Greetings again, flight docs. Welcome to the Winter 16 edition that I hope will give you all some tools to use in your daily practice of flight medicine for the USAF. It is hard to believe the year is half over! We are into a “battle rhythm” and deep into planning for the upcoming AsMA Annual Meeting. Hopefully you recall that I challenged each of you to 1) advance Aerospace Medicine (AsM), 2) recruit and retain more flight surgeons and AsM specialists, and 3) foster continuing professional development and leadership, particularly within our enlisted force, the 4N0X1-F technicians. The Base Operational Medical Cell effort is part of number 3 and will be a focus for the next edition. But we wanted to give you the underlying philosophy of medical standards, thinking to help you lead the BOMC implementation for the coming months. So hang on. Here goes!

My personal framework for thinking about medical standards and waiver decision making goes kind of like this. Will this person with condition “X” be able to...

1. Make it through the training that the USAF is going to put them through?
2. Be deployed anywhere on the planet to do the things we trained them to do?

Continued on page 2
We start off with Mobbic’s confessional (yikes! What a thought…) on ness and mission completion.

training health, Dr Littlebird, gives you a prev doc’s look at a single ly with our last edition on why flight docs fly. The USAF’s expert on the impact of standards on our core business – combat. This ties nice-vice occurs. The goal is to sustain and maximize mission effective- density, high demand career fields. All of this is done in an effort to Force” also alters the “calculus” of these decisions for certain low do shop visits)? A healthy understanding of the “needs of the Air everyday work environment like (hence, why we are required to deploy and study global infectious disease risks)? What is the likeli- hood of recurrence or worsening (prognosis and prevention)? What is the everyday work environment like (hence, why are we required to do shop visits)? A healthy understanding of the “needs of the Air Force” also alters the “calculus” of these decisions for certain low density, high demand career fields. All of this is done in an effort to maximize the performance of our Airmen in the full spectrum of chal lenging environments and stressful conditions in which military ser vice occurs. The goal is to sustain and maximize mission effective ness and mission completion.

We start off with Mobbic’s confessional (yikes! What a thought….) on the impact of standards on our core business – combat. This ties nicely with our last edition on why flight docs fly. The USAF’s expert on training health, Dr Littlebird, gives you a prev doc’s look at a single disease process – eczema – and the reason that standard is “on the books.” Dave Miller’s primer on the DODI standards comes next to explain how it is developed and maintained – straight from the horse’s mouth (so to speak). Speaking of horses, Backdraft gives a fantastic overview of accesson medical standards process, its complexity, its varying authorities, and AETC’s myriad roles. He discusses the foundational nature of the DODI, which (paraphrasing the words of an Apollo 13 astronaut) is NOT a “load of flight surgeon horse s…” er, manure. Next Dr. Miller educates you on the MSD and our ongoing efforts to improve (CPI) and adapt the standards. You flight docs play a pivotal role in this arena by identifying issues that don’t make sense to you. We have an orientation to MFS followed by the history of the USAF Waiver Guide. Next Pfieffur has a practical guide (almost a checklist really) of how to produce a quality waiver for your patient. This is directly linked to the BOMC processes coming on line and can save you significant anxiety. Don’t forget to check for all past waivers, too!

Wow. That’s a lot of stuff already. But wait! There’s more… Dr. Colby Uptegraft has put together an iPhone/iPad app that has key references at your fingertips. (Sorry Android users.) Next the AETC Standards shop has put together some tips for both PEPP and AIMWTS to help get your physcals through the first time. Stay tuned for new updates as we move our EHR processes towards Aero and BOMC. Next Hawkeye gives us a provocative vision for profile management to maximize performance and availability with evidence-based information. It is where we need to move to provide our CCs their “airmen availability.” Voodoo gives his years of perspective on a difficult topic, fear of controlling, which links to our last edition’s article on fear of flying. There is a constant lament by AMP students that has been going on for years – why is there so much ophthalmology in the AMP? I endeavor to answer that after a tasking to address comments that flight surgeons disqualify too many candidates for pilot training. We actually don’t DQ too many. But many of the DQs are related to eyeballs. Live it. Love it.

And to wrap up the medical standards perspective, Maj Tong gives you a glimpse into the reason we have flight surgeons and medical standards. The CRG is a perfect example of the mission that gets handed to the USAF. The flight surgeon’s foundation in medical standards (see the paragraph after the 5 things above) and expedition ary knowledge is critical for the missions that the nation expects its Air Force to do. And for the lagniappe – our sundries for this issue include the second installment of the history of your flight surgeon wings by Doom and the new RAM class listing for your SA.

Wow. What a lineup! At the risk of sounding repetitive, this edition is bursting at the seams with great perspectives and practical articles to help you understand how to think through medical standards, making you a much more effective flight surgeon. Please share this edition with everyone associated with the BOMC – profile officers, MSMEs, Techs, Nurses, PAs, Docs, Admin, SGHs, and even CCs. This edition will be a must-read for several years to come. Thanks for what you all do every day for our Air Force. Hopefully this edition will help you to 1) advance AsM, 2) recruit and retain more flight surgeons and AsM specialists, and 3) foster continuing professional development and leadership. We definitely have the “greatest job in the Air Force”!

I’m looking forward to connecting up with everyone in Atlantic City. Thanks again for the opportunity to lead this great organization and keep ‘em flying!

Bugs
Hernando J. Ortega, Jr., MD, MPH
Has anyone ever come up to you and asked, “Don’t you have any standards?” If you didn’t know what to say, the answer is “Yes!” We have Medical Standards and that is what this issue is all about. But, what are standards? I asked Dictionary.com and found a few ideas. First; serving as a basis of weight, measure, value, comparison, or judgment. At cdfa.ca.gov, “A Brief History of Weights and Measures,” the question is asked, “How can you know that the pound used to weigh your apples is the same whether you are in New York City or Los Angeles?” Weights and measures officials in each state use standards that are checked against national standards in Washington, DC. Likewise, how do we ensure that aviators at Ramstein are weighed against the same set of measures as aviators at Minot?—you must utilize established rules or principles that are used as a basis for judgment, such as AFI 48-123. When was the last time you went to the grocery and the checkout clerk asked you just to estimate how much your apples weigh? Every time the apples are measured against the standard. This issue begins with several articles that emphasize the need to consistently utilize the standards as we interact with flyers. This way, when you’re down range, you and troops on the ground are working with “an approved model”: something considered by an authority as a basis of comparison. This is not the time to find out that the mission has been entrusted to non-standard aviators. However, certainly not every great pilot or airman fits the mold, and we should champion the cause of those whose condition may be substandard, but who gain our confidence in their ability to skillfully and safely fly, fight, and win. For this, there is another definition of standard— manual; not electric or automatic; e.g., standard transmission. There are tools in place that allow the application of the art of medicine to these rules and principles. This issue will empower you to more capably submit waivers for your flyers.

These “Standards” definitions emphasize the importance of flight surgeons learning our standards and consistently applying them. Additionally, as we immerse ourselves in our operational units and get to know our flyers, we not only have a more accurate scale upon which to weigh, but we are more apt to grab that “manual” transmission on their behalf as appropriate. This foundational issue will describe several medical standards and illustrates from the experience and insights of seasoned flight docs how they can best be utilized. We’ve even added articles about Flight Surgeon history and a little known operational medical unit. Perhaps this issue will become “The Standard Issue”-- of recognized excellence or established authority! ✨

SoUSAFFS Merchandise

We are currently in the process of reorganizing and revamping our merchandise inventory and online store, but rest assured that both the Mishap Investigation Handbook and Flight Surgeon’s Checklist are the most updated versions available. Thank you for your continued patience with our merchandise sales department – it is our aim to keep you armed with the tools and gear to keep you on top of your flight medicine game!

COST:
The Aircraft Mishap Investigation Handbook and the Flight Surgeon’s Checklist are $45.00 each.

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Orders can be followed up through our merchandising officer Capt Ashley Franz at ashley.franz@us.af.mil.
Flight docs are the bearer of medical standards. This simple statement of fact eluded me in my youth. Throughout medical school and residency, my focus was solely on my patients’ wants. Think about it! I worked for the patient, and as their physician, I was their strongest advocate. Damned Air Force Medical Standards! No illness, injury, or disability would stand between me and my patient’s ability to “Fly-Fight-Win.” This is their livelihood, and medical standards should not interfere with their career. So as any good primary care doc would do, I would minimize or s-l-o-w roll a disqualifying diagnosis. They want to deploy? Absolutely, I support them, and when caught, I would write glowing deployment waivers and MEBs advocating for the patient to be retained. As their doctor, that is what I was supposed to do, right?

