Hello everyone! Yet another great issue of FlightLines follows this short introduction thanks to our editors and especially our contributors. This issue is full of thought-provoking insights across the spectrum of aerospace medicine. First, I’d like to draw your attention to the 50th Anniversary Banner on the cover—the Society is celebrating a significant milestone. It’s a great opportunity to reflect back across the years on the giants who built our community. The first contribution to FlightLines recognizing our proud heritage is from Doogie Clysdale. I hope you enjoy it and I invite you to submit something for the next installment.
Second, I’ll point out my picture to you. That’s me in the back of a Huey about to fly out to the SERE field training site. It’s a great reminder for me to tell you all about the incredible work our medics – both officer and enlisted - are doing as part of this very important training. Most of you know on a very personal level what that training is like. Well, it’s just as significant when viewed from the other side. SERE support is just one of the many “not exactly flight medicine” missions we do every day. Two articles tie into this point in this issue of FlightLines: Bugs Ortega’s Distributed Ops and Doogie Wyrick’s From the ANG: both good reads.

Last, I’d like to use Joker Schroeder’s article Spreading the Word as a springboard for talking about retention. His message, in a nutshell, is “tell your story.” Sure, we all have numerous gripes about the challenges of Aerospace Medicine (put staffing levels at the top). But, when you tell your story, how you got here, what you’re asked to do, how you impact the mission, both speaker and audience recognize what a great opportunity working in this career field is. Our best retention tool is you! Then there’s Schweaty Bohnsack’s article, Human Retention Factors. He points out how powerful it is to include nurses and techs more completely in patient care and documentation. I’ve talked with a lot of docs who are dismissive of the idea of letting technicians take a full history and document it in an AHLTA template. I can tell you from experience that it saves time, writes a better note, and motivates the staff. It’s just one more way to attack the monster that is retention.

The FlightLines editorial staff has put together another great edition. I encourage each of you to contribute to future editions – no matter where you are in the organization, your perspectives are valuable – please consider contributing.

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**Update Your Society Information!!!**

Every few months, we fix common address errors, which may cause problems with mailing lists and prevent you from receiving your highly prized copy of Flightlines.

For USA addresses (including APO, Puerto Rico, Guam, and other US protectorates/territories), use your ZIP+four code.

To our overseas/foreign addressees: Update your address as follows:

**Address 1:** Street address as your country writes it.
**Address 2:** City/State/Postal code as in your country.
**City:** Enter your country’s name in ALL CAPS.

If you need more lines for your office address, move your country name to the zip code field (limited to ten characters). We may be able to add an Address 3 field in the future. In the meantime, we’ll continue fixing abbreviated countries. If you live in Ontario, your address should read like this on the website:

**Address 1:** 1234 Some St
**Address 2:** Orleans, ON K4Axxx
**City:** CANADA

If you have any problems, contact the Exec at Duncan.Hughes@brooks.af.mil or the webmaster at Robert.York@osan.af.mil for assistance logging onto the website or resetting your password.

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**FlightLines: Vision and Mission**

**Our vision:** FlightLines is the written forum for the Society of United States Air Force Flight Surgeons. We help facilitate top-to-bottom, bottom-to-top, and horizontal dialogue within the Flight Surgeon community.

**Our mission:** We provide a vehicle to pass the vector and tools to Flight Surgeons so they can do their jobs effectively and efficiently as current and future leaders within Team Aerospace.
In 1960, a group of forward-thinking flight surgeons from the USAF Surgeon General’s Office, Aerospace Medicine Division, initiated a movement to create an Aerospace Medicine organization. The new society was proposed to become a subset of the burgeoning Aerospace Medical Association (AsMA). On 1 April 1960, Major General O. K. Niess (USAF Surgeon General) selected the society’s first Board of Governors. The ten officers were Colonel Fratis L. Duff, Colonel Harold V. Ellingson, Colonel James B. Nuttall, Colonel Robert A. Patterson, Colonel Charles H. Roadman, Colonel Alonzo A. Towner, Lieutenant Colonel Norman I. Condit, Lieutenant Colonel Hugh W. Randel, Lieutenant Colonel William A. Turner, and Major Charles A. Berry. This board was the bedrock of this novel organization setting out to write its constitution and by-laws, recruit members, petition the AsMA for constituent organization status, and plan for the first Society’s meeting. From the arduous work and steadfast dedication of this band of brothers, The Society of USAF Flight Surgeons (SoUSAFFS) was accepted as a “Constituent Association” by AsMA’s Executive Council on 12 November 1960.

