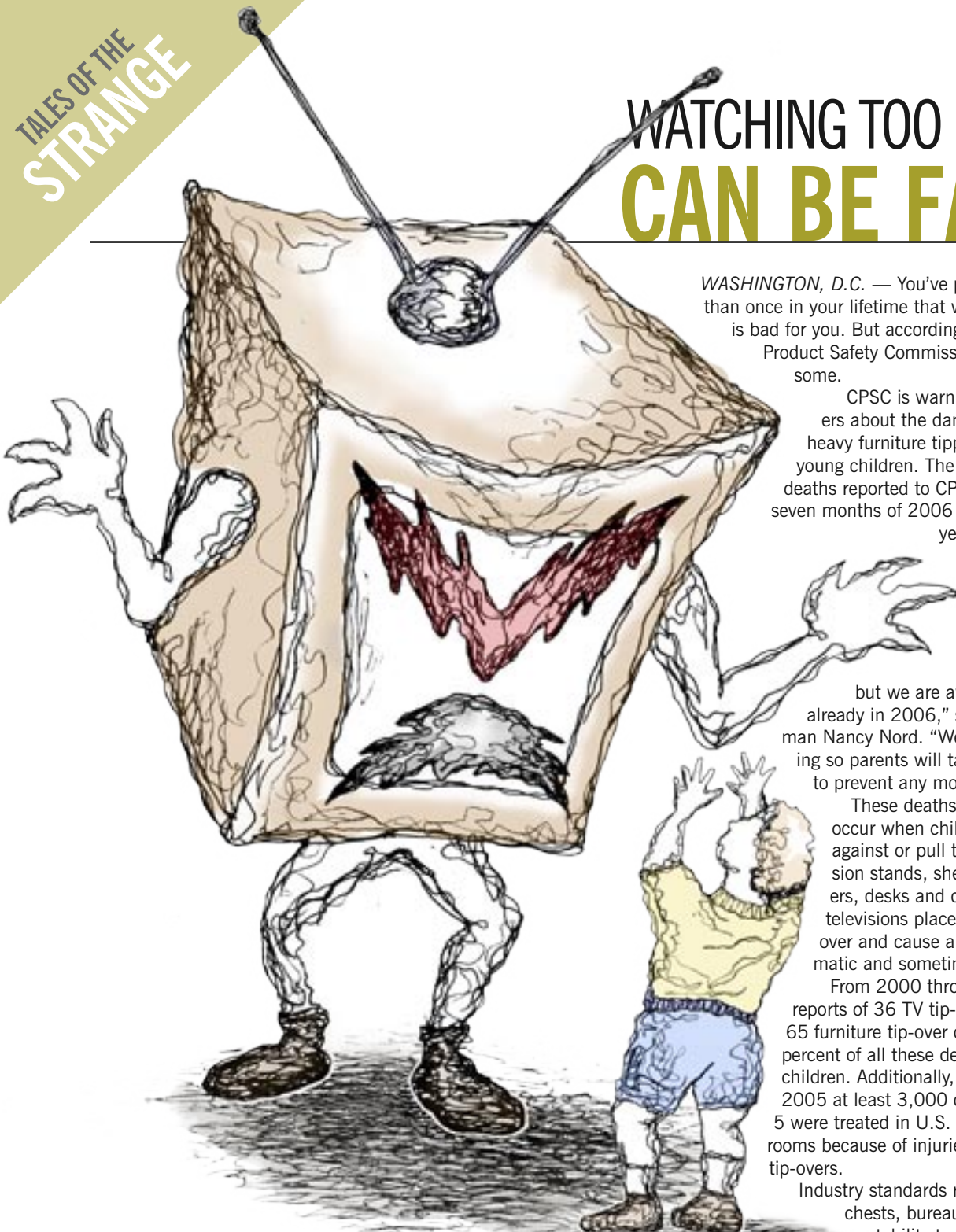
"There are usually five deaths reported to CPSC each year caused by televisions tipping over onto young children,

but we are aware of 10 deaths already in 2006," said CPSC acting chairman Nancy Nord. "We are issuing this warning so parents will take the necessary steps to prevent any more of these tragedies."

These deaths and injuries frequently occur when children climb onto, fall against or pull themselves up on television stands, shelves, bookcases, dressers, desks and chests. In some cases, televisions placed on top of furniture tip over and cause a child to suffer traumatic and sometimes fatal injuries.

From 2000 through 2005, CPSC has reports of 36 TV tip-over-related deaths and 65 furniture tip-over deaths. More than 80 percent of all these deaths involved young children. Additionally, CPSC estimates that in 2005 at least 3,000 children younger than 5 were treated in U.S. hospital emergency rooms because of injuries associated with TV tip-overs.

Industry standards require that TV stands, chests, bureaus and dressers pass a stability test. If a piece of furniture violates these standards, the product can be subject to a safety recall.



by Sammie W. King

PREVENT TIP-OVER HAZARDS

- Verify that furniture is stable on its own. For added security, anchor to the floor or attach to the wall all entertainment units, TV stands, bookcases, shelving and bureaus using appropriate hardware, such as brackets or screws.
- Place televisions on sturdy furniture appropriate for the size of the TV or on a low-rise base.
- Push the TV as far back as possible from the front of its stand.

- Place electrical cords out of a child's reach, and teach children not to play with the cords.
- Remove items that might tempt kids to climb, such as toys and remote controls, from the top of the TV and furniture.
- Don't use the TV as your "babysitter" and leave children unattended.

— U.S. Consumer Product Safety Commission

HEALTH CARE SYSTEM AIMS TO REDUCE MEDICAL ERRORS

WASHINGTON (AFNEWS) — The Defense Department has trained thousands of military health care providers to employ a quality management system that's designed to minimize human errors in hospital operating and delivery rooms, a senior defense official said Jan. 11.

The Team Strategies and Tools to Enhance Performance and Patient Safety, or Team STEPPS, program stresses teamwork and communication among doctors, nurses and other healthcare givers to improve quality, safety and efficiency across military health care, said Dr. David N. Tornberg, deputy assistant secretary of defense for clinical and program policy.

"Providing the optimum, cutting-edge care to our beneficiaries is what this is all about," Tornberg said. "And, I'm proud to say that the Department of Defense and the military health care system are absolute leaders in enhancing a culture of safety in our military treatment facilities."

Use of Team STEPPS creates "an environment where people broadly communicate and have a clear understanding of the goals and objectives of the team," he said.

Establishing a culture of patient-centered care through the use of teamwork and enhanced communication among health care employees is absolutely vital, Tornberg said.



by Senior Airman Cassandra Locke

"Miscommunication clearly is associated with medical errors," he said.

For more information on patient safety, visit the following Web sites: TeamSTEPPS, www.usuhs.mil/cerps/teamstepps.html; the DOD Patient Safety Program, <http://patientsafety.sabx.disa.mil/>; and the Agency for Healthcare Research and Quality Patient Safety Network, <http://psnet.ahrq.gov/>.

— Gerry J. Gilmore
American Forces Press Service

After surgery to combat a flesh-eating bacteria, Maj. (Dr.) Crystine Lee checks the status of Staff Sgt. Stephen Jones' leg at a hospital in Southwest Asia. Jones had to have surgery after developing the flesh-eating bacteria known as Necrotizing Fasciitis. This type of infection is fatal if not treated immediately. Because of Jones' pre-deployment training, he knew to seek help.

PATIENT SAFETY BEGINS WITH YOU!

Ancient Greek physician Hippocrates gave this advice about the practice of medicine: "First, do no harm."

To maximize patient safety, health care providers and patients need to partner effectively during the delivery of health care. There is much patients can do to ensure safety when receiving medical care.

❖ **Actively participate in every decision regarding your health care.** Talk with your doctor about planned treatments and expected results. If you are uncomfortable talking with your doctor, designate an advocate, such as a relative or friend, to go with you and speak for you.

❖ **Tell your doctor about your medications, allergies and adverse reactions to medications you've had in the past.** Even if you think these things are all noted in your medical records, it never hurts to mention them. Good communication is the key to partnering with your medical team.

❖ **Keep a record of all medicines, vitamins and herbal supplements you take.** This is important in case your doctor gives you a new prescription. Sometimes supplements or

medicines that are helpful by themselves can cause a harmful reaction when combined.

❖ **Don't leave the doctor's office until you understand when and how to take your medications.** When you get a prescription, ask what the medication does and what the possible side effects are.

❖ **Do a little homework.** Learn as much as you can about your illness, the treatment plans available and any tests your doctor may conduct. If you need surgery, ensure you and the surgeon agree on exactly what is going to be done, including the surgeon marking the surgical site. And ask your provider when, where and how you will get the results of a procedure or test.

❖ **Remember that no one knows as much about how you feel as you do.** As a partner in your own care, you can help the rest of the team keep you healthy.

— David N. Tornberg
Deputy Assistant Secretary
of Defense for Clinical and Program Policy


Tears for Chloe

When an Air Force couple lost their 2-year-old twin daughter to a tragic accidental poisoning, they decided to ensure her death would not be in vain

By **TIM BARELA**

Photos by Staff Sgt. MATTHEW HANNEN





Billie Lombardo tried to stay calm, but panic overtook her like a swarm of angry bees. Something was wrong with her 2-year-old twins. Kevin lay on the bed lethargic and barely responsive. Seconds earlier Chloe had passed out at the breakfast table and went into convulsions.

Then Chloe stopped breathing.

With hands shaking uncontrollably and fear attempting a hostile takeover of her mind, the frantic mother began trying to administer CPR.

Her eyes caught a glimpse of her two older daughters crying and screaming, "Don't let our sister die!"



Tormented by her daughter's death, Billie Lombardo tells her story to try to save other parents from the same anguish of losing a child to an accidental poisoning.

The tragic events that started on Dec. 27, 2005, didn't have a happy ending for Capt. Kevin Lombardo and his wife Billie.

While their son Kevin Jr. miraculously survived, his twin sister Chloe, just more than a month shy of her third birthday, succumbed to an accidental poisoning. She and her brother had managed to get their hands on blood pressure medication and consumed the better part of a bottle of the tiny white pills, as if eating candy.

Since being born 15 minutes apart on Feb. 4, 2003, twins Chloe, who arrived first, and Kevin Jr. were inseparable. They did everything together, from terrorizing the family dog Pepper, to sneaking their dad's Reeses Peanut Butter cups and getting wonderfully yummy — and messy — chocolate and peanut butter all over the carpet, the walls and themselves. He called her "Coco," because he had trouble saying Chloe, and she called him "Cage," her interpretation of K.J. They were the perfect "partners in crime."

So what happened exactly? The answers may hit too close to home for a lot

of parents, which is why the Lombardos have agreed to tell their heartbreaking story. They don't want others to have to feel their pain — no one should have to shed the buckets of tears the Lombardos have wept for Chloe.

Kevin, an operations officer with the 21st Security Forces Squadron at Peterson Air Force Base, Colo., deployed to Baghdad, Iraq, in early November 2005. He served with Task Force 134, headquarters for all detainee operations in Iraq. He had just spent another Christmas away from home, and he allowed himself a well-deserved moment of brooding.

"How many holidays have I missed with my family now? ... Too many," he said, answering his own question. One-by-one he slowly extended three fingers as he counted silently. "I've missed three Christmases alone in the past 10 years."

He'd probably trade 50 holidays if he could just have one back — the last Christmas with Chloe in 2005.

Chloe loved the holidays — especially Christmas. Her favorite toy, book, TV show and clothes were all the same — Dora the Explorer, or "Dorna" as she called her. Her piercing blue eyes lit up every time she saw Dora, and she'd holler, "Dorna, Mommy! Dorna!"

Billie walked into the kitchen and Chloe told her, "Mommy, I sick." ... Minutes later the 2-year-old passed out and went into convulsions.

On Dec. 27, just before midnight in Iraq, Kevin awoke to a nightshift sergeant knocking briskly at his door.

"Sir, you need to call home," the sergeant said.

The hair stood up on Kevin's neck. What could be wrong? He got dressed and grabbed his 9mm handgun — a constant companion to the captain during his deployment and a cold reality of supporting the war against terrorism.

Kevin hurried out his door and headed to the headquarters building to call home.

Back in Colorado Springs earlier that day, Billie and the four Lombardo children had gathered in the basement of their home. The two older girls, Lexie,

who was 9 at the time, and Lidia, who was 6, were watching TV. K.J. and Chloe played tirelessly. So Billie sat down at the computer to read an e-mail from Kevin. While at the computer, Billie didn't notice the twins "sneak" upstairs.

When she finished reading e-mail, Billie went upstairs to fix lunch and saw the adventurous twins. K.J. had laid down for a rest — probably tuckered from all the hardcore playing. Chloe walked up to her mom and said, "Mommy, I sick."

Sure enough, Chloe did look pale.

"I didn't get overly concerned at that moment, because I thought she was experiencing low blood sugar like her sister, Lidia, did at about the same age," Billie said. "Lidia was hypoglycemic, and Chloe's symptoms looked similar."

Chloe's fair skin and rosy lips were framed by long chestnut brown hair that ended in soft, curly locks. Her beauty was only surpassed by her sweet disposition and a politeness that was beyond her years. She always said please and thank you, and doled out hugs and kisses as if passing out Halloween candy. To call her loveable would be an understatement.

To boost her blood sugar, Billie gave Chloe a glass of chocolate milk and some Lucky Charms. Then she stepped away from her to continue making lunch. Suddenly, her oldest daughter Lexie screamed, "She's falling! She's falling!"

Billie turned just in time to see Lexie catch Chloe as the preschooler passed out.

She grabbed her youngest daughter and laid her near her brother. She also noticed K.J., who she thought had been resting, was actually lethargic.

Then, something else caught her eye.

An opened bottle of blood pressure medication sat near K.J. A few of the tiny white pills lay scattered nearby — all that was left of what had been a nearly full bottle.

"Oh my God!" Billie screamed, as the horrifying realization filled her mind.

She tried to shake the twins awake and hollered at Lexie to call 911. Lidia ran to the neighbor's house to get help.

Then Chloe went into convulsions.

"I freaked out," Billie said.

And things only got worse.



Twins Kevin and Chloe were inseparable. Above, 4-year-old Kevin, shown with his mom Billie, has slowly adjusted to losing his twin sister a little more than a year ago. Below, candid snapshots remind family and friends of the dynamic duo and the memories they made together since being born 15 minutes apart.





The Lombardos, in their last family photo taken with Chloe just before the accidental poisoning, are reminded of happier times with Chloe sitting on mom's lap and Kevin Jr. and Lidia sitting on their dad's back, flanked by oldest sister Lexie.

A neighbor arrived and watched over K.J., who was now awake and aware. That allowed Billie to focus on Chloe. While Billie was on the phone with the 911 operator, Chloe stopped breathing.

"Lexie and Lidia were hysterical," Billie said, as her voice cracked and a tear rolled down her cheek. "They kept screaming, 'Don't let my sister die! Don't let my sister die!'"

Chloe adored her big sisters and would often cuddle on the couch with them while watching TV. And, when given the chance, she'd also go through their coloring books, with the carefully colored pictures, and "improve" their work with her own free-style artistic interpretation.

The 911 operator tried to keep Billie calm and walked her through the lifesaving steps of CPR.

Meanwhile, the paramedics arrived and took over.

When they restored her breathing, the paramedics put Chloe in an ambulance and rushed her to the emergency room at nearby Memorial Hospital. A second ambulance took K.J. and Billie.

Billie didn't know it at the time, as medics shielded him from her sight, but K.J. stopped breathing in the ambulance. The paramedics saved his life.

"Once we got to the hospital, Kevin was awake," Billie said. "So they gave him liquid charcoal to help combat the effects of the medication."

But doctors told Billie they couldn't give Chloe the liquid charcoal because she was unconscious. They said she had

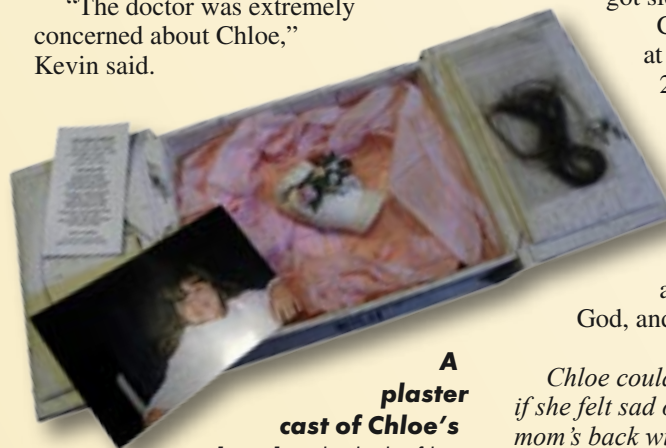
obviously taken a lot more of the pills than K.J. had.

Back in Iraq, Kevin had managed to reach a friend of the family who told him the twins had been rushed to the hospital. He didn't have any other details.

"I didn't know what was going on," he said. "Had they fallen or been in a car accident? When I finally got through to the emergency room, they put Billie on the line. But she couldn't even speak; she was sobbing too hard."

A doctor took the phone from Billie, and told Kevin what had happened.

"The doctor was extremely concerned about Chloe," Kevin said.



A plaster cast of Chloe's hand and a lock of her

chestnut brown hair are among the cherished items kept in a memorabilia box for the Lombardo family.

Chloe was strong and determined, and she loved to dig. She'd get one of her mom's cooking spoons, go out in the backyard, and dig and dig and dig. Billie would ask Chloe, "Where you diggin' to, China?" Pleased as punch, Chloe would always flash her white teeth and respond matter-of-factly, "Yeah."

Still not grasping exactly how serious the situation was, Kevin asked the doctor, "Do I need to come home?"

The doctor paused a few seconds ... "Yes," he said.

Getting home from Baghdad proved to be a difficult task. Just to get to a C-130 at the airport, the captain had to hop into a Humvee and travel a perilous route, known to be a favorite target of enemy mortar rounds. It took five connecting flights and 36 hours before Kevin made it back to the United States.

He arrived on American soil in Atlanta ... 16 minutes after his little girl had died.

"That news hit me like a bag of rocks," the grieving father said. "It was a tough moment. ... I couldn't protect them."

About a half hour earlier, as Chloe still lay clinging to life, Billie massaged her daughter's limbs to keep the blood flowing.

"As I'm doing this, I noticed Chloe's legs were getting stiff and cold," Billie said. She paused to wipe the tears streaming uncontrollably from her eyes. "I looked at the doctor and said, 'Just tell me the truth!' The doctor said, 'It doesn't look good. She's just not responding. Her liver and kidneys are failing.'"

A short time later, Chloe flat-lined.

As doctors fought to bring her daughter back, Billie dropped to the floor and screamed for God to take her instead.

Overcome by grief, Billie then got sick and threw up.

Chloe Bella Lombardo died at 12:29 p.m. on Dec. 29, 2005.

"When they stopped working on her and said she couldn't be saved, I was mad ... so mad,"

Billie said, frowning her brow. "I was mad at the doctors, I was mad at God, and ... I was mad at me."

Chloe could always cheer up her mom if she felt sad or angry. She'd rub her mom's back with her little hand, and say, "It's OK, Mommy." Or she'd sing her favorite song, "You Are My Sunshine." And who could resist the butterfly kisses that would make her giggle?

Billie walked over to Chloe and cradled her. That's how Kevin found her a few hours later when he finally arrived.

"When I saw Billie, we just held each other and held Chloe," Kevin said. "Needless to say, it was pretty emotional."

As Chloe lost her struggle for life, K.J. surprisingly grew stronger and stronger. He even got to go home the next day.

Still white as a ghost from his ordeal, the first thing K.J. said when he arrived home was, "Where's Coco?" That set off a wave of emotions throughout the house.

"How do you tell a 2-year-old that his twin sister is dead — that he just lost his best friend forever?" Kevin said.

The explanation is one that will haunt the Lombardos for the rest of their lives, and it should serve as a warning to others.

Located in a cupboard above the kitchen sink area, the deadly blood pressure medication appeared to be safely out of reach of the 2-year-olds. However, it seems the twins opened a Lazy Susan (a kitchen cabinet with a revolving door and shelves), located at ground level. They used the shelves as steps to climb to the countertop. They then opened the top cupboard and reached the medication. After climbing back down, they managed to pry open the child-resistant cap with their teeth and ate the contents.

All of this happened in a matter of minutes — the time it took to read and respond to an e-mail message.

"Kids are active, smart and determined," Kevin said. "This happens every day in America. Our message is don't let it happen to you. Lock up medicine and household chemicals."

As a matter of fact, poison centers handle an average of one poison exposure every 14 seconds — more than 2 million exposures in the United States annually, according to the American Association of

*Peering into her casket,
her twin brother said,
"Coco sleepin' ..."*

Poison Control. More than 90 percent of these poisonings occur in the home.

"If we can reach even one family and save just one child," Billie said, "... then Chloe's death won't have been in vain."

K.J. saw his twin sister for the last time lying in her casket at a memorial service in Bainbridge Township, 30 miles east of Cleveland, where his father grew up. He looked at her quizzically, and said, "Coco sleepin' ..." 🦋

Keeping Children Safe from Poisoning

Often new parents and caregivers, who aren't accustomed to having small children in the home, are unaware of the dangers presented by everyday household products. One example is leaving an open bottle of baby oil within reach of a young child. The consequences could be tragic. Here are some prevention tips:

1. Keep all household products and medicines locked up, out of sight and out of reach.
2. Use child-resistant packaging properly by closing the container securely after each use or choose child-resistant unit packaging, which does not need to be re-secured.
3. Call 1-800-222-1222 immediately in case of poisoning.
4. When products are in use, keep children in your sight, even if you must take them along when answering the phone or doorbell.
5. Keep items in original containers.
6. Leave the original labels on all products, and read the label before using.
7. Do not put decorative lamps and candles that contain lamp oil where children can reach them. Lamp oil can be very toxic if ingested by young children.
8. Always turn the light on when giving or taking medicine so you can see what you are taking. Check the dosage every time.
9. Avoid taking medicine in front of children.
10. Clean out the medicine cabinet periodically and safely dispose of unneeded and out-dated medicines.

Are Adults at Risk?

Yes, poisonings happen to adults — especially older people — who cannot read labels or who fail to follow instructions. Some people may confuse one medicine for another, especially if the light is not on when they reach for a medicine at night. Others may take too much of a medicine or may mix medicine with alcohol or other substances. Adults should take precautions to avoid poisonings:

1. Turn on a light at night and put on your glasses to read the label when you need to take a medicine.
2. Always read the label and follow instructions when taking medicines. If any questions arise, consult your physician.
3. Never mix medicines and alcohol, and never take more than the prescribed amount of medicine.
4. Never "borrow" a friend's medicine or take old medicines.
5. Tell your doctor what other medicines you are taking so you can avoid adverse drug interactions.

Poison Emergencies

If you think someone has been poisoned from a medicine or household chemical, call 1-800-222-1222. This new national toll-free number works anywhere in the United States 24-hours-a-day, seven-days-a-week. Keep the number on your phone. It will connect you to a poison control center. There are currently 61 poison control centers across the country that maintain information for the doctor or the public on recommended treatment for the ingestion of household products and medicines. For additional information about poison prevention and poison control centers, visit www.poisonprevention.org or www.aapcc.org.

— American Association of Poison Control



115 POUNDS LIGHTER!

Fitness program
changes civilian's life

Story and photo by **STEVE THUROW**

When she needed to lose more than 100 pounds, Diana Harmon turned to the Brooks City-Base, Texas, Health and Wellness Center for help. She has lost 115 pounds over the past two years through hard work, dedication and education.

Diana Harmon awoke startled and confused. Her cat stood on her chest, pawing at her face. But the feline wasn't trying to hurt its master, it was trying to get her to breathe.

Weighing 270 pounds, Harmon suffered from sleep apnea. Not wanting to use a Continuous Positive Airway Pressure machine, she sought alternative means. She went to the Health and Wellness Center at Brooks City-Base in San Antonio for help.

Civilian Health Promotion Service Coordinator Diana Gonzales started seeing Harmon. After initial assessments, they mapped out a fitness program together.

Harmon wasn't thrown into an aerobics class and left to suffer until she met her goals. The assessment revealed that a healthy, safe start for her would involve seven minutes of cardio-vascular exercise on a stationary bike five days a week. That was less time than all the commercials that appear during a half-hour TV show.

Harmon has made exceptional progress over the past two years. She dropped 115 pounds, is down to a size 10 and does up to an hour and a half on an elliptical trainer.

Now she wants to work out, even needs to workout. If she has had a bad day, she'll get a babysitter so she can go to the gym. Two years ago her children couldn't get their arms around her to give her a hug. Today her 15-year-old son gives her hugs and tells her that she's little. That makes Harmon feel great.

By using all of the resources available to her at the HAWC, Harmon learned that there are four dimensions of human wellness: physical, emotional, social and spiritual. When you're healthy in all four areas, you're a healthy person.

"It's a relationship that helps keep you motivated," Harmon said.

Harmon said she learned an important lesson after only two months of working out: Trying to go it alone just wouldn't work.

"(There's a) group that's there to encourage you when you don't feel like going in to workout," she said. "You don't have to do it alone."

But Harmon had other emotional issues to overcome. In the past when she was depressed, food was her companion. After only a short time of working out and watching what she ate, she experienced emptiness from the loss of that companion. She spent the next three months fighting the addiction and turned to scrapbooking to occupy the time — time she had spent eating in front of the TV.

For her, it proved to be a better approach than dieting.

"Diet is a four-letter word," Gonzales said. "(Some) diets starve the body. When the body is starving, it saves every calorie that it can as fat."

That's why with a lot of fad diets, people drop large amounts of weight, but without lifestyle changes the weight will not stay off.

Gonzalez said that by following a fitness program, it's reasonable to lose one to two pounds a week and be able to keep it off.

Harmon can attest to that. She lost an average of nearly five pounds a month on her weight-loss journey and has been able to keep it off. Her new wardrobe puts the exclamation point on her success. ♣



LOSE WEIGHT SAFELY

If You're Overweight, Slim Down for Better Health

Overweight people have an increased risk of high blood pressure, heart disease and other illnesses. Losing weight reduces the risk.

Ask Your Doctor About Sensible Goals

Your doctor or other health worker can help you set sensible goals based on a proper weight for your height, build and age and your current health.

Exercise 30 Minutes

Do at least 30 minutes of exercise, like brisk walking, most days of the week. You may have to build up to that based on doctor's recommendations. Ensure you do a proper warm-up for about 5 minutes before exercising, and a 5-minute cool down and stretching after exercising to avoid injury. Stretching cold muscles might cause injury.

Eat Less Fat and Sugar

This will help you cut calories. Fried foods and fatty desserts can quickly use up a day's calories. And these foods may not provide the other nutrients you need.

Eat a Wide Variety of Foods

Variety in the diet helps you get all the vitamins and other nutrients you need.

Watch Out for Promises of Quick and Easy Weight Loss

Fad diets aren't good because they often call for too much or too little of one type of food. As a result, you may not get important nutrients you need daily. Remember, if it sounds too good to be true, it probably isn't true.

What About Diet Pills?

Diet pills you buy without a prescription won't make a big difference in how much you lose each week or how long you keep the weight off. If you do use them, read the label carefully. Because of possible side effects, like high blood pressure, never take more than the listed dose. Also, be careful about taking cough or cold medicines with diet pills you buy without a prescription. These medicines may contain the same drug used in diet pills, or a similar drug with the same effects. If you take both products together, you may get too much of the same type of drug. This can hurt you.

For More Information

If you have questions, call the Food and Drug Administration's toll-free number: 1-888-INFO-FDA (1-888-463-6332) or look online at www.fda.gov.



ARMED & DA

New ammo improves pilot safety, reduces collateral damage

Story and photos by Capt. **KEN HALL**

Air Force F-16 Fighting Falcon pilots at the 332nd Air Expeditionary Wing at Balad Air Base, Iraq, are employing a new 20mm cannon round in their M61/A1 Gatling guns for the first time, improving pilot safety while reducing collateral damage.

Airmen first validated the rounds at a firing range and then employed them in battle at the end of February.

Ground forces east of Baghdad chased insurgents into a building and then called in close-air support. F-16s from the wing's 14th Expeditionary Fighter Squadron responded, strafing the insurgent stronghold and vehicle, said Lt. Col. Chuck Toplikar, squadron commander.

Improved PGU-28A/B 20mm ammunition began replacing the long-used M56 high explosive incendiary ammunition in the wing's F-16s, making pilots' jobs easier, safer and more effective. That is a lofty claim, but recent combat sorties prove the ammo is enhancing combat airpower.

The older M56 ammo required a specific impact velocity for its high



***The more aerodynamic,** higher velocity PGU 28A/B 20mm cannon round replaced the M56 round long used by F-16 Fighting Falcon pilots. The new ammo allows for higher velocity, a greater standoff distance and increased safety for pilots, all contributing to greater effectiveness while providing close-air support. Its use Feb. 26 against insurgents east of Baghdad, Iraq, marked the first in battle for Air Force F-16 pilots.*

explosive incendiary properties to function correctly. In other words, the round would not explode on impact if it did not get there fast enough, so pilots had to get in closer for the strafe. Of course, the impact and mass of the projectile would still damage the target, but wouldn't achieve the full effect for which it was designed.

The new cannon round employs a more aerodynamic design and "hotter load," which increases its velocity and effective range, allowing greater standoff distance for pilots, according to wing

officials. That increased distance directly translates to greater pilot safety overall, because they can fire the new rounds from more than a mile and a half away, said Capt. Jim Maxwell, the deputy chief of weapons and tactics at the wing.

The captain also noted that when bullets can be used instead of bombs, the potential for collateral damage is reduced as well, increasing airpower options for the ground commander who must calculate the desired result when calling in air support, according to Maxwell.

Acquiring and readying the new ammo for use, though, was not an easy task.

After airpower leaders determined the enhancements, the new cannon round could bring an "urgent operational need" to procure the PGU-28A/B, according to Senior Master Sgt. Michael Ray, 332nd Expeditionary Maintenance Squadron. New ammo came from as far away as Naval Air Stations Miramar, Calif., and Sigonella, Sicily, as well as Naval Base Guam and Iwakuni Marine Corps Air Station, Japan.

When the ammo arrived, 332nd EMXS munitions members received and inspected more than 80,000 rounds in a lightning-fast six hours — compared to the 8,000 rounds usually processed in a typical day.

"It ain't ammo 'til we say it's ammo," Ray said.

The PGU-28A/B rounds then made their way through loading machines, called replenishers, to fill drummed universal ammunition loading systems, which are used by weapons loaders to arm the wing's F-16s.

"Airmen toiled around the clock as well swapping PGU ammo for M56 rounds over a period of two days," said Capt. Kevin Tanner, 332nd EMXS officer in charge.

That hard work allowed F-16 pilots to employ the ammo quickly.

"Our ammo and weapons loader personnel are just phenomenal," said Lt. Col. Patrick Kumashiro, the 332nd Expeditionary Maintenance Group deputy commander.

Capt. George Watkins and 1st Lt. David Bennett, both from the 510th EFS at Balad, made up the first two-ship combat mission to use the new cannon rounds. The pilots worked as a team employing standard night tactics where one "sparkles" the target with infrared marker invisible to anyone not wearing night vision goggles, and the other then strafes and destroys the target.

"I'm excited to have the new ammo," Bennet said, "and glad to employ it to help the guys on the ground."

Watkins agrees. "Protecting the guys on the ground is our No. 1 priority, and having the new ammo makes it easier and safer for us to do that," he said.

Col. Scott Dennis, commander of the wing's 332nd Operations Group, added, "It's critical for ground forces who call in air support to get it when they need it. These new rounds certainly kick our (close-air support) effectiveness up a notch." ✈

Captain Hall is with the 332nd Air Expeditionary Wing Public Affairs at Balad AB, Iraq. (AFNEWS)

USAF photo

Now that it is airborne in New Mexico, it's time for the CV-22 Osprey to

QUIET THE CRI

Story and photos by Staff Sgt. MATTHEW HANNEN



TIES



With the CV-22 Osprey soaring above the skies at Kirtland Air Force Base, N.M., it's perhaps a sign of the aircraft's resiliency, having overcome heavy controversy in the press and in Congress the past few years.

A CV-22 Osprey tiltrotor aircraft from the 58th Training Squadron performs a training mission near Kirtland AFB, N.M.



The criticism came from the aircraft's high cost and some well-publicized mishaps during the development stage. One CV-22 in particular succumbed to mechanical issues, which brought the aircraft down in Arizona; five crewmembers and a dozen Army and Marine troops perished. Even while passing live fire tests and proving survivable, the bad press and public relations picture of the aircraft proved to be challenging to aircrew and pilots who know the plane best.

With the CV-22 pilot training program at the 71st Special Operations Squadron at Kirtland going strong, its aircrew members find the current critics off the mark.

"It seems like every time I tell someone that I fly in CV-22s, they still have that bad taste in their mouth, because it had a shaky history in the development stages," said Staff Sgt. Jeremy Hoyh, CV-22 flight engineer. "But it's a safe aircraft, and the public needs to realize that it is capable – it's not as dangerous as people think."

According to Master Sgt. Jim Hesick, 71st Aircraft Maintenance Unit CV-22 crew chief, every new major weapons system goes through growing pains, but he says that's why they use operational risk management to ensure the safety of the aircraft and crew.

"Thus far, problems we've come across haven't been insurmountable or unsafe to the aircraft or crew," Hesick said. "But we're big on ORM. So we're taking the necessary precautions, just as you would in any new aircraft."

Despite the negativity, the CV-22 isn't a small research project off in the corner of the Department of Defense, according to Lt. Col. Todd Lovell, 71st SOS director of operations.

"We're getting a lot of phone calls from individuals asking how they can get into the program," Lovell said. "They want to know what the future holds."

"The real strengths of the CV-22 are speed, range and the ability to land in a helicopter landing zone. That's the capability that no one in the world has ever had. If you just want to go from here at Kirtland to downtown Albuquerque and land on a small spot, take a helicopter. If you want to be able to take people cross country, across Iraq or insert forces directly into their objective area, we offer something that no one else can."

Lt. Col. Jim Cordoso, the 71st SOS commander, agrees.

"The CV-22 Osprey is not a rumor; it's not a myth; it's not an acquisition nicety," he said. "It's here on the ramp, and it's flying regular sorties, training the future Air Force Special Operations Command operational aircrews who are going to fight the global war on terrorism."✈

Staff Sgt. Marisa Hannen, 19th Air Force noncommissioned officer in charge of the personnel section, contributed to this article.

CV-22 Osprey Crew Chief Staff Sgt. Greg Dove of the 71st Aircraft Maintenance Unit performs maintenance on the Air Force's newest tiltrotor aircraft to prepare for a mission at Kirtland AFB, N.M.



Gentlemen, start your engines!

Staff Sgt. Jason Hall (right) and Tech. Sgt. Dennis Bracey, with the 71st AMU, signal a CV-22 pilot to start engines prior to taking off for a mission at Kirtland.



Preparing for a training mission at Kirtland, Master Sgt. Jim Hessick, a CV-22 flight engineer for the 71st Special Operations Squadron, gives the tiltrotor aircraft a thorough look-over before takeoff.



Marshalling out an Osprey, Hall takes his duties as a CV-22 crew chief seriously and, like the rest of his maintenance unit, gives the performance and safety of the tiltrotor aircraft an enthusiastic thumbs up.

“It seems like every time I tell someone that I fly in CV-22s, they still have that bad taste in their mouth, because it had a shaky history in the development stages. But it’s a safe aircraft.”

— Staff Sgt. Jeremy Hoyh,
CV-22 flight engineer



GETTING DIRTY

C-17 TESTING INCREASES SAFETY, AGILITY ON DIRT RUNWAYS

By Tech. Sgt. **ERIC M. GRILL**
Photo by **BOBBI ZAPKA**

In an effort to expand the capability of the C-17 Globemaster III, about 40 people from the C-17 Integrated Test Force at Edwards Air Force Base, Calif., are in the midst of a four-phase test program to determine the C-17 takeoff and landing performance on non-paved surfaces.

Engineers and pilots are testing the aircraft in extreme runway conditions to eventually write the book for landing on dirt runways during dry, wet and muddy runway conditions.

Phase 2 got under way at Edwards AFB Dec. 4. It follows lessons learned from flight tests conducted during Phase 1, which occurred between Sept. 16 and Nov. 8 at Fort Hunter Liggett, Calif.

According to Lt. Col. Bob Poremski, C-17 Integrated Test Force director, the first phase put the C-17 through tests to validate the

ability to bring a large force into an airfield without making runway condition corrections.

Testing at Fort Hunter Liggett started with a dry landing zone "without re-grooming or re-preparing the runway to see if it's able to sustain rapid deployment operations with enough aircraft," Poremski said. "Once that was done, we progressively wet the ground in a controlled manner to correlate how much rainfall would happen if something like a thunderstorm rolls by and drops a quarter-inch of rain to see the effect it has on the braking action of the aircraft."

The purpose of the testing is to open up the capability to bring warfighters and equipment closer to the combat zone so there is not as much transit time.



A C-17 Globemaster III takes off during Phase 1 tests at Fort Hunter Liggett, Calif. Tests are being conducted to determine the C-17's ability to bring a large force into a wet or dry dirt airfield without making runway condition corrections. Phase 2 is scheduled to begin Dec. 4 at Edwards AFB, Calif.

“The C-17 was designed to deliver forces and cargo from an initial pick-up point and directly to the battlefield. This is called the direct-delivery concept,” Poremski said. “But the original testing only cleared a small portion of the types of surface the earth is made out of. Our testing is expanding the types of surfaces the C-17 can operate in and out of safely.”

Performing tests on wet, semi-prepared runways proved to be a challenge, said Gus Christou, a mechanical subsystems engineer with Edwards’ 418th Flight Test Squadron.

“The biggest concern we had was executing this test on a relatively short runway,” Christou said. “Most of the runways, with the exception of the Edwards runway, are 5,800-feet long. For the wet-testing we proposed in the test plan, we really didn’t have enough room to execute on a fully-wetted runway. So, we split the runway into a partial wet section and a partial dry section to ensure the aircraft could perform stopping as well as takeoff (again).”

There also was a computer modeling issue. Christou said the performance software that currently is available for the aircraft addresses both take offs and landings on wet and dry conditions for ordinary concrete runways. However, in this particular case there is a mixed condition runway.

“The software cannot predict performance of the airplane on a combination of dry and wet runways,” he said. “That existing software had to be blended to accommodate a dry and wet runway. It was very time-consuming.”

In the end of the testing at Fort Hunter Liggett, the upgraded software models were able to accurately predict the aircraft performance.

“But it’s quite a spectacular site to see this huge cloud of dust chasing you when you’re taking off, and then the same thing happening when you’re landing — a dust cloud chasing you as you come to a stop,” Christou said.

The dust clouds and wet dirt that arose from takeoffs and landings added some unusual aspects to the testing process.

“Through semi-prepared runway operations testing and weighing the aircraft after the take-offs and landings, we’ve seen anywhere from 1,200 to 1,500 additional pounds of dirt col-

“The C-17 was designed to deliver forces and cargo from an initial pick-up point and directly to the battlefield.... Our testing is expanding the types of surfaces the C-17 can operate in and out of safely.”

lected in the aircraft,” Poremski said. “We’ve seen enough dirt collect in the wheel wells to where it was eight to 10 inches in depth.

“However, those sorts of operations are not going to be typical with the aircraft in the field, because they might operate into a field and depart again,” he said. “We’ve been up there with the dirt being wet, and we’ve repeated the landings multiple times throughout the day, thus helping to force the dirt up into the wheels.”

There also is the maintenance aspect of the aircraft when dealing with so much collected dirt, said 2nd Lt. Mike Mohr, C-17 semi-prepared runway operations project manager.

“Well after we got into the mud, these guys had to fire hose (the aircraft) down to get the mud off,” Mohr said. “Some of the instrumentation on the (landing gear) was kind of epoxied on, and we were having some calibration issues. There were all kinds of things pretty much all throughout the C-17 test the maintenance folks were dealing with, from the nose to the tail.”

The third and fourth phases are scheduled to take place at Fort Chaffee, Ark., and Fort McCoy, Wis., next year. Officials say all four phases of testing are scheduled to be completed by November 2007.

Sergeant Grill is with the 95th Air Base Wing Public Affairs Office at Edwards AFB, Calif. (AFPN)



DON'T FIND 'OLD WAYS' TO CRASH 'NEW AIRPLANES'



USAF file photo

Since aviation can be an unforgiving endeavor, aircrew members don't have to be involved in flying too long to have had, seen or at least heard about, a close call or actual mishap. They can use these lessons learned to instruct new aviators.

RANDOLPH AIR FORCE BASE, Texas — “We’re not inventing new ways to crash airplanes.”

At least that’s what you’d hear if you attended the Air Force Aircraft Mishap Investigation Course or the Flight Safety Officer Course at Kirtland Air Force Base, N.M.

While this is true, we are creating thousands of new aircrew members, maintenance technicians and air traffic controllers every year. How do we pass on lessons learned from previous mishaps to new Air Force members so they don’t make the same “old” mistakes?

Primary training publications like Road to Wings, flight safety officers passing on

germane safety investigation results, major command-mandated safety briefs and magazines, and formal training programs that take into account previous mishaps causes are all examples of systemic or cultural approaches to mishap prevention. But what can you do as an individual?

How about passing on your own set of “war” stories and other lessons learned to aviation newcomers?

Since aviation can be an unforgiving endeavor, you don’t have to be involved in flying too long to have had, seen or at least heard about, a close call or actual mishap. Create your own list of lessons learned, and use those as instructional topics during com-

mander’s calls, weather days, mission briefs, shift changes, shop talk or hangar flying.

You don’t have to be an instructor to be a teacher and pass on a story that may save someone’s life. Some of the less mature or more judgmental among us might scoff at aerial miscues; but all of the aircrew members involved were highly trained, and most were highly experienced. If you care more about preventing a mishap than protecting your ego, make your own list and pass it on to prevent newer aviators from finding “old ways” to crash “new airplanes.”

— Lt. Col. Rich Doyle
AETC Inspector General air operations and safety inspector

PILOT, CREW ERROR CAUSE C-130 MISHAP

SCOTT AIR FORCE BASE, Ill. (AFNEWS) — Air Mobility Command officials released the results of their investigation into the July 17 mishap involving a C-130 Hercules deployed from the 43rd Airlift Wing at Pope Air Force Base,

N.C., during a night landing at Al Asad Air Base, Iraq.

The accident investigation board concluded that the primary cause of the mishap was pilot and crew error. The aircrew flying the C-130E was deployed from the 317th Airlift

Group, Dyess AFB, Texas. The mishap occurred when the aircrew used aggressive braking and taxied at a high speed after landing. This resulted in mechanical failure in three of the aircraft’s four brakes and led to a fire in one of its wheel

wells. Firefighters immediately extinguished the fire when the aircraft stopped, but extensive damage was done to the left side of the C-130.

The crew and 56 passengers were uninjured and safely evacuated the aircraft.

SEVERAL FACTORS LEAD TO KC-135 ACCIDENT



Digital manipulation by David Shack

SCOTT AIR FORCE BASE, Ill. (AMCNS) – Air Mobility Command officials here released the results of an investigation into the Sept. 26 KC-135 Stratotanker and TU-154 Kyrgyz passenger plane accident at Manas International Airport in Bishkek, Kyrgyz Republic.

The collision between the TU-154 and KC-135 was clearly an accident and not the result of any intentional conduct, according to the report, which was released Dec. 20.

The accident investigation board, convened by AMC officials, determined that the accident was caused by the Kyrgyzaeronavigation air traffic controller who cleared a civilian airliner for takeoff without verifying the KC-135 was clear of the runway. In addition to the air traffic controller, the investigation found evidence of several contributing factors involving the KC-135 aircrew, conflicting published airport notices, and a tower liaison employed by the U.S. government to facilitate communication between the tower and U.S. aircrews.

Although the board found the air traffic controller primarily at fault, the KC-135 crew and tower liaison shared responsibility for ensuring the KC-135 cleared the runway to a safe location following landing. The accident might have been avoided had any of them exercised better awareness of their situation.

At approximately 8:03 p.m. local time Sept. 26, a KC-135 landed at Manas International Airport following a combat mission over Afghanistan. After landing, the KC-135 was parked at the intersection of the active runway and a taxiway while the crew awaited clarification on instructions from the air traffic control tower.

The KC-135 was struck by a host nation TU-154 that was taking off. The TU-154's right wing struck the fairing of the KC-135's No. 1 engine. The force of the impact nearly severed the No. 1 engine from KC-135 and destroyed a portion of the aircraft's left wing. The TU-154 lost approximately 6 feet of its right wingtip, but

was able to get airborne and return to the airport for an emergency landing with no additional damage to the aircraft.

The three aircrew members on board the KC-135, as well as the nine aircrew members and 52 passengers aboard the TU-154, survived the accident. None of the aircrew or passengers onboard the TU-154 sustained any injuries. One KC-135 crewmember sustained minor abrasions while evacuating the aircraft.

Although the board determined the principal cause of the mishap was the Kyrgyzaeronavigation controller clearing the TU-154 for takeoff without verifying that KC-135 was clear of the runway, there was evidence the following factors also contributed to the mishap:

- The Kyrgyz air traffic controller's instruction to vacate at taxiway Golf after dark conflicted with a published Notice to Airmen that limited that taxiway's use to daylight hours. The contractor safety liaison employed by the U.S. Air Force to facilitate communication between its aircrews and Kyrgyz controllers did not clarify the apparent discrepancy.

- After questioning the Kyrgyz controller's instruction to vacate the runway at taxiway Golf, the liaison instructed the KC-135 crew to hold short of Alpha. The mishap KC-135 crew misperceived the liaison's instructions and responded "holding short of Golf." The liaison failed to catch the read-back error.

- The Kyrgyz controller failed to maintain awareness of the KC-135's location.

- The liaison failed to maintain situational awareness and intervene when the controller's actions endangered the KC-135 and aircrew.

The KC-135 is assigned to the 92nd Air Refueling Wing at Fairchild Air Force Base, Wash. While deployed at Manas AB, the KC-135 and its aircrew were assigned to U.S. Central Command's 376th Air Expeditionary Wing, flying missions supporting coalition aircraft over Afghanistan.



This general diagram of the Manas International Airport (Kyrgyz Republic Airfield) shows the approximate location of the control tower in relation to Taxiway Golf, as well as the approximate location of the KC-135 (inset diagram) when it was struck by a commercial aircraft Sept. 26. This diagram is based on an investigation completed by an Air Mobility Command accident investigation board.



B-52 BOMBER

"Safety is something that happens between your ears, not something you hold in your hands."

— Jeff Cooper
Firearms expert

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