In 2004, I deployed for the first time to Balad AB, Iraq. As one of two flight surgeons assigned to the 332 CASF, I received stabilized patients throughout the day and uploaded them on AE flights during the night: 1938 patients in 90 days. For a guy fresh out of family practice residency, the medicine was relatively easy—post-op wound care, pain and transfusion management, basic stuff. Despite the high volume of patients, before long, I noticed the majority of patients weren’t from battle injuries but from DNBI. Who are all these broken, non-injured people? I soon realized the primary offenders were U.S. Army and defense contractors—patients with Crohn’s disease, ulcerative colitis, uncontrolled malignant hypertension, dental caries, to mention a few. My favorite was a 400-pound contractor with a 53 BMI, 4 weeks status post angioplasty, presenting with chest pain. We required 8 members to move his litter. Why are all these broken people down range? Doesn’t anyone follow standards?

Despite this low signal-to-noise ratio, I plodded along, taking care of anyone presenting to the CASF. One afternoon I visited with several of the U.S. Army patients. These young men suffered from gunshot wounds and several were missing limbs and eyes. Despite deploying with their entire unit, over 30% of their brothers-in-arms were sent home due to preexisting medical conditions. Without replacements, this manning shortage led to extra patrols and guard duties. The result: fewer soldiers too fatigued to repel the enemy when their FOB was overrun. This is when I had an epiphany—by not following medical standards, not only were individual patients at risk, but those who remained were overworked and more vulnerable.

My philosophy transcended. Not only do we work for the patient, we work the patients we don’t see, as well as the Air Force. We must protect them all. Protect patients from harming themselves, protect patients from harming others, and protect the Air Force from harm to the mission. Appropriately screening and DQing just one Army soldier may have changed the whole outcome at the FOB.

Flight docs are the bearer of medical standards. Due to our tight association with the Line, most flight docs have internalized this. Our challenge is to educate and impress the importance of medical standards upon the unenlightened. Failure to do so places patients, others, and the mission at risk.
The views expressed in this newsletter are those of the individual authors and do not necessarily reflect the official policy or position of the Air Force, the Department of Defense, or the U.S. Government.
A Rash Thought...

Forrest Littlebird, Lt Col, USAF, MC
Chief, Training Health and Human Performance, AETC/SGP

The by-line isn’t a typo. I’m not a flight surgeon. <gasp!> But I regularly sleep in a Holiday Inn Express… Ok, not really. But I am a doc. So you might be asking yourself, what in the name of Sam Hill is a guy who isn’t a flight surgeon doing writing an article in the Society of USAF Flight Surgeons Newsletter? I am boarded in Preventive and Occupational Medicine. And I happen to be stationed at AETC/SG in charge of Training Health and Human Performance (so blame Bugs). Occasionally, I also pinch hit for the medical standards branch on MEPS waivers determinations. So I run across a variety of issues dealing with trainees and medical standards and, every once in a while, an issue that isn’t routine and makes my brain grow (or hurt).

A while back, I was preparing a SITREP for the boss on a trainee hospitalized with severe vaccinia but thankfully not the neurologic form. You may recall that vaccinia is the vaccine adverse event that arises post smallpox vaccination, yes… that little scab. It is especially problematic in individuals whose immune system is weak or malfunctioning. That little scab becomes multiple, HUGE scabs across the entire body, which can make you pretty sick. This particular airman developed a severe vaccinia because of an undetected leukemia. However, many other defects of the immune system could produce a similar result. Conditions such as HIV obviously come to mind, but lesser diagnoses are of significant interest, too – cell-mediated immune deficiencies that cause conditions like eczema and psoriasis. This was a light bulb moment for me.

I’ve reviewed several MEPS cases for waiver consideration of a “little eczema as a teenager” or “skin rashes beyond the age of 12” or “simple mild psoriasis on the elbows only.” The arguments are always the same – it’s just a little skin rash. It doesn’t affect their daily activities. It’s easily controlled with topicals. You know the drill. And the services are loath to allow waivers for many of these cases. Eureka – now it makes more sense! It’s not the rash that is so much the issue as it is a manifestation of the biologic dysfunction precipitating rash… the cell-mediated defect and/or other immune mechanisms that are the issue. My immunology classes taught the fundamentals of this but stopped short of drawing these practical clinical applications of the science.

Most of the time we “forget” that we are in the military service and not simply a medical organization treating disease. The medical standards business demands that you think beyond your clinical training and use your complete knowledge of the operating environment of the profession of arms. Since the medical clearance for this trainee’s first duty assignment required smallpox vaccination, we fortuitously discovered and will treat the underlying leukemia causing the vaccinia reaction. We rarely see severe forms of vaccinia because most all cell-mediated defects are screened out from military accession—that is, unless we forget our medicine and our duty as military physicians to ensure that all members are combat ready to include the full spectrum of preventive assets (vaccines, malaria, insect repellents, anti-CBRNE, etc.) that we use to ensure preparedness and combat effectiveness. This occurrence strengthens my understanding for seriously considering waiver decisions involving “just a little rash from time to time.” Hope you learned something, too! And thanks for letting a non-flight doc say a few words.

Flight Surgeon Oath

I accept the sacred charge to assist in the healing of the mind as well as of the body.

I will at all times remember my responsibility as a pioneer in the new and important field of aviation medicine.

I will bear in mind that my studies are unending; my efforts ceaseless; that in the understanding and performance of my daily tasks may lie the future usefulness of countless airmen whose training has been difficult and whose value is immeasurable.

My obligation as a physician is to practice the medical art with uprightness and honor; my pledge as a soldier is devoted to Duty, Honor, Country.

I will be ingenious. I will find cures where there are none; I will call upon all the knowledge and skill at my command. I will be resourceful; I will, in the face of the direst emergency, strive to do the impossible.

What I learn by my experiences may influence the world, not only of today, but the air world of tomorrow which belongs to aviation. What I learn and practice may turn the tide of battle.

I may send back to a peacetime world the future leaders of this country.

I will regard disease as the enemy; I will combat fatigue and discouragement as foes; I will keep the faith of the men entrusted in my care; I will keep the faith with the country which has singled me out, and with my God.

I do solemnly swear these things by the heavens in which men fly.
Organizational Philosophy and Predictive Occupational Standards

David C. Miller, Lt Col, USAF, MC, SFS
Chief, Physical Standards Development

What is DoDI 6130.03 and, more importantly, why should I care? Where did that obscure instruction come from, and why is it making so many docs cranky? (If you thought the ASWG was contentious and confusing, wait ‘til you see this one!)

Hopefully, this is no surprise to anyone reading FlightLines. Current evidence suggests that those who read FlightLines are smarter, faster, stronger, and better looking than almost everyone else, so you likely already have DoDI 6130.03 on your desktop, phone, personal memory, and potentially even tattooed on your thigh for easy reference. For outliers, here is a brief update on this crucial DoDI, which is mentioned in the opening paragraph of AFI 48-123 (which implements DoDI 6130.03) and discussed more fully in Chapter 4.

DoDI 6130.03 is the “Medical Standards for Appointment, Enlistment, or Induction in the Military Services.” This sets the accession standards for the DoD and is used by other Federal entities as well. The DoDI is in the middle of a major rewrite, which started in 2014, and may be finished in 2016, maybe. The Accessions Medical Standards Working Group (AMSWG) has been regularly meeting to collaborate on this instruction that has many far-reaching implications. The AMSWG is co-chaired by the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD/P&R) and the Assistant Secretary of Defense for Health Affairs (ASD/HA). The major players in this update include MEPCOM and DoDMERB, SG Representatives, Guard and Reserve Affairs, AMSARA, and dozens of SMEs from all Services. We also sneak USAFA and AETC into as many of these meetings as possible, since they apply this standard every day. There are more acronyms, but you get the point.

Did you know that the accessions standards apply as retention standards for USAFA cadets and ROTC scholarship students until graduation/commissioning? The underlying philosophy for DoDI 6130.03 is culminated in “The Big Five”:

Ensure that individuals under consideration for appointment, enlistment, or induction into the Military Services are:

1. Free of contagious diseases that probably will endanger the health of other personnel.
2. Free of medical conditions or physical defects that may require excessive time lost from duty for necessary treatment or hospitalization, or probably will result in separation from the Service for medical unfitness.
3. Medically capable of satisfactorily completing required training.
4. Medically adaptable to the military environment without the necessity of geographical area limitations.
5. Medically capable of performing duties without aggravation of existing physical defects or medical conditions.

All of the potential conflicts in the ASWG are greatly magnified in the AMSWG. Lumper vs. splitters and not forgetting the retention standard are big concerns for the ASWG. For the AMSWG, the Services have significant philosophic and organizational differences that are hard-wired and immutable. For example, the USAF looks at every applicant and considers the course of the applicants’ current diagnosis over their potential 20+ year career and into the VA. The Navy considers only the first term of obligation, and the Army considers accessions a raging success if they complete one tour through the AOR as an 11B and then pull chocks. The USAF is interested in hiring, training, and retaining highly skilled, technically proficient poster children for national defense. The Army wants to ensure that new recruits can feed themselves and pull a trigger. (No kidding, real discussion!) These significantly different underlying mindsets lead to the USAF’s conservative approach to what illnesses/injuries/conditions are allowed and the Army’s much more lenient approach as they know most soldiers have no intention to stay for 20 years. There are also practical concerns that arise regularly with each standard discussed, such as ability to test (some tests aren’t allowed for different reasons), identification of disqualifying conditions (different skill sets/experience of examiners), self-disclosure concerns (some applicants may “forget” they had a psychotic break following their TBI), and the limitations inherent in the sheer number of applicants every year.

These standards are being updated with a focus on bringing the most current evidence to the table. AMSARA monitors the accessions (with or without waivers) for the Services and tracks who completes basic training, 6 months, and 2 years. We can then validate that condition X does not complete basic training 70% of the time (appropriate standard), or condition Y always remains on active duty after 2 years in service (standard may be too strict). We also bring in multi-service SMEs to ensure we are up to date on current literature, practice patterns, standard of care, and expected prognosis for the conditions. This has led to major updates in some sections, as well as significant differences in opinion (put 30 docs in a room and ask them to write a sentence about anything, and see how it goes). There has been significant pressure to “loosen” standards from outside the AMSWG, but the evidence does not always support loosening standards. For other diagnoses, the existing standard was removed or completely rewritten due to advances in medicine. Some standards discussions were highly controversial—punctuation or verb tense led to serious work stoppage and required a break (or “time out” if you will). Other standards were quickly and unanimously agreed upon with no dissent (however, this does not mean it will be supported outside the confines of the AMSWG).

The current draft will make one more pass through the SG Consultants and SMEs, then the personnel teams, then the non-medical appointees, who are very interested in what was written. There are a lot more individuals who want to “make their mark” on this DoDI, so we will likely not see an impact until this summer. Or fall. Maybe winter.
To Waive or Not to Waive, or Horse Betting, Odds, & Handicapping

Michael A. “Backdraft” Madrid, Lt Col, USAF, MC, SFS
Chief of Medical Standards, AETC/SGPS

Military Medical Accession Standards provide for the vetting of applicants similar to a veterinarian’s exam of a potential a race horse. The conformation and physical evaluation of a horse is at very least an attempt to rule out future problems. At best it gives you a really good idea about the animal’s performance in various tasks. A horse with the potential for recurrent lameness is a significant loss on investment. Worse yet is the horse with a fetlock that blows out in the home stretch and kills the rider and/or injures other horses and riders. The medical evaluation process for a horse is akin to the medical evaluation of our military service members whose “race” entails winning military engagements, battles, conflicts, wars, and defending our freedoms. Additionally, unlike horses that develop medical issues, we don’t send our troops, seamen, and airmen to the glue factory but instead may incur a lifelong medical disability payment. So it’s unwise to waive an applicant who has a significant risk of developing a duty/mobility limiting condition and/or a medical retirement.

To understand the process one must first have a familiarity with the instructions that relate to the medical standards. To enter any of the military services, all applicants (officer and enlisted) must meet the Medical Standards for Appointment, Enlistment, or Induction in the Military Services (DoDI 6130.03). The application of medical standards is first made at the Medical Enlistment Processing Station (MEPS) for enlisted applicants, Officer Training School (OTS) applicants, or Health Promotion Scholarship Program applicants. The Department of Defense Medical Evaluation Review Board (DODMERB) is the medical starting point for Reserve Officer Training Corps applicants, U.S. Air Force Academy (USAFA) applicants, and Uniformed Services University of the Health Sciences (USUHS) applicants. MEPS and DODMERB are not limited to Air Force accessions but feed the Army, Navy, Marine, and Coast Guard programs and thus apply the basic standard. Each service may apply additional requirements for specialized programs, and granting medical waivers is a service-specific function.

Waiver decisions can be made by several entities. Medical waivers for USAFA are made by the USAFA/SG/SGP and for USUHS by the Assistant Secretary of Defense Health Affairs. Enlistment waiver determination for the AF Reserve is made by AFRC/SG and for Air National Guard by ANG/SG. The remaining bulk of AF waiver determinations is delegated to the Air Education and Training Command SG, done by AETC/SGPS, whose office over the past decade has made around 32,000 determinations per year. This number of determinations includes all AF (active, Reserve, & Guard) initial flying class and special operations physicals for all AF MAJCOMs, but does not include the number of initial and renewal trained asset AIMWTS reviews. To get a visual on the complexity, check out the Medical Standards Responsibilities flowchart for a representation of just some of the information that flows in and out of our office. Beyond the medical waiver process is the Exception to Policy (ETP) waiver, which is a line process that trumps a medical disqualification. ETP authority is the Chief of Staff of the Air Force and should be based on the special skills that an applicant brings to the fight. ETPs other than anthropometric ETPs (that’s a whole other story!) are very rare.

The calculus used to make waiver determinations is multifactorial, complex, and unique to each case. At very least an applicant should meet retention standards per the Medical Standards Directory of AFI 48-123 for waiver consideration. For initial accession waivers, AETC/SGPS may utilize SG consultants and for aeromedical waivers the Aeromedical Consult Service.

The DODI mentions several tenets for Standards medicine – to make sure applicants are…

1. Free of contagious diseases that probably will endanger the health of other personnel
2. Free of medical conditions or physical defects that may require excessive time lost from duty for necessary treatment or hospitalization, or probably will result in separation from the Service for medical unfitness
3. Medically capable of satisfactorily completing required training
4. Medically adaptable to the military environment without the necessity of geographical area limitations
5. Medically capable of performing duties without aggravation of existing physical defects or medical conditions

In an all-volunteer force environment, we do our best to get to “yes” for everyone, and often we ask for more tests in that effort. We consider the risk of progression and current extent of the medical issue. Further, we assess the potential risk on the health and safety of the individual applicant as well as his/her wingmen while performing the AF mission. From a business standpoint, we consider the return on investment (ROI). Part of ROI is evaluating the expected length of service of the applicant, which varies from the duration of an initial enlistment to a minimum of 12 years for a pilot applicant to a 20+ year career. This ROI math continues to change over time considering the increased specialization and investment in AF personnel. Consider that in WWII it took 1,000 planes with a crew of 10,000 to hit one target, but in OIF/OEF it took 1 plane and 1 crew to hit 6 targets. (See FlightLines Vol. 25, No. 2, Winter 2012, Telewarfare: A New Human Performance Frontier.) This increasing specialization is common among many AFSCs, and it is reasonable to look at a 20-year career as opposed to a single enlistment for those AFSCs.

Our main goal is to support the future AF by considering the risk of developing a duty-limiting and/or mobility-limiting condition as well as the potential impacts on the mission of Fly, Fight, and Win. So after we ponder whether this individual can 1) make it through BMT or OTS, 2) do the duties required of the job anywhere on the planet, 3) make it through his/her first commitment, 4) tolerate the stresses of military service, and 5) not get injured or sick and miss too much time, then we make the call to approve or not. It ain’t so easy sometimes. But then again, neither is raising and racing thoroughbred horses. Giddyup! 🐴

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The views expressed in this newsletter are those of the individual authors and do not necessarily reflect the official policy or position of the Air Force, the Department of Defense, or the U.S. Government.

The Evolution of Evidence-Based Medical Standards

David C. Miller, LtCol, USAF, MC, SFS
Chief, Physical Standards Development

From the newest GMO to grace your base, to the crusty Colonel on Air Staff, AFI 48-123 and the Medical Standards Directory remain the guidebook for today’s flight surgeons. On apparent fleeting whims from the Good Idea Fairy, these instructions are irregularly updated through arcane processes that lead to new standards that are unfathomably more complicated than their predecessors. Or sometimes much simpler, but wrong. Where do these all-powerful instructions come from?

The final goal of the 48-123 and the MSD, when it comes to medical standards, is to ensure an appropriate balance (agreed on by both the Line and the SG communities) between the safety of the individual, mission safety, and mission completion. Ideally, every medical standard would have at least 100 years of documented evidence on at least 1,000 aviators (in that specific AFSC and airframe) that completely prove the safety of each diagnosis or condition, or verify their unacceptable hazard/death rate. Unfortunately, as you may have surmised, that is almost never the case. In the absence of a mountain of SORT A, gold-standard studies, we must rely on the best evidence available and attempt to extrapolate that to the military aviation environment using the experience and training of our panels of experts including physiologists, dentists, BEEs, public health teams and, dare I say it, mental health providers.

Continued on page 10
Recommendations for updates to the 48-123 and the MSD come from a variety of sources. The SG Specialty Consultant may advise on new improvements to medicine, or identify concerns with existing standards. Sometimes, recommendations come from the Line (usually the A3 side of the house), based on operational concerns and future plans. Occasionally, a recommendation will come from AFPC/DP2NP (formerly known as DPANM), where they identify a diagnosis or condition that always receives a RTD without a C Code and may be a candidate for change, or they identify a standard that has resulted in exorbitant numbers of MEB requests for a condition that should not warrant an MEB. The ACS regularly reviews their study groups, waiver recommendations, and reviews from the ACS SMEs and frequently provides recommendations to improve our MSD based on the evidence that they have reviewed. A significant change to the MSD may come from far outside the medical standards cubicle in the form of a Directive from “above,” where discussion, evidence, and clarity are all verboten.

However, the majority of our recommendations for change come from you, the base level flight surgeon who reviews the AFI and MSD to help keep the aviator alive and the mission successful. The local flight doc finds an error, a confusing or outdated statement, or identifies a diagnosis that is clearly disqualifying based on all the literature available today, but is currently not in the MSD. The local flight doc notifies the MAJCOM for direction, and the MAJCOM forwards on to AFMSA/SG3PF (me), where it is verified and presented to the ASWG. The ASWG (Aircrew Standards Working Group) is composed of the ACS, AETC, USAFA, and the AF “Standards Guy” (AFMSA/SG3PF). Any MAJCOM/SGP or SGPA may request the ASWG to consider any relevant topic. An AF/A3 representative is always invited, and frequently the MAJCOM/SGPs attend to stay “in the know,” as well as get an inside look prior to the FOMCB.

Recommendations from the ASWG are presented to the Flight and Operational Medicine Corporate Board (FOMCB), formerly known as the Aerospace Medicine Corporate Board (AMCB). The FOMCB includes the SG Consultant for Aerospace Medicine, as well as SGPs from AFMOA, AFMSA, and all the MAJCOMs. At the FOMCB, the recommendations are thoughtfully reviewed and wisely deliberated, then either approved, modified, tabled, or sent for further clarification or evidence before arriving at a final decision. Unless the bar is nearby, then all bets are off. If approved by the FOMCB, the new standard is sent to the AFMSA/SG3P for final approval and publication.

Arriving at the perfect set of medical standards will remain elusive, as it is an iterative process with many points of influence, including some outside the realm of medicine. The desire to lump more standards together is always at odds with the desire for more specificity, i.e., “anything that the flight doc thinks is disqualifying is disqualifying” versus “list every single diagnosis or condition in the DSM-5 and then let the X fall where it may.” The desire for more RPA pilots in the next year is at odds with a long-standing vetted standard. There are many more opportunities for conflict, but you see how it goes.

Hopefully this has provided a little insight into the great Medical Standards Mystery. The topics discussed at the ASWG and FOMCB are usually posted on the Kx for open review, so keep checking the Kx for updates. (You do have the Feb 2016 MSD, right?) I value your input; keep the good ideas coming! 🌟

Medical Flight Screening?

Chaz Shulrow, Col, OHANG, MC, CFS

Initial rollout of the Enhanced Flight Screening-M happened in March 1994 with affirmation in December 1998. The name was changed to Medical Flight Screening (MFS) in January 2000. MFS was developed to identify disqualifying abnormalities that initial flying class I physicals done in the field often failed to detect. Historically, specific disorders were not recognized because testing was difficult to administer or interpret or was unavailable.

MFS provides a consistent high standard examination by having the same paraprofessionals and professionals perform the tests over many years using strictly proscribed procedures. Also, MFS has the world aviation sub-specialty experts available for consultation, if needed. As a final validating examination, MFS identifies individuals with aeromedical disqualifying conditions prior to the undergraduate pilot training (UPT) investment. MFS typically identifies aeromedical disqualifying conditions anywhere from 1 to 3% among the 1500 physicals performed annually, thus saving $20–$50 million in potential UPT losses.

These examinations also reduce medical attrition and career medical groundings by finding early signs of disease. Early in the evolution of MFS, testing included echocardiography, corneal topography, red lens, color vision validation, base line neuropsychological testing, and anthropometric measurements (started in the spring of 2000). The echocardiogram was discontinued in 2008 due to very low yield of abnormalities that had aeromedical significance.

The neuropsychological tests include an IQ test, Multidimensional Aptitude Battery II, neurocognitive test, MicroCog™, and personality test, NEO-PI-3. These neuropsychological screening tests establish a baseline reference for potential future brain insults, improving and expediting post brain insult waiver processing to safely and efficiently return aviators to flying duties.

MFS examinations are completed at two locations: the U.S Air Force Academy and U.S. Air Force School of Aerospace Medicine. The MFS program provides sound and consistent aeromedical recommendations to the line on UPT candidates, ensuring fully qualified aviators capable of safely fulfilling their aviation career.

Medical Flight Standards: world peace one flight physical at a time! 🌟
The Air Force Waiver Guide

Dr. Dan Van Syoc, Col, USAF, MC, CFS (Ret)
Deputy Chief, Aeromedical Consultation Service

The Air Force Waiver Guide has been around since 1993 and in its present format since 2006. There are currently 155 separate waiver guide topics in 17 categories. Each topic is updated at least every 3-4 years. The waiver guide can be accessed via the KX (where each topic can be viewed as a stand-alone product) or via the USAFSAM website, where all topics are part of one large Word document. The KX is limited to those with a dot mil account, where the USAFSAM site can be accessed anywhere (http://www.wpafb.af.mil/afrl/711hpw/usafsam.asp).

Each topic is generated or updated by an aerospace medicine resident or by the waiver guide coordinator (currently Dr. Dan Van Syoc). It is then reviewed by the AF/SG consultant in the appropriate specialty or by the applicable branch chief at the ACS if it falls into one of the following specialties: cardiology, pulmonology, ophthalmology, neurology, or psychiatry. After that review, it is forwarded to AFMSA for a policy check and then posted for use in the field.

Each waiver guide is formatted similarly. It begins with an overview of the topic, followed by a discussion of the aeromedical concerns, and then a statement of current Air Force policy on that topic. A table is developed with waiver potentials for various aeromedical categories, and then an up-to-date AIMWTS review discussing the history of waiver submissions and dispositions on that topic dating back to the fielding of AIMWTS in early 2001 is presented to assist the flight surgeon with expectation management. The next-to-last section is a detailed list of necessary items to include in the aeromedical summary for that topic, and last is the list of references utilized in the development of that topic. The waiver guide coordinator maintains a pdf copy of each reference if anyone would like to have a copy.

There are three major “customers” of the Air Force Waiver Guide. The original intent of the guide was to provide a tool to base-level flight surgeons to assist in the development of a waiver submission. This is still the primary audience. But the waiver authorities also lean heavily on the waiver guides to assist with waiver dispositions. Finally, non-Air Force aeromedical personnel greatly utilize our waiver guide, including many in foreign countries. If the base-level flight doc adheres to the recommendations in the waiver guide, he or she will most likely get a much quicker disposition, as that should take care of most of the major requirements. As you would expect, not all possible medical or aeromedical issues have an applicable waiver guide. If you need assistance with a particular waiver or have questions about the waiver guide or a specific topic, please give me a call at DSN 798-2648. I would be happy to assist you in any way.

Writing Waivers—Do It Right, or Do It Twice!

Dave “Pfieffur” Duval, Col, USAF, MC, SFS
AFSOC SGP

New flight surgeons will likely be introduced to their first waiver within hours of starting to see patients. Whether a new waiver or a renewal, fear not! It’s much less daunting than it may appear.

First, determine if the condition really does require a waiver. Do this for renewals as well. Standards change rapidly now, so someone who previously needed a waiver may meet current standards. In some cases, you may find that the current waiver was done even though it was not needed at the time—yes, this has actually happened to me. If they do meet current standards, simply email your MAJCOM SGP and request a retirement of the waiver.

Look up the standards in the Medical Standards Directory first. Do not refer to the Waiver Guide first!! The MSD is updated much more frequently, and there may be a conflict. If you do find a conflict, go with the MSD because, well, it’s the true standard. (And call or email your MAJCOM SGP to make sure they’re aware.) The medical standard should be referenced in your first paragraph, e.g., “(patient’s name) is disqualified IAW MSD 28JUL15, N2, Anemia.”

Now that you’ve determined a waiver is truly required, you can get to work. Writing the Aeromedical Summary is not that much different than the narrative summaries we all did as interns. Keep it concise and relevant; include pertinent positives and negatives. Provide the reader with a synopsis of a consultant’s conclusions; make sure to include their recommendations and/or restrictions. Never write “see attachment.” That’ll get the waiver unsigned and sent back to you faster than you can write “see attachment.” Attachments don’t always “stick,” sometimes they don’t open, and many of them are unreadable. And it’s painful to switch back and forth given the leisurely pace of our computers.

The Waiver Guide (most of the time) has the necessary information that’s needed in the AMS. Simply copy the list, paste it into your AMS, and fill in the blanks. Also, make sure the proper tabs are filled out. It does not look very good when you’re asking for a waiver for H-3 hearing and the hearing tab is not filled in!

Perhaps the toughest part to write is the Recommendation. If you truly believe the person you’re writing about deserves a waiver, then say so! It’s your proper role to be the patient’s advocate. When the case is going to be a disqualification, and you know it’s probably so but don’t want to be the bad guy and write a DQ recommendation, then just write “Submitted for your consideration” and MAJCOM will take it from there. However, it is very important that you do not foster an expectation that’s out of line with reality. A DQ should not be a huge surprise to the patient or his/her leadership.

Time management of waivers is crucial. Waiver renewals should be identified at least 90 days before they expire. This is especially true of waivers that require ACS review. Look at past waivers and ACS reviews to get info on what they’ll want. Get your MSME (or whomever it is that monitors waivers) to coordinate with ACS on what will be required so you can lead-turn the process. Nobody should go DNIF because of late administration processes! Speaking of which, if you need an extension, just ask! (But remember, you only get one….)

So there it is. The quick and easy guide to waiver writing.
DNIF? There’s an App for That

Colby Uptegraft, Capt, USAF, MC, FS

Med Standards, available on the Apple App Store for the iPhone and iPad, presents the medical standards for special duty personnel of the United States Air Force, Army, and Navy. For the Air Force it includes the Waiver Guide, Medical Standards Directory (MSD), AFI 48-123 Medical Examinations & Standards, AFI 10-203 Duty Limiting Conditions, and the multiple approved medication lists. A separate menu includes 31 other relevant AFIs and documents and some useful tools and links, including an altitude oxygen converter that converts ground-level FiO2 needs to the respective cabin altitude. You can text search documents within the app or download them into iBooks for some increased functionality. Flight surgeons working with Army and Navy personnel will also find the Army’s FS Checklist and AR 40-501 Standards of Medical Fitness and the Navy’s Aeromedical Reference and Waiver Guide. Basically, it’s a mobile, CAC-not-required version of the Flight Surgeon Toolkit from the Knowledge Exchange plus some other handy tools and references.

All the documents listed above update routinely. About every 3 weeks I scroll through the ePublication Library and Knowledge Exchange to check for updates and then submit a new version of the app to the Apple Store. After submission, new versions take about a week for approval, so you can expect a new version once a month. Apple veterans know to look for the familiar mini red circle with a number above the Apple Store icon when updates are available.

Search for Med Standards in the Apple Store by name, my last name, or the App ID# 1018687273. Most importantly, it’s free to download (no in-app purchases either). Published mid-2015 by an amateur programmer (me), the app has plenty of room for growth. If you have any ideas on how to improve the app or additional resources or tools you would like added, please email me at couptegrafi@gmail.com.

Sorry Android faithfuls, it’s only available on the Apple App Store for now.

MSME or BOMC?

Mr. Michael Landez (former 901 and 4F0X)
Deputy Chief of Medical Standards, AETC/SGPS

TSgt Robert Rackard (current 4N0X1-F)
Initial Flying Physical Program Manager, AETC/SGPS

We usually aim our conversations at information and techniques to assist you with accomplishing your physical examinations. As most of you know, the Medical Standards Management Element (MSME) was the “bellybutton” for this work, but you may have heard about … the BOMC! So we will still pass out info to the field on a variety of physical examination standards issues that we deal with here at HQ AETC/SGPS. And we’ll be tracking the ongoing implementation of BOMC. As with all new programs there are going to be growing pains, and not all will go according to plan. No plan survives first contact with the “enemy.” However, you technicians will be the key in shaping/influencing how this plan works and evolves. In my 38 years I have seen many changes to Aeromedical Services (now FOMC), such as the implementation of the Physical Examination and Standards section (PES) in the 1980s. When this plan came down to my NCOIC, he threw a fit and said “I’m not implementing this.” The Flight Medicine Clinic at that time was for flyers and their dependents only. A separate “non-flying” physical examination section performed all of the “non-flyer” physicals and other standards requirements. Around 1981/82, the PES plan was implemented. This plan combined flying and non-flying physical examination sections, becoming a part of Flight Medicine, hence PES. As you would imagine, there were a lot of rumblings from the field (see above) regarding this change; however, we made it work. Now, making it work didn’t mean that all went smoothly because it didn’t. We had issues with manpower, workspace, training, etc. These are issues (along with others) that may impact the implementation of the new BOMC plan. This is my advice to you in the field: become knowledgeable about each phase of the BOMC plan and provide feedback along with suggested solutions to your leadership on ways to improve BOMC. Do not sit back and complain without using your experience to help shape the future of Aerospace Medicine.

HQ AETC/SGPS will continue to update the field on issues regarding physical exams processing. We ask that you please do your homework prior to calling this office with your questions (review AFIs, the Medical Standards Directory (MSD), the AF Waiver Guide, and other resources found on the KX, all the BOMC workflows, and checklists, etc.). Listed below are some PEPP/AIMWTS tips from TSgt Rackard and Mr. Mark Arce, who are my Initial Flying Physical program managers. These should assist you as you process your physical examinations and waivers.

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The views expressed in this newsletter are those of the individual authors and do not necessarily reflect the official policy or position of the Air Force, the Department of Defense, or the U.S. Government.
7. The Aeromedical Summary (AMS) is intended to be a standalone document and must include all the pertinent information regarding the defect in question; that is, if you have accomplished a specialty evaluation, the pertinent information from this evaluation needs to be included in the AMS. Do not state “see attached”! You should attach the consultation in AIMWTS under “Attachments” for further review by the waiver authority. Please make sure to refer to the AF Waiver Guide to ensure all required information is included in the AMS.

8. The medical history needs to be complete and address the defect in detail. Use the example in the MSME IFC/Special Duty Physical Examination Templates to help you write a concise history on your applicants. This can be found in PEPP under the “Resources” tab, then go to “Links,” and it is listed in the topics. In “Links” you can also go to the “Physical Examinations Techniques Grid,” which will take you to the “Knowledge Exchange”; there you will find links to other topics, including how to take a medical history, that will help you in accomplishing physical examinations. Do not submit the medical history in the format that the applicant submitted on the DD Form 2807-1. You must review and in detail provide a comprehensive history for the certification authority to review. Don’t forget to review AHLTA and any other medical document that can help determine the medical history. This will change as we roll out BOMC templates and training. So keep up!

9. When forwarding Initial Flying/Special Operational physical examinations to HQ AETC/SGPA for review, do not forward the AIMWTS only. Our PEPP workflow indicates to us when a case is ready for review. If you only forward the AIMWTS we will not see it.

10. HQ AETC/SGP highly encourages that waivers be created directly in AIMWTS instead of using the function in PEPP to create a waiver. Using PEPP to create waiver can cause the certification authority to not be able to accomplish a “Return for Corrections,” and PSP has to be used. When a PSP is used, HQ AETC/SGPS must acknowledge the PSP before the PE can be signed by the Sr. Reviewer (causes delay in processing). When PEPP is used to create a waiver in AIMWTS, the cert authority will not receive any indication of a physical/waiver request unless the AIMWTS is appropriately forwarded to the certification authority (PEPP will not show in our workflow). There won’t be an indication of a PE awaiting review at the Cert authority level. Recommend close tracking, at your level, of all cases forwarded for certification to ensure timely disposition!

As stated above, I have two dedicated case managers for the HQ AETC/SGPS Initial Fly Program (Tsgt Robert Rackard and Mr. Mark Arce), and they stay busy, busy, busy with case reviews. We receive hundreds of phone calls with questions that could have been answered by utilizing the MSME, Flt Surgeon, or SGP and by researching applicable AFI’s, other guidance available on the Knowledge Exchange, PEPP, AIMWTS (https://ks2.afms.mil/ksx/FlightMedicine/Pages/home.aspx), etc. When we are doing that answering (that you could’ve done by looking it up), then we aren’t processing your physicals! Many calls are from individuals who have little to no knowledge regarding the issue but were told to call and ask the question. So when you do call, please have the MSME, Flt Surgeon, or NCOIC make the inquiries. Please do not get me wrong. We are here to help you; however, we ask that you do your homework first prior to calling this office. Another resource that is available and one that you should utilize is your MAJCOM personnel (SGP/4N Functional) when you have questions regarding processes within FOMC/BOMC. Remember, we are all in this together, and only with everyone’s efforts will we be successful! Stay tuned for more on BOMC! Keep ‘em flyin.’
Well, today is post-op day 3 from having my belly cut open...again. This time they were repairing the incisional hernia they left there after the last time they went in. I’m starting to wish that there was a zipper that could be installed. I’ll be stopping the narcotics today, which will be a little uncomfortable, but hopefully I’ll be able to pass the brick that is no doubt forming in my gut.

The interesting thing…I’m not expected to be back from con leave for 2 weeks. I wonder how the surge on came up with that amount, and of course, they gave me no profile? For all the areas in medicine that the AF has worked hard on to bring in evidence-based medicine (EBM), why have we not looked for standards for profiles and con leave? Not only is it a problem for consistency and what’s right for the patients (the product), it’s not right for the customer (their commander) who needs and should expect available manpower at whatever capability they can produce.

Well, actually, there are evidence-based con leave and “profile-like” systems out there, and the one that I think is the best and has been employed in the Air Force is the Official Disability Guidelines (ODG). This reference is made up of thousands of workers’ comp cases, a library of supporting articles, and the consensus of a multi-specialty panel. Now available on-line, it lays out by ICD code and, as needed, the particular therapy/intervention, recommended limitations the employee should have during recovery….and that’s just scratching the surface of its capabilities, but let’s keep to our needs.

For developing my con leave and profile, the ODG gives a good baseline for an umbilical incisional hernia repair: 6 days con leave then days 7-20 with administrative/light duties followed by days 21-42 of manual labor limits, and finally release to heavy manual duties afterwards. It even defines what actions, functions, times, weights, distances, and such are defined by each of these duty recommendations. This step-wise return of capability makes so much more sense than the routine profile that says I shouldn’t do anything on day 42 but the next day I’m ready for everything. Finally, the profile can then be tweaked for my work/occupation. Do you ask patients what they do? If they told you, would you have any idea of what this meant? Understanding what the work does and what that means allows these profile descriptions to maximize capability and protection. This step-wise and job personalization, in combination with reduction of con leave from 14 to 6 days, could have given my boss (again, the customer) the additional worker availability we, the profile writers and profile reviewers, owe to him and the Air Force mission.

Now, before someone runs out to purchase this or other similar programs, I do not recommend its local purchase but instead recommend an Air Force central clearing house for templates pre-loaded for our users into ASIMS. The production of these and the costs can easily be absorbed by using these same programs and people to remove GS workers from the long-term workers’ comp roles, but this program, originally part of the Federal Employee Compensation Act (FECA) Working Group, has fallen into disarray. It’s likely that none of you are driving this requirement, which is a costly issue to the AF. If anyone would like to see how some of this has been employed within the Air Force, I’ve also worked with an exercise physiologist to add other components to include rehab and fitness into the profile templates, as well as work by Col Chris McNulty, the SGP at Nellis AFB, who has pre-tuned some of his profile templates for high volume worker sub-populations (assisting his providers with that “what do you do” question).

In the end, we flight surgeons, as the overseers of the profile system, have a responsibility to unit commanders to maximize worker availability while protecting their workers. A well-written profile under science-based evidence can be a key to our part in supporting the mission.
“Manifestations of Apprehension” (“MOA”…whether during pilot or air traffic control training) are some of the most common (and frequently frustrating) clinical cases a flight surgeon will see during a tour at a training base. (They also present in trained assets, although much less commonly.) If you haven’t already, review the excellent discussion by Col (ret) Dr. Bob Ireland in the last FlightLines issue on “Fear of Flying,” as there are some similarities. I’ve spent time at both ATC and pilot training bases over the years and realized that the approach to these conditions in trainees is very similar, even though the populations are much different. What follows is not the official Air Force Instruction or Medical Standards Directory. Much of it is anecdotal, although grounded in several generally acceptable clinical models in both occupational and operational medicine. Use the “BICEPS” model (brief intervention, immediacy, centrality, expectancy, proximity, simplicity) and, above all, be a good doc. Just make sure you understand your role and don’t medicalize the problem.

Lesson 1: Reinforce that some apprehension (fear) is “normal” when you first start training as an air traffic controller. It may sound cool, but it is hard work and the standards are high. Remember, many of these kids have never failed at anything in their lives…they probably all got participation trophies for playing on the soccer team. It’s a jolt when an adult tells them they aren’t measuring up to the standard. Talk about this right up front, and make sure the instructors have the same message. In every training program, somebody will be first, half the class will be “below average,” and somebody will be last.

Lesson 2: Keep them out of the clinic whenever possible. Ideally, you address early “MOA” (in this case “fear of controlling”) when you walk around the training section as a shop visit. Make sure you (the Flight Doc) and the instructor cadre have the same message to students. Incidentally, the best message is delivered by experienced controllers who can talk honestly to their students about how nervous they were when they were young Airmen. It’s a great prevention strategy.

Lesson 3: Do not remove them from training for medical reasons unless there is a valid reason (other than being nervous). Most of the time students are nervous because they are behind in their training. If you take them out of training, even if just for a day, their peer group will move along without them. They will most likely never catch up and then eventually fail out. Let the “syllabus take care of the strugglers”…some will fail out, and that is ok.

Lesson 4: If they come to the clinic, listen, be a good doctor, and provide honest feedback. Do not, however, enable whiny cry-babies. Make sure they don’t have “other stuff going on” (dog died, wrecked the car, broke up with fiancé, etc.) and make sure they don’t have a medical illness (you don’t perform well in any tech school if you have the flu, for example). For those few guys, put them on quarters and get them a good night’s sleep, then immediately get back to work. For everybody else, show that you understand and explain how BICEPS works on their terms…and then get them back to work.

Lesson 5: Make sure they are sleeping. This is one place where I play the “medical card.” If a kid was so wound up from poor performance that he wasn’t sleeping, he would rapidly end up in a death spiral. I will often give those Airmen either Ambien or Restoril to “break the cycle” and get them back into a normal sleep pattern so they can stay with the class and not get behind. What I tell them is that I am intervening to “break the cycle” just enough to take charge of their life stressors and develop coping skills. They need to know that this is a one-time intervention. While some will argue that I am very aggressive with this strategy, in my experience this was one of the few interventions that would actually keep a failing student with the syllabus, at least some time. I usually would include a single brief visit on “relaxation strategy” with a mental health provider, scheduled ideally during their out-of-class time.

Lesson 6: Get them coping skills, not a mental health diagnosis. Treat MOA as an administrative issue, not a medical one. When a student has a lot of apprehension, someone (often the mental health person) will try to convince you (and the Airman) that he or she has some deep-seated phobia or pathology. Most of the time, this is both non-productive and incorrect. If the student was fine before training, and the training events brought out the problem of anxiety, then the student has a problem with his or her Air Force job that should be addressed as an administrative issue (see below).

Lesson 7: Separate medical from administrative. You can place nervous controllers in DNIC (“duties not to include controlling”) status for safety of flight, but do not move to “disqualify” them with an aeromedical summary. Instead, pick up the phone and tell the commander that they have MOA and the case should be handled administratively. Many commanders won’t like this and will pressure the Flight Doc into doing a medical board or writing an aeromedical summary with a goal of disqualification. Do not allow yourself to get pressured into these seemingly innocuous actions. While this is the easy way out for commanders, you should not do the commanders’ job for them. Caveat: If after medical review the Airman has a “boardable” condition that will persist even if you take him/her out of training (“hurt feelings” is not one of these conditions), do a medical board. But for all others tell the commander (in writing) that you recommend that the member be processed administratively due to his/her inability to complete the training syllabus. This means that the retention or cross-training decision is at the discretion of the commander. This is not yours to comment on. So don’t.

Final thoughts: The above lessons are from training bases. You may have some of these problems for young Airmen who just made it through the pipeline and are now at your base for initial qualifications. The farther away from training you are, the less likely you will see MOA, but it’s still out there. For these uncommon cases, search for significant life events (involvement in mishap or near mishap, personal or professional problems) in trained assets specifically, and get them help. Always remember BICEPS, and always address this problem in partnership with the commander, treating these cases as an administrative issue with medical support, not as medical problems.

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Why Does the AMP Have So Damn Much Ophthalmology?

Bugs Ortega, MD, MPH

This is a standard lament of all AMP students, AMP graduates, and USAF flight docs. Couldn’t we learn some other cool stuff instead of spending so much time on eyeballs? You all know what I’m talking about, don’t you? Come on, admit it! You’ve all said this and repeated it multiple time, haven’t you? Well, I know I’ve said it many times myself. As you all know, there’s more stuff to know as a USAF flight doc than there is time in the AMP to teach it all. Additionally, there is a lot of benefit to experience in the field with these topics. The USAF actually counts on physicians to be able to “reason” their way through many of the unique challenges that present during the operational medical support we provide to air power. All of it is based on a sound understanding of clinical medicine, the operational environment, and the effects on performance that these conditions have on our airmen.

Let me ask you a question about ophthalmology. In your medical school, how many ophthalmology rotations were required to graduate? 1 month? 2 weeks? More likely, nothing! My school had no requirement for ophthalmology except what I picked up in the ER. What about in your internship year? Your residency in FP or IM? My guess is not much, again. So, the reality for most AMP students (i.e., future flight docs) is that they have had absolutely no exposure to eyeball medicine whatsoever. And when you experience it, it is not very easy. You have to work at it – which gives you ample reason to complain about it, which we all do!!

But let’s look a bit more objectively at that requirement. If you read some history of aerospace medicine, you find out that aviation medicine was born from ophthalmologists. Early pilot selection was not medical standards related at first. Actually, aviation medicine was born from the realization that aviation was not simply “another job in the Army” and that a properly functioning and healthy human with a good attitude was required. Additionally, a healthy set of eyeballs was about as near an absolute “requirement” as there could be, given the task of landing an airplane safely. Throw on top of that combat aviation requirements—finding and targeting enemy airplanes and equipment at a distance. In 1917, Drs. Lyster, Greene, Jones, and Wilmer developed the training programs for military flight surgeons. Wilmer was an ophthalmologist and the first commander of the Medical Research Laboratory, the ancestor to 711th HPW. And as a matter of fact, ophthalmology began U.S. medicine’s track toward specialization; it was the first officially recognized, U.S. medical specialty that same year, 1917. But I digress…

So Bugs, what does all this have to do with the current AMP and eyeballs? Lyster’s medical standards established back in 1914-17 recognized that defects of vision accounted for over 20% of all disqualifications, portending reduced performance in the combat arena. Let’s fast forward to today. What sort of items DQ pilot wannabes today? We at AETC did a little study on all IFC1 examinations processed through our standards shop. In 2014 we DQ’d about 9-10% of all applicants who had a PEPP entered and forwarded to us for certification. If you group the ICD codes into Injury, Respiratory, MH, Ophthalmology, and Other Symptoms, you find DQ rates in the 3-7% range for all of them… except eyes—60%. By far the most common reason for DQ for the applicants is eyeball related. The most common diagnoses were color related (43%), myopia (24%), stereopsis (11%), drusen (9%), and glaucoma (4%). Color deficiencies accounted for 25% of all DQs and myopia was another 14%. So those two eyeball conditions accounted for about 40% of all IFC1 DQs in 2014.

So while clinical medicine is important to know and understand, ophthalmology is a very important discriminator in getting into USAF flight training. Due to the lack of requirements for ophthalmology knowledge in most medicine training from school through residency and the combined impact of the eye on both selection and performance in military aviation, the AMP is loaded with ophthalmology – because it’s all you’re going to get to explain, discuss, recommend, and treat your applicants and trained aviators. The AMP is working diligently to reorganize information to make it more relevant. But you still have to get that knowledge somewhere. So suck it up and learn, so you can be the best flight doc you can be for our combat aviation mission. Keep ‘em flying. ✈️
The Best Job You’ve Never Heard of

Robert L. Tong, Maj, USAF, MC, FS
Expeditionary Medical Flight, 36 CRG

The significance of sitting across from the Vice Commander of the Vietnamese Air Defense Forces (ADAF) as a flight surgeon assigned to the 36th Contingency Response Group (CRG) stationed out of Andersen AFB, Guam, did not escape me. Forty-four years earlier we had launched Linebacker II missions from Guam, and now we were enjoying dinner and toasts with much of the ADAF brass. We had been on the ground at Nha Trang, the home of the Vietnam ADAF Academy, during a week-long safety subject matter expert exchange (SMEE), and this was the pinnacle of our summit. Our SMEE was just the tip of a much larger strategic vision within the region that brought me to this meeting. Talking flight safety with Vietnamese ADAF officers was not a mission that I had ever dreamed of taking part in. But due to our wide range of skill sets, we have been sent across Asia in a variety of capacities, including SMEEs, humanitarian assistance/disaster relief operations, and Presidential support missions. We’ve been the first on the ground in places like Tacloban after Typhoon Haiyan in 2013 delivering life-saving food, supplies, and medicine. Our passports have stamps from China, India, Sri Lanka, Papua New Guinea, Malaysia, and Australia. We have experiences that span the spectrum of Air Force operations. Despite the unique opportunities that a CRG offers medics, few flight surgeons have ever heard of a CRG or know what they do.

CRGs, in short, are rapidly deployable units that secure, repair, then operate airfields anywhere across the globe. Our unit is composed of cops, engineers, pilots, crew chiefs, porters, and many more career fields, but when we deploy, we are whatever we need to be to get the mission accomplished. Therein lies some of what makes CRGs so unique. We are from different AFSCs, but when we are on the road, we are a team, and we are capable of accomplishing amazing feats. In the past 2 months alone, we have deployed to 4 locations in 2 countries and offloaded 1.7M pounds of cargo on 72 missions. As medics, we are charged with covering down on the care of our airmen when in garrison and deployed. But being medics does not give us a pass on setting up tents and offloading pallets. My IDMTs deployed to Nepal shortly after the devastating earthquakes of 2015. If they were not actively performing CASEVAC missions on USMC MV-22 and UH-1 aircraft to remote villages destroyed by the earthquakes or setting up MASCAL triage collection points to treat civilians injured during aftershocks, they were busy unloading critical disaster relief supplies from C-17s to ensure that aid was making its way off the runway and to the folks who needed help the most.

As medics, we still are responsible for taking care of METALS, shop visits, and flight physicals. However, with the unique mission set of the CRG, we also are tasked with a number of other responsibilities not common for other flight docs and IDMTs. Especially within our AOR, a working knowledge of tropical medicine and primary prevention of endemic diseases is paramount to keeping our airmen healthy. Two of our teams just returned from areas with ongoing dengue outbreaks, and accurate medical intel and adequate implementation of force protection measures were key to ensuring that none of our airmen fell out from disease non-battle injury. Operating out of foreign countries also presents its own set of unique challenges outside of preventing emerging tropical disease infections. Medical infrastructure varies widely throughout our area of operations. As such, we complete hospital surveys and determine aeromedical evacuation options from point of injury all the way to delivery of definitive care. The possibility of operating in uncertain and potentially hostile environments also dictates that we have a robust trauma and critical care skill set. All of our IDMTs are paramedics as well, and we all rotate in the Navy Hospital Emergency Department to stay current on our critical care skills. We have tailored our deployment package to be able to provide ACLS care as well as intubation and ventilation capabilities.

For now, we continue to accomplish the mission as expeditionary medics and members of the CRG. In the future, we plan to augment our medical capabilities with increased critical care skills, CASEVAC training, and wilderness medicine courses. Realizing the significance of soft power projection, and harkening back to my time in Vietnam discussing flight safety with a new regional partner, we also hope to increase the medical presence in Building Partnership Capacity missions with partner nations across the Pacific. As always, we are prepared and eager for the next mission to come our way.
An Evolutionary Story of the Modern USAF Flight Surgeon

In August 1966, Lieutenant Colonel (Dr.) Howa rd R. Unger was tasked by his superiors to provide a definitive history of the current problem of whether a requirement exists for some form of distinctive badge for the Flight Medical Officer (FMO) and whether the current requirements for the rating of Flight Surgeons should be affected. In an after action report submitted to the Surgeon General and his staff, Colonel Unger made the following four prescient assumptions before offering several recommendations:

Flight medical officers possess sufficient medical experience and training to provide medical care and advice to the flying personnel they support. Adequate supervision of their practice is in effect to assure that their ability to demonstrate advances in proficiency in aerospace medicine is observed.

Aviation medical examiners from 1949-1960 had reached an experience level justifying award of the designation (and as of 1956, the rating) of Flight Surgeon at the end of a one (1) year period on flying status as an AME with a minimum of 100 hours flying time.

Provided an FMO is considered qualified for the rating of Flight Surgeon after some level of training and experience, an earlier rating policy, e.g., 1 year as an FMO and 100 hours flying time, might present a greater retention incentive.

The total strength of rated medical officers, aerospace medicine should not exceed a reasonable percentage of the total rated officer strength.

Colonel Unger discussed the strong desire and support of the aeromedical community in recognizing the FMO with a distinctive badge, but without compromising the integrity and importance of the rated flight surgeon. He states in his report:

The wearing of wings is not considered a substitute for a sincere attitude and a dedicated interest by FMOs in health, safety and welfare of flying personnel in the development of flight medical officer-aircrew rapport.

It was well recognized since the days of the Aviation Medical Examiner that the wearing of “wings” served to identify the aeromedical physicians as active, operational participants of the aeromedical team and community. Colonel Unger made one key observation in his discussion points when he stated:

The wearing of flight surgeon’s wings is not authorized for the flight medical officer. Since action to authorize this practice is considered an “unsupportable precedent” then approval of the request for a new and distinct badge for the flight medical officer appears an appropriate means of satisfying this requirement. The new badge would also serve to identify him as less experienced than the flight surgeon, a distinction often obscured by the unauthorized wearing of the flight surgeon badge.

Several possible solutions, gleamed from the past three decades of discussion and supported by the various camps within the aerospace community (not just medical), included the policy to rate all physically qualified graduates of the Primary Course in Aerospace Medicine (PCAM) when assigned flying squadrons, to designate all physically qualified graduates of the PCAM as flight surgeons while keeping the Senior Flight Surgeon and Chief Flight Surgeon qualifications unchanged, and finally to consider or study the reduction of the 2-year requirement and 200 hours flying time needed to demonstrate the level of proficiency required to become a flight surgeon. Colonel Unger commented:

If the assumption is correct that aviation medical examiners had achieved a level of proficiency sufficient to warrant becoming flight surgeons at the end of one year and 100 hours flying time, then, from a professional standpoint, the same requirement should be valid today.

Another factor often overlooked at the tactical level, but not the strategic level of the “personnel and finance” forums, was the actual costs associated with rating medical officers and then determining a sufficient quantity of aviation pay. Colonel Unger briefly but succinctly warns:

Another unacceptable limiting factor associated with this course of action <rating all PCAM grads> would be the sudden increase in the total number of rated medical officers which would exceed a reasonable percentage of the total rated <pilot> officer strength allowed.

The views expressed in this newsletter are those of the individual authors and do not necessarily reflect the official policy or position of the Air Force, the Department of Defense, or the U.S. Government.
Colonel Unger correctly subsumed that any threat to the “rated” line totals as prescribed by Congressional dictum would directly pit the Surgeon General’s office against the line of the Air Force – not just aviators or traditional aircrew. The designation (not rating) of PCAM graduates as flight -surgeons-in-waiting, which allowed a reserve of trained aviation physicians ready and capable of assuming “rated” aviation flight medicine support missions without the economic and political expense, was an appealing argument that needed to be considered by the Surgeon General. After his exhaustive historical résumé, Colonel Unger’s final recommendation presented the following and consequential compromise:

1. That the Permanent Air Force Uniform Board be requested to reconsider the proposal for a distinctive Flight Medical Officer badge.
2. That the policy of requiring one year of experience as an FMO and 100 hours of flying time as prerequisites for the rating of Flight Surgeon be reinitiated.

The brilliance of Colonel Unger’s recommendations cannot be understated, for he well knew that the Permanent Air Force Uniform Board, a line of the Air Force function headed by the Air Force Vice Chief of Staff, was not in the mood to support an FMO badge but was eager, instead, to finally provide a definitive solution to the Surgeon General on this three-decade-old problem. On the morning of 24 February 1967, the Thirtieth Meeting of the Permanent Air Force Uniform Board met to discuss, amongst other things, the need for a distinctive Flight Medical Officer insignia. Lieutenant General Hewitt T. Wheless, Assistant Vice Chief of Staff notes:

The Chief of Staff noted that:

b. Since World War II the Air Force has relied upon Rated Officer’s Wings, and more recently Missile Badges, to denote Air Force personnel. Aircrews and Missile Crew members no longer represent the majority of the Air Force family, and many special categories of personnel desire to be recognized as a part of the Air Force by means of a special badge. Most requests along these lines are disapproved, in keeping with the Clean Uniform Policy.

Again, the Surgeon General requested from this Board a distinctive badge for the FMO. Armed with Colonel Unger’s three decades worth of historical perspective and data, the Surgeon General asked for “reconsideration” of past requests from the Board on this topic and expected a definitive, if not positive, answer.

The Thirtieth Air Force Permanent Uniform Board’s final report denied the SG’s request.

Instead, the Board recommended that the SG consider revising the award criteria for flight surgeon badges and utilizing the basic badge for recognizing FMOs. Furthermore, the Board strongly stated that the SG had to reconcile and provide a justification to the award of the basic flight surgeon wings to the FMO with less than the usual nominal year of training associated with rated (pilot) training. This recommendation proved to be exactly what Colonel Unger and his subsequent successors needed to finally adjudicate this long-standing issue within the aerospace medicine team.

Six years later, in a memo dated 4 January 1973, Brigadier General (Dr.) George E. Reynolds, Director of Professional Services, AF/SG office, made the following recommendation that all flight surgeon’s today can recognize. He stated:

The attached draft of proposed change to AFM 35-13 authorizes the awarding of the Flight Surgeon rating upon successful completion of the Aerospace Medicine, Primary (AMP) Course and deletes the designation of Flight Medical Officer (FMO). Request your review and comment regarding the financial impact of deletion of all FMO man-months, and subsequent conversion of these designated positions to those of Flight Surgeon.

The proposed change to AFM 35-13 read:

The Commander of the USAF School of Aerospace Medicine may award the aeronautical rating of Flight Surgeon to Air Force and Reserve of the Air Force medical officers who successfully complete the Aerospace Medicine, Primary (AMP) Course. Furthermore,

Applications for the rating of Senior Flight Surgeon and Chief Flight Surgeon must be forwarded to HQ USAF/SGPA for approval prior to publication of aeronautical orders.

This last sentence was clearly added by those “most senior” Chief Flight Surgeons to preserve the integrity and prestige of the higher rated badges. This is yet another story that must be told!

And so concludes the lost history of GREEN HORNET #2473. By 1974, the AF Surgeon General, a Chief Flight Surgeon, was able to pin on the basic flight surgeon wings on Air Force physicians graduating from the Aerospace Medicine (Primary) Course – better known as the AMP – for the first time. It took over three decades, innumerable officer careers, multiple Surgeon Generals, and an upwelling of support from aerospace operators across the Air Force to make, what many flight surgeons take for granted, those “silver wings” worn today. I challenge all to read the Flight Surgeon’s oath weekly and to be proud to be a United States Air Force Flight Surgeon.

Doom out.
RAM XVII Call Signs

In a dimly lit Irish pub on the outskirts of Oklahoma City, the RAMs of the Class of 2017 gathered to name the last of their members. This was done in the tradition of the modern Air Force with a formal roll call and naming ceremony. Below is a list of the 2017 RAMs and their call signs.

<table>
<thead>
<tr>
<th>Resident</th>
<th>Call Sign</th>
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<tbody>
<tr>
<td>Tracy Bozung, Lt Col, USAF, MC, FS</td>
<td>TICTAC</td>
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<tr>
<td>Paul DeFlorio, Lt Col, USAF, MC, FS</td>
<td>TRAUMA</td>
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<tr>
<td>Ashley Franz, Capt, USAF, MC, FS</td>
<td>Blue</td>
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<td>Chuck Mahakian, Lt Col, USAF, MC, FS</td>
<td>Solo</td>
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<tr>
<td>Bryant Martin, Lt Col, USAF, MC, SFS</td>
<td>Thunda</td>
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<tr>
<td>Chris McLaughlin, Capt, USAF, MC, FS</td>
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<tr>
<td>Michelle Milner, Lt Col, USAF, MC, FS</td>
<td>MOTOR</td>
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<tr>
<td>Anthony Mitchell, Lt Col, USAF, MC, FS</td>
<td>MAGIC</td>
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<td>Stefanie Nance, Lt Col, USAF, MC, FS</td>
<td>PHANTOM</td>
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<td>Jaime Rojas, Maj, USAF, MC, FS</td>
<td>Hector</td>
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<td>Andrew Timboe, Maj, USAF, MC, FS</td>
<td>Stitch</td>
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