From its humble beginnings, SoUSAFFS has flourished and emerged into a vital, formidable, and respected pillar of the Aerospace Medicine community. And through the last five decades, SoUSAFFS flight surgeons have made significant contributions to the practice of aviation medicine. We have seen our scope of practice expand from aviator selection and health maintenance to all aspects of operational combat medical support. From fabric-covered aircraft to space vehicles and now unmanned aerial systems, there have been flight surgeons supporting the Line every step of the way. Many of our members have taken on leadership roles and have paved a better way for those of us who followed—and to them we are grateful. We are also grateful to our fallen colleagues who have lost their lives engaged in furthering our noble profession.

Hence, we must never forget our roots and always remember the sacrifices of our predecessors. We are obligated—no, it should be our honor to perpetuate their legacy. How does one do this, you might ask. I propose some simple ways: by never faltering and always doing the right thing, by remembering that the mission has to get done, and by doing our best every day. Those principles should sound familiar and can be summed up into: integrity first, service before self, and excellence in all we do. And since you already follow these core values, I suggest an additional way to preserve the awesome tradition of flight surgeons: mentorship. To be a teacher and role model to our young and/or novice docs is a scary and a sacred responsibility. However, it is especially important during these times of change and progress, when the AMP graduates do not have the benefit of tutelage by 4F0Xs. When flight surgeon retention is faltering and our numbers keep dwindling, there is no excuse not to step up and be a mentor. It does take time to teach and advise, but this is time well spent. It is a wise investment in your future and especially the future of USAF Aerospace Medicine. You may not only inspire that young flight doc to perform the flight physical correctly but he may actually enjoy his job, too! Who knows, the next surgeon general may be in your midst, just waiting for you to spark that passion for Aerospace Medicine!

Here are a few suggestions of how to energize your inner mentor (and possibly invigorate your mentees):

- **F**- **FLY.** Flying is crucial to understanding the basis of aviation medicine and its fun, too
- **I-** **LAUGH.** There is always a time and place for levity. But if you have forgotten how to laugh in your job then it might be time to ground yourself for greener pastures
- **I-** **INSTILL** the core values, enough said
- **G-** **GUIDE.** Give the gift of your experience to others. Share your knowledge of aerospace medicine and all its aspects—you may not appreciate how much you really know and love about it until you explain it to someone else
- **H-** **HELP/Facilitate/Advocate** for your docs. Send them to quality courses. If they are deserving and eligible for an award, do not just justify a non-submission because she is in the medical corps and it is “not necessary” for promotion
- **T-** **TRAIN.** Take time to train yourself and then teach. Our field is always changing, make sure you keep up with the new AFI 48-123 (released Sep 2009), for instance

There are numerous other ways to affect the lives of our new flight docs and I challenge you to find your method to become a mentor. Reach out and take the time and effort to teach a flight doc and it may just make a difference for one of them. I know it did for me. 

As was mentioned earlier, SoUSAFFS will celebrate its 50th anniversary in 2010 and we will be dedicating the spring issue of FlightLines to commemorate this milestone. Please send us your thoughts, suggestions, and article contributions. Remember, this is your organization and we would appreciate hearing from you. ✼
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This issue of FlightLines is chock full of great stuff. Please take the time to devour appropriately! I don’t have much to add this go ‘round other than to call your attention to a couple of important Society happenings.

First, as many of you may know, 2010 will see SoUSAFFS in its 50th year. We are planning a special tribute edition of FlightLines in honor of the 50th anniversary for the spring of 2010. So, I’m sending out an all points bulletin seeking stories, anecdotes, tributes, et al. that you’d like to see highlighted in the anniversary tribute edition. Please send your ideas and inputs to the e-mail address below.

Secondly, in honor of the 50th anniversary, we will be designing a limited edition, numbered, 50th anniversary SoUSAFFS coin. Our stock of the current SoUSAFFS coins is just about depleted and the timing for a reorder and/or redesign couldn’t have been any better. It will only be available during 2010; and, a new redesign for the regular SoUSAFFS coin will then be available beginning in 2011. What I am seeking is the best design concept or artwork for the anniversary RMO that you may have. Please send me your ideas and artwork submissