Around the Air Force

President’s Column

Todd “Bucko” Baker, Col, USAF, MC, SFS
President, Society of United States Air Force Flight Surgeons

Time has flown, the fall issue of FlightLines is here, and the AsMA Council is meeting—indicating that the 86th Annual AsMA Scientific Meeting is only 6 months away! “Open season” for conference registration closed 15 November—if you’re an active duty flight surgeon I very much hope that you were able to run the approval wickets and that you will be able to attend. Col Rob “MOBBIC” York (your USAF Aerospace Medicine Consultant to the SG) is identifying meeting sessions that provide USAF flight surgeon continuity training and readiness skills verification training. For our non-active duty Air Force Members, Honorary Members, Associate Members, and Members Emeritus, we very much would like to engage with you both academically and socially; we are looking forward to seeing you (and your families!) at Walt Disney World, Lake Buena Vista, FL, from 10-14 May 2015. This year’s theme is “Making a Difference in Aerospace Medicine.” AsMA will, of course, provide CME, CEU, and MOC credit for all members as appropriate.

Now is the time to begin your SoUSAFFS annual award packages; see http://www.sousaffs.org/awards.php for the awards, criteria, and past winners. Your Society has the privilege of picking the best AF Medical Service Aerospace Medicine Team, Flight Surgeon, and Flight Medicine Technician for 2014—expect the call for these awards (and the Operational Flight Surgeon Award) to go out through your MAJCOM/SGPs very soon. Other Society awards flow separately; see the webpage for more. Winners will be announced at the luncheon during the AsMA Annual Meeting.

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As always, please provide any feedback that you’ve got – and please don’t wait for the next issue of FlightLines to do that! Contact me directly (richard.baker@us.af.mil or tbflydoc@me.com) or contact any Board of Governors member with suggestions that you’ve got for your Society, or anything that will help us to be better advocates for the USAF flight surgeon. The more involved you are as a member, the more membership will return to you. SoUSAFFS truly is your organization!

Col Todd “Bucko” Baker

From the Editor

Peter “SPANKY” Baldwin, Maj, USAF, MC, FS
RAM XIII

The fall issue of FlightLines brings a change in editorial staff, and we thank you for continuing to read what we’ve prepared for you. Our staff is composed of the best and brightest RAMs at USAFSAM, and we’re excited to bring you exciting and relevant content. As it has been throughout history, our field is rife with changes. New budget and operational demands have provided new opportunities for the USAF Flight Surgeon community to continually adapt, innovate, and overcome. Your editorial team hopes to bring you the latest and greatest innovations for you to adapt and overcome the challenges present at your home station.

Change is a theme to many of the articles in this issue. In this issue, Col York shares with us that some important changes are coming to your Flight Medicine clinic. You’ll also read about a few of those changes at USAFSAM in this issue. It’s true that all things come to pass. This past June saw the graduation of the last Preventive and Occupational residents and an end to those longstanding programs. A longtime staple at USAFSAM, Col Hadley Reed, has retired and the the AAMIMO baton has been passed to Lt Col David “FUDD” Hardy. RAM XV has lived up to its motto and doubled down, starting the inaugural second year of the revised Aerospace Medicine curriculum. In addition, the 2016 RAM class has arrived at the Schoolhouse. These eager residents add a new dynamic to GME at USAFSAM, as there are now two active RAM classes studying aerospace medicine.

Speaking of operational Flight Medicine, we want to hear from the field! What challenges are SGPs facing right now? How are you accomplishing your RSV and can the Society help? Are the recent changes in AMP preparing our new Flight Surgeons well enough? To the GMOs out there, are you considering continuing in Flight Medicine? Sharing your stories and experiences is vital to this publication and SoUSAFFS at large. Consider submitting an article for publication. You never know—you may have the solutions at your base to issues that your AMP classmates are having at theirs!

Additionally, remember that we are part of a larger organization, the Aerospace Medical Association. AsMA membership is required to be a part of ours. As such, we all have the opportunity to present at the Annual Scientific Meeting and publish articles in AsMA’s Aviation, Space, and Environmental Medicine (the “Blue Journal”), which will be renamed Aerospace Medicine and Human Performance beginning in January 2015.

The bottom line: support your fellow Flight Surgeons! The Society is here to facilitate that in any way it can, and FlightLines is just a part. The editorial staff is eager to hear from you, as are all SoUSAFFS members.

Keep ’em flying!

From the AsMA Front Office

The Aerospace Medical Association is looking to update the Self-Assessment CD for Aerospace Medicine Boards and has put out a call through ASAMS looking for volunteers who would be willing to take on the task of updating the questions. The last CD was updated in 2006 with the help of many SoUSAFFS members. AsMA has also discussed putting the questions/answers on a flash drive instead of a CD. Please contact Sheryl Kildall at skildall@asma.org if you have any interest in helping with this project to support your specialty.

Call for Content

What makes FlightLines great is that it connects us with the rapid changes and variety of expertise that exist in USAF flight medicine. Send us news that affects us all, teach us about your area of expertise, and share with us your “There I was…” stories from the field. (Include your pictures!)

Submission guidelines:
500-3000 words
Pictures 300 dpi or better in .tif or.jpg

Send your articles, news, suggestions, or comments to:
peter.baldwin.1@us.af.mil
john.miles.2@us.af.mil
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Information Update!

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In January 2014, Lt Gen Travis directed the implementation of Patient Centered Medical Home (PCMH) in Flight Medicine (FM) by 31 December 2014.

History of PCMH

The idea of the “medical home” originated with the American Academy of Pediatrics in 1967, which was the central source for all pediatric medical information, especially for those with special needs. New approaches were established to improve early childhood development and formed the foundation of the Academy policy statement defining the “medical home” as a strategy for delivering the family-centered, comprehensive, continuous, and coordinated care that all infants and children deserve.
Gen Bruce Green initiated the AFMS PCMH as the Family Health Initiative (FHI) the same year, based on the results of a focus group of Primary Care Optimization (PCO) team members from across the AFMS. The FHI was formally designated PCMH and went Tri-Service in 2010-11. Early AF roots of PCMH go back to 1997 with the publication of the 1997 re-engineering plan, which provided the basis for the Enrollment Based Resourcing Model (EBRM), which established the first manning standard and related enrollment requirements. Discuss management and other population health initiatives were incorporated into the primary care operations, and EBRM became PCO. There was a brief period where PCO was aligned into an entity called Primary Care Element (PCE), to align the PCO concept with the Objective Medical Group. Lt Gen George “Peach” Taylor at the time described this as “a flight surgeon for everyone,” referring to the unique relationship of the SME flight surgeon with his or her flyers and families as the model for the core principles of continuity and personal physician, which were central to both PCE and the civilian concepts of early PCMH. The clinical CONOPs of PCE were essentially the same as PCO, and the general term “PCO” returned to the AFMS vernacular.

The validity of the “medical home” is widely substantiated in the literature, showing better health, lower total cost, and reductions in health disparities.

So why is FM late to the fight? In simplest terms, going back to Gen Taylor’s day, we all assumed that FM really represented a PCMH in clinical operations and didn’t require change. Current efforts are not a fundamental change in FM clinical ops: it is a standardization of operations to ensure the tenets of PCMH are met as we move forward in AFMS Primary Care operations. The day-to-day Flight Medicine approach to the care of our patients does not change how the Flight Medicine team practices with the continuity and patient ownership traditionally observed in Flight Medicine! We are, for all intents and purposes, PCMH principle.

So what is the policy, what are the ROEs, and how does this affect you?

Some have criticized the lack of official policy regarding the implementation of PCMH in Flight Medicine. This delay has been deliberate, as a one-size-fits-none policy would only frustrate and disrupt delivery of health care. Over the past 9 months, the AFMOA PCMH team has visited dozens of bases, evaluating the mission, LIMFACS, manning, clinical space, and supporting services. These visits have identified commonalities and pitfalls, allowing us to hone the draft policy into something that is executable.

Flight Medicine is a hybrid clinic, consisting of both primary care and occupational/operational medicine. Patient empanelment is dictated by AF 48-149, which stipulates 1042 holders, their families, special duty operators, and those approved by MAJCOM/SGP waiver (typically firefighters and/or EOD).

Empanelment ratio numbers have been bandied about since I was a captain. Currently a 500:1 empanelment ratio is being used as a corporate business model WAG. This ratio does not directly translate to the base level. Instead, based level FS manning is determined by the “SARDO MODEL,” originally created by Col Alden Hilton, Col Bill Nelson, and others. This model uses multiple weighted values from 1042 holders, dependents, occupational/operational mission, and presence of SMEs to determine how many flight surgeons, nurses, and technicians every base earns. Many bases approximate the 500:1 patient:FS corporate WAG, but several do not. An outlier example is Lackland, which earns 6 providers for 328 permanent party and 350 students. The extra flight surgeons are earned from the 5300 annual IFC exams.

Due to the fact that FS are 50% clinical and 50% operational, each Flight Medicine PCMH team will contain up to 5 MTF assigned providers. Bases with greater than 5 MTF assigned providers will have 2 teams. The enrolled patient population will be assigned to individual providers. SMEs (with the exception of SOFM and continually deploying SMEs) will be empanelled with their squadron members and their families. Commanders, affiliate providers, and IDMTs are considered Non-Empaneled Medical Officers.

Continuity

Despite the myriad appointment types, in reality Flight Medicine has 2: Today and Not-Today. Today (OPAC) appointments are often acute care, DNIF, RTFS, or immediate administrative action required. These appointments do not require patient-provider continuity and can be accomplished by any provider in Flight Medicine. OPAC appointments will not count against individual provider continuity. The Not-Today (EST) appointments include the PHA, flight physical, PDHRA, waivers, and management of chronic medical conditions. Individual provider continuity will be counted on these appointment types.

This framework is not a galactic paradigm shift. Ninety percent of our bases will have only 1 PCMH team; therefore, team continuity is 100%. Since individual provider continuity is only measured against the EST appointments, achieving the 70% individual provider continuity metric should be easy with good planning and scheduling, aka good management.

In the end, this is not a radical departure from what we have always done. We have always taken care of the flyers and their families, providing quality care, continuity of care, and access to care.

Yes, PCMH is being implemented in Flight Medicine. No, the sky will not fall.

**Special thanks to Col(R) Jon Pearse for the historical information. ◆
TOP KNIFE—The Original

Eric “De-Mo” Chumbley, Lt Col, USAF, MC, FS
173 FW, Kingsley Field

In the beginning was the Knife. And the Knife was at Kingsley. And the Knife was Kingsley. It was at Kingsley in the beginning. “OK, De-Mo,” you might be thinking, “You’ve spent so much time with fighter pilots that you’re starting to tell fighter pilot stories,” which is to say that only 10% need be true. “And we also suspect you have joined a cult.” Not so, friends, not so.

A quick disclaimer: I graduated Top Knife II at Luke AFB back in October 2001 and enjoyed every moment of it. I have a bit of gouge from some recent participants and believe it’s still an outstanding course, so no disrespect intended. However, they didn’t create the program. It started in Southern Oregon in 1990, but was suspended in 2006.

Let’s step to the Way Back Machine for an abbreviated look: In 1989, then-Major Randal Falk and Col James Whinney were assigned to Guard Bureau. They were instrumental, along with Major William Fridinger of the Oregon Air National Guard (OR ANG), in developing the Air National Guard’s Fighter Surgeons School at Kingsley Field. It was created with three purposes: to support the full time flying mission with a flight doc present on the base almost all of the time at a very low cost (remember that full time flight docs don’t usually exist on a Guard base), to provide the flight medicine community a venue for an advanced course and experience, and as a retention tool. We were teaching in Vipers back then. Falk and Whinney were the first two students to complete the program in January 1990. In March 1990, Lt Col Allen Parmet became the first active duty student. It was a hit from the start, with literally hundreds of flight docs flowing through, including a few future celebrities (Figure 1). We had German, Australian, and Canadian flight docs in the course (Figure 2). When the 114th Fighter Squadron at Kingsley converted to the Eagle in 1998, Top Knife for the Viper was handed off to Luke and renamed “Top Knife II” (in case you ever wondered why it’s called “Top Knife II”), while we converted our curriculum to reflect our new airframe and kept the designation of “Top Knife.” Unfortunately, without a full-time flight surgeon presence at Kingsley it was tough to maintain the curriculum, although the part-time docs assigned to Kingsley did a phenomenal job for 16 years! So Top Knife was shelved in 2006 until some unwitting full-time individual could be coerced into standing it back up.

Here is a glimpse of Top Knife at Kingsley Field in 2014: First, we aimed at ANG flight docs who have to take vacation to come here and no longer have Readiness Frontiers to help them with RSVs. Being a traditional Drill Status Guardsman (DSG) can make it pretty arduous to keep up on those. Therefore, we created a curriculum that addresses not only fighter operations/traditional aeromedical issues but also nearly all of the items on the 48X3 RSV checklist. To respect the DSG’s time and his or her MDG’s finances, we send the CME disk by mail for completion prior to arrival at Kingsley. That allows us to shorten the TDY to 1 week and to make that week completely dedicated to fighter operations. That being said, we welcome Reserve and RegAF docs as well! In fact, we have begun hosting active duty RAMs from the Schoolhouse. Additionally, if you just want the disk for some CME and RSV credit but don’t have the time, funding, or desire to come out and fly, we’ll send it to you.

Figure 1. BG Timothy Jex states that he unequivocally owes the majority of his success to participation in Top Knife in 1991. At least that’s how I heard it. (173 FW Top Knife archives)

Figure 2. Canadian Flight Doc Capt Brian Feaver left a token of his appreciation in the early days of Top Knife. (Author)
Second, we try to immerse you in fighter ops while here. Whenever possible, we put you in the simulator so that you can learn about the piano-dodgeball link (my attempt to explain learning hands-on-throttle-and-stick, or HOTAS, while dogfighting) as well as have some fun with retired Eagle Driver “Vein” McLain, who has been indispensable in making sims happen. Graduates have confirmed that the experience is an eye opener. We have heard more than once that prior to their sim session, they just did not understand how high the workload was in the front seat. Operating the avionics and weapons systems through HOTAS, which the student observes in the simulator, while maneuvering the jet for the kill and performing a good AGSM, which the student experiences in the air, makes the piano-dodgeball metaphor come alive.

Speaking of AGSM, we will put you in the Eagle as much as possible, depending on ops that week (Figure 3). You are guaranteed one flight. For students who come fully spun-up, the actual experience has been much better. Most fly two to three sorties, and even then it is often limited by fatigue, which is to say the student was wiped out from the morning sortie and declined to “turn two” that day. If you aren’t used to fighters, you will get tired, but anticipate hearing me encourage you to press. The record in the modern era is eight sorties in 5 days, which is very unlikely to be matched. “Varsity” Vinson is an experienced Eagle Doc with the 142 MDG, OR ANG at Portland, and a man on fire.

Of course, before you fly you will be fitted for helmet and g-suit if you do not bring your own (Figure 4) and undergo local area survival training, hanging harness training, and F-15 egress training (Figure 5). If you come with equipment, that piece will be much shorter. If you are current in fighters, you will likely only have to accomplish local area training.

Third, you will see computer-based briefings on the F-15 and fighter ops, take a final exam on these areas, and earn your Top Knife Graduate patch (Figure 6), which typically makes WIC graduates jealous. Or angry. It’s hard for me to tell. Depending on the level of discussion, you are encouraged to attend all briefings and debriefings. If you sit in on briefings, you get both a deeper understanding of the mission and increased rapport with pilots.

Fourth, before you depart Kingsley, our public affairs (PA) office will go to the jet with you for glamour shots (Figure 7). There is just no excuse for coming all the way out here and not getting your picture in front of the world’s most successful air superiority fighter, and if I may say so, our PA office has to be about the best in the Air Force. They have been huge supporters from day one.
Finally, you can expect some time debriefing with me. I think that this course constantly improves because of your input. We might make corrections or additions to the CME content or alter the schedule while you are on base. For instance, we have pushed harder for the simulator sessions because of student feedback, and our wing leadership has responded positively. Top Knife is considered one of our core missions, and the culture of Kingsley is very much focused on finding a way to make things work. So if your sim session is on an ANG “down day” or at 1600, it’s because the wing recognizes how important your ideas are and is accommodating to make sure you get your time.

That flexibility sets us apart in another way. We do our best to schedule your time at Kingsley when it works best for you, and we are not limited to Monday-Friday. If you want to stay longer than 1 week to get more opportunities to fly, that’s fine with us. If you need to come Tuesday-Monday instead of Monday-Friday because of scheduling conflicts, we can accommodate. If you want to try to stay here and fly over one of our drill weekends, just tell us. If you want fries with that…I digress.

Why go to all this trouble? The original goals of Top Knife to provide an advanced course and fighter experience are still valid, and we know that many units have a lot of difficulty finding time and/or seats for flight docs. But we must also remember that in 1942, General “Hap” Arnold mandated that every flight surgeon fly. This was in combat over Europe. He wanted his flight docs to walk the walk and have a genuine bond with aircrew. It worked. Aircrew morale improved, and aeromedical issues with night vision and oxygen equipment were addressed by flight surgeons who had been there. Colonel Malcolm C. Grow, Eighth Air Force Surgeon, oversaw development of the flak suits eventually worn by bomber aircrew that were credited with preventing over 2500 aircrew injuries and fatalities by the end of the war. During this century, pilot-physician Lt Col Jay “Bones” Flottmann helped solve the F-22 mystery that had plagued our fifth generation fleet. Over 70 years ago, the line and the medical corps recognized the value of putting flight docs with fliers at their place of business, and that need endures. As long as the Air Force has aircrew and flies, flight surgeons will be called upon to help solve problems that we have yet to even anticipate. You need to fly. This is your heritage. That is why we go to all this trouble.
When said unwitting full-time individual got the program back on its feet in 2013, the fiscal environment of the Air Force would not allow us to make it a formal course, since that would be duplicating the existing course at Luke. Bottom line here is that the program is unfunded. That’s the down side. However, we are able to issue CME credit, rehack most of your RSVs, put you in the Eagle, and let you tell us when you want to attend since we run this program throughout the year, which is a pretty formidable up side.

And one last thing: when you come, remember that you make the course better. Every participant’s background and response become a part of the Top Knife legacy. Yes, it’s fun to come to Oregon and fly in the Eagle. OK, it’s CRAZY FUN to come to Oregon, hang with the 114th FS, and fly in the Eagle. But come with the attitude that you are going to contribute. You’re a flight surgeon. It’s what you do.

I wish to extend sincere thanks to OR ANG State Air Surgeon and former 173 MDG/CC Colonel Bob Gentry for his contributions to this article, to the Top Knife program at Kingsley Field ANGB, and for mentoring the medical officers of the OR ANG. The list of people who have made possible the return of Top Knife to Kingsley is simply too long to recount, but I owe a tremendous debt to the 173 FW for making this happen.

SUGGESTED READING


The AAMIMO Program

David “FUDD” Hardy, Lt Col, USAF, MC, SFS
AAMIMO Program Director

The Advanced Aerospace Medicine for International Medical Officers (AAMIMO) course is a 6-month intensive program designed for international flight surgeons who have already completed the USAF Aerospace Medicine Primary Course (AMP) or equivalent and have 2 years operational flight surgeon experience. Since the first AAMIMO class convened in 1959, the course has produced hundreds of graduates from 87 countries. Thirty-nine of these students have gone on to become their nation’s equivalent to the Air Force Surgeon General. These nations include Bangladesh, Brazil, Burma, Canada, Denmark, Finland, Germany, Greece, Indonesia, Israel, Japan, Republic of Korea, Netherlands, Pakistan, Peru, Philippines, Poland, Portugal, Saudi Arabia, Singapore, Sweden, Thailand, and Turkey. Germany, Israel, Japan, and the Netherlands each have had multiple AAMIMO graduates go on to become their respective country’s SG. The majority of the course focuses on the operational military applications of advanced aerospace medicine, assuming students already have a firm academic aerospace medicine foundation.

The course provides hands-on exposure to a wide range of tactical and operational aerospace medical topics including hyperbaric medicine, global preventive medicine, mishap prevention and investigation, public health, bioenvironmental engineering, pilot selection, and aeromedical evacuation. Additionally, students visit U.S. Army and Navy aeromedical operation centers to compare and contrast various programs unique to each service. They also spend time with NASA and the FAA to better understand unique aspects of civilian aviation and the critical link between the military and civilian aerospace medicine programs. The Washington DC portion of the course allows students to meet key Department of Defense medical leaders to build upon their tactical and operational knowledge, thus developing a strategic understanding of the policy making process.

The AAMIMO also includes a Field Studies Program (FSP) allowing students to better understand American culture and core values. Students visit a variety of locations to gain a balanced understanding of the United States through studies in Human Rights, Law of War, International Peace and Security, U.S. Government Institutions, Political Processes, Judicial System, Free Market System, Media, Education, Health and Human Services, and Diversity.

During the 6-month course, students travel extensively, visiting Naval Air Station Pensacola, Fort Rucker, AFSC/Hurlburt Field, Edwards AFB, Nellis AFB, FAA/CAMI in Oklahoma City, Washington DC, and NASA in Houston. Each travel week affords both academic and FSP opportunities for students. Additionally, students may travel during their elective weeks where each student chooses a special interest topic for more in-depth study. Finally, students present a case study at the yearly Aerospace Medical Association conference, thus demonstrating to their visiting leadership and colleagues their accomplishments and enhanced understanding of operational aerospace medicine.

The program objective is to educate future military medical leaders of allied nations to provide and oversee the broad scope of aerospace medicine within their home nations and improve cooperation with allies. Additionally, the program seeks to foster lasting relationships between U.S. military medical leaders and our allied partners in the spirit of education and joint cooperation. Our allied partners have discovered over the past 55 years that the AAMIMO course has fulfilled the needs of their national military medical hierarchy. This fantastic course continues to produce operational aerospace medicine officers who know how to lead aerospace medicine efforts given the specific needs and capabilities of their nation.

Lt Col Dave “FUDD” Hardy is the new USAFSAM Chief of International Training Division and AAMIMO course director. He replaced Col Hadley “Iguana” Reed in August upon Col Reed’s retirement after 30 years of service.
Managing Bird Strikes at the Smithsonian Museum

John Miles, Maj, USAF, MC, SFS
RAM XV

One night in 2008, while flying around northwestern Missouri in a C-130, my routine low-level sortie became mildly more interesting when a bird struck the windshield – or did the windshield strike the bird? Either way, it was fairly dramatic to witness through NVGs. Since most of my recent flying had been in T-38s, I assumed that any bird strike was an emergency. Surprisingly, the C-130 crew briefly discussed the strike and then continued the sortie. We landed uneventfully and I assumed that was all there was to it.

What I didn’t realize then was that someone later scraped what remained of that bird off of that plane and sent it to the Smithsonian Institution in Washington, DC. Several years later I lived in the DC area while completing my MPH at USUHS. While there, I visited the Smithsonian many times, but I never saw that bird on display beside the Apollo II command module, the Spirit of St. Louis, Glamorous Glennis, or any of the other incredible museum exhibits. Maybe that’s because the remains were mailed to the Smithsonian’s Natural History Museum and not the Smithsonian’s Air and Space Museum. Or maybe it’s because that bird ended up not being a bird at all, but rather a bat. At least that’s what it turns out the scientists at the Smithsonian’s Feather Identification Lab had determined after examining the remains under a microscope.

At the Feather Identification Lab, Dr. Carla Dove and a small team of ornithologists/forensic scientists examine over 8000 wildlife strike specimens per year. They receive bird carcasses, beaks, wings, feathers, and sometimes just the slime, or snarge, wiped off an aircraft after a strike. As in my flight, other animals are struck by aircraft too, including bats and bugs, frogs and spiders, iguanas and armadillos. The Feather Identification Lab compares preserved specimens from its collection to the unidentified victims. Some of the lab’s specimens date back over 100 years, with a few collected by such famous biologists as Darwin and Audubon. Others have been collected only recently by suburban grandmothers who simply discovered dead birds in their backyards. For an elective aerospace medicine residency rotation, I received a behind-the-scenes tour of the Feather Identification Lab at the Smithsonian Museum of Natural History and had a brief opportunity to help identify a few of these bird strike victims. The action takes place on several museum floors devoted to science and preservation and not open to the general public.

The lab staff starts each day by sorting its mail. Over 100 bird strike victims arrived on my first day. If an entire bird, large bird parts, or distinctive feathers are received, then the staff attempts identification using key features (size, color, etc.), field guides, and comparison to preserved specimens in its collection. When using field guides with range maps, it helps to know where the bird strike took place. (Unfortunately, this information cannot always be provided due to OPSEC restrictions. Imagine what the scientists think when they identify an African bird struck by a plane they believe to be in Idaho.) The next step is to identify what part of the bird each feather came from. Next you look for distinct features of the individual feathers. Is the base of the feather thin and pointy as it is in doves? Does the feather have any obvious colors, patterns, or markings? The eventual goal is to match the unknown feathers to specific feathers on a museum specimen. When you find the right species, it’s remarkable how well the feathers match.

If whole feathers are not available or if the feathers provided have no grossly identifiable features, the next step is to examine what you have under a microscope. Lab staff looks at key features of the feathers and barbules to make an identification or to at least narrow down the species from which the feather came. Under the microscope you can see features of the barbules not visible to the naked eye – things like nodules, which may be sparse or pigmented or triangular or elongated.

If even less of the bird is available or if the scientists are still unsure after gross and microscopic examinations, then it’s off to the DNA lab. Nowadays, DNA may be the easiest route to an answer, but it’s not always the fastest, cheapest, or correct one. DNA analysis of one specimen repeatedly suggested that it was from a white tailed deer. The pilot insisted that the strike occurred at 3000 ft AGL, an uncommon altitude for finding deer. Microscopic analysis eventually revealed a fragment of a feather from a turkey vulture, which had apparently dined on a deer before impacting the aircraft.

DNA analysis requires a sample only the size of half a lentil. DNA may be obtained from the base of a feather shaft or the snarge wiped off the aircraft. Be careful when collecting it though. Chemicals added with the intent of preserving a specimen may actually denature the DNA. After the anthrax scare in DC, the Post Office began irradiating mail and destroyed the DNA in many specimens en route to the Smithsonian. A good

Identifying an American Kestrel – Falco sparverius – at the Smithsonian’s Feather ID Lab.

Continued on page 10
method for collecting snarge (and a simple one) is to clean the remains off the aircraft with an alcohol wipe and then toss the wipe into a Ziploc bag, which can then be mailed to the museum. The alcohol won’t harm the DNA and it prevents mold from growing on the specimen. If you have the whole bird, or most of it, then pluck (don’t cut) a few feathers from various parts of the bird (wings, tail, breast) and drop them into the Ziploc bag with the alcohol pads. Check the AF Safety Center website (http://www.afsec.af.mil/organizations/bash/index.asp) for detailed instructions. Air Force incidents should be documented in AFSAS, so include a report with your specimen. Then sit back while the Feather ID lab does its work. Once the scientists have identified the species, they’ll update AFSAS with the info.

Identifying species involved in wildlife strikes is one small but important step in managing the problem. As the scientists at the Feather ID Lab suggest, “you can’t manage what you haven’t measured.” Knowing the species involved in these mishaps can help focus management efforts, whether these efforts consist of designing better engines or canopies, discouraging wildlife activity near airfields, or limiting low-level flying during certain seasons or times of day.

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**Attention to Detail**

J.B. “Nasty” Nast, Col, USAF, MC, SFS
60 MDG/SGP

What is the purpose of a medical record? You might think the medical record exists solely for the purpose of coding, which leads to billing, which leads to…okay don’t get me started on that. No, the purpose is communication. Not communication to the patient, but communication to other healthcare providers. Unfortunately, it can also be communication to legal professionals, but more on that later.

Think about how frustrated you get at the end of a busy clinic session when you review a record that says “failed CCT (cone contrast test, as if you didn’t know), but passed PIP 1, meets standards.” What has this record communicated to you? Communication depends on some degree of mutual understanding between the parties. If you don’t understand that failing the CCT requires a waiver for color vision deficiency, then this record might communicate something different to you than if you were Dr. Dan Van Syoc, who is in charge of the Air Force Waiver Guide. Communication is everything in both flying and medicine, and we are privileged to be a part of both. Work to understand your job as a flight surgeon by becoming familiar with the medical standards. We are expected not only to be the standards experts but also to communicate those standards to our colleagues.

Does your medical documentation communicate thoughtful, thorough, timely standards-based care? Did you remember to document an aeromedical disposition? Probably not all the time, every time. However, this is what we should strive for. This is why we do peer review. When that record is on lockdown for a mishap investigation or standard of care review, will you be able to sleep well at night knowing how much it will be scrutinized?

In conclusion, since I have reached the end of even my attention span, flight surgeons are aerospace medicine PROFESSIONALS. We are held to a higher standard due to the unique occupational medical requirements of our patients. Part of our professional obligation is to ensure quality care for our patients. One way to do this is through proper documentation in the medical record. Now that you are interested in medical record documentation, check out a very interesting and well-written paper soon to be or already published in *Military Medicine* entitled “Standard of Care of Erectile Dysfunction in U.S. Air Force Aircrew and active duty not on flying status.”

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**Flight Surgeon CME and MOC Now Online!**

Attention SoUSAFFS!

Any of you Aerospace Medicine specialists having trouble getting your MOC for continuing Board Certification? Know any flight docs who need to get some CME for their licensure? Announcing some online CME and MOC offerings for Aerospace Medicine practitioners. AsMA has gone to great trouble to record, format, and make available the best sessions from San Diego’s Annual Meeting – the Grand Rounds. These sessions use a case presentation format to discuss aeromedical issues and the current thinking in the field. You can find them on the AsMA website at the link below.

(http://www.asma.org/continuing-education/courses)

Additionally, AsMA has made available the RAM Bowl, a College Bowl format competition of questions on facts and factoids in Aerospace Medicine, featuring last year’s Residents in Aerospace Medicine. It is loads of fun and counts as 1.5 hours of CME! Check it out.

The AsMA website will send you to the Intelligiquest Media site for the actual content. And at only $6 per CME credit for AsMA members (plus only $0.67 for MOC!!), it is the most cost-effective CME/MOC known to humankind! So hit the link above and check out what AsMA has for flight surgeons.

Happy Educating. And spread the word far and wide!!

For any further questions or to give feedback on what else you’d like to see, contact the Executive Director of AsMA.

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On July 1, 2013, Majors Peter Baldwin and Clifton Nowell began their training in the Wright State University (WSU) family medicine residency. Their entrance into the program represented the culmination of years of dialogue, effort, and collaboration on the part of many within the aerospace medicine community, as well as numerous “blue ribbon panels” tasked with identifying future training needs.

Known as the RAM-FM, the program represents a joint endeavor between USAFSAM and WSU. It targets general medical officer (GMO) flight surgeons who have a passion for operational medicine but desire the clinical proficiency represented by a family medicine residency. Accessed through the Joint Services Graduate Medical Education Selection Board, two to three selectees per year begin with their USAF residency in aerospace medicine (RAM).

The Air Force RAM is the largest preventive medicine residency in the U.S. and has been producing graduates in support of Air Force operations since 1951. The aerospace medicine practicum years offer unparalleled experiences, with aerospace medicine rotations at Wright-Patterson, Tinker, Keesler, the Aeromedical Consultation Service, Mayo Clinic, NASA, and the FAA; occupational medicine at Hill AFB; hyperbaric medicine; and a myriad of exceptional elective opportunities. Residents are trained to fly, including soloing a private aircraft, and are on active flying status, attached to a local C-17 unit (except for the Master’s program year).

Upon graduation from the RAM, training immediately commences with the WSU Family Medicine Residency <http://www.med.wright.edu/fm/res>, which offers an outstanding, community-based program. It provides residents with practical, hands-on patient care treating a diverse population with high disease acuity in an urban setting. As there are no other residencies embedded at Dayton’s 350-bed Good Samaritan Hospital, senior residents “run” their own inpatient service under the watchful mentorship of dedicated, full-time faculty. As a result, WSU FM residents achieve a level of clinical expertise that is often lacking in many other training programs.

Residents can be given constructive credit for prior internships and other venues. This credit is awarded under the guidance of the American Board of Family Medicine and at the discretion of the program directors. An average of 4 to 6 months credit is generally expected, but is case-dependent. While at WSU, RAM-FM residents continue under the jurisdiction of USAFSAM, remain on flying status, and stay connected with the Air Force community through flying with their C-17 unit, attending RAM journal clubs and social events, spending time in the flight medicine clinic, and completing required and elective rotations at the base. For example, this year our residents will be doing their cardiology and psychiatry rotations at USAFSAM’s Aeromedical Consultation Service. Other experiences that will be considered include the SGP course, Global Medicine course, Occupational Medicine Symposium, etc., all of which are designed to ensure that graduates are ready for responsibilities at their next Air Force assignment.

Graduating residents will be vectored to traditional RAM assignments, particularly Chief, Aerospace Medicine, although efforts will be made to utilize their recently acquired skill set. Countless other clinical and non-clinical assignments are available as well. The RAM-FM program is open to active duty GMO Air Force flight surgeons who have completed at least 2 years in flight medicine (at time of entry into the RAM). It is designed to vector interested Air Force active duty flight surgeons into a career path that will produce the best combined expertise in operational and clinical medicine. If you have questions about this outstanding and competitive program, please feel free to contact Colonel Michael Jacobson, RAM-FM Program Director, at michael.jacobson.6@us.af.mil or (937) 938-2651 (DSN 798-2651). Physicians will secure a master’s-level graduate degree as well as board certification in two specialties, both of which offer significant career opportunities both in and outside of military medicine.
Sweet Sixteen!

Kevin Hettinger, Lt Col, USAF, MC, SFS
RAM XVI

This June, the newest class of United States Air Force School of Aerospace Medicine (USAFSAM) residents arrived at Wright-Patterson AFB to begin the 2-year Residency in Aerospace Medicine (RAM) program. The RAM XVI class consists of 16 residents; therefore, they have selected as their motto the Latin phrase “Suavis Sedici,” which translates as “Sweet Sixteen.” This motto is reminiscent of the 16 top teams in college basketball’s prestigious annual tournament and symbolizes the 16 class members’ efforts to obtain excellence in the career of Aerospace Medicine.

The members of the RAM XVI class arrived at USAFSAM with varying clinical backgrounds. Twelve have prior residency training, with nine board-certified in family practice, one in general surgery, one in emergency medicine, and one in preventive medicine. Four entered the RAM program after tours as General Medical Officer flight surgeons. Two are currently enrolled in the RAM-FM program and will transition directly to Family Medicine Residency training at Wright State University following aerospace medicine graduation. Each resident completed a Master’s level program prior to beginning the formal RAM years, consisting of 12 Master of Public Health degrees, 3 Master of Occupational Health degrees, and 1 Master of Aerospace Science.

The Aerospace Medical Association website describes the focus of the RAM program as “geared to prepare residents for the care of flight squadrons and their families, as well as crew at sea or remote locations.” Additionally, the program will “prepare them for the breadth of medical problems associated with the flying environment.” To provide this foundation of familiarity in the flying environment, the residents began their training with a week of aviation ground school followed by 3 weeks of civilian flight training in Piper Warriors. Over half of the class completed solo flights in their aircraft at the conclusion of this program. In August, the RAMs traveled to Randolph AFB for Medical Officer Flight Familiarization Training, completing three T-6 sorties and five simulators flights. Additionally, to hone their clinical skills and broaden their aerospace medicine experience, the RAMs will rotate through the Mayo Clinic, the Aeromedical Consult Service, Hill AFB Occupational Medicine Clinic, Randolph AFB or Keesler AFB, the FAA, and NASA. They will also have opportunities for several clinically oriented elective rotations.

The RAM XVI class brings extensive experience as administrators and aviators. Several have served as Chief of the Medical Staff and one as Chief of Aerospace Medicine. One served as a Public Health Officer prior to Family Medicine Residency training at Wright State University following aerospace medicine graduation. Each resident will have opportunities for several clinically oriented elective rotations.

The RAM XVI class patch depicts a set of crossing contrails ascending in a deep blue background representing ascension from the atmosphere to space. The stars form the Ares constellation beneath a transposed ram head, which represents the noble and aspirational calling of the Residency in Aerospace Medicine. The aircraft shapes depict military cockpit symbology for the latest generation aircraft. The white and black aircraft represent the overt and covert world, respectively, in research, training, and operational aviation. At the base of the contrails is the Wright Brothers’ flyer representing the heritage of aviation and location of USAFSAM at Wright-Patterson AFB, Ohio. The motto “Suavis Sedici” represents the RAM Class of 2016 as well as the number of flight surgeon cohorts in the “Sweet Sixteen” class.

<table>
<thead>
<tr>
<th>Resident</th>
<th>Master’s Degree</th>
<th>School</th>
<th>Prior Duty Station</th>
<th>Medical Degree/Specialty</th>
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<td>Elizabeth Anderson-Doze, Lt Col, USAF,MC, FS</td>
<td>MPH</td>
<td>UNC Chapel Hill</td>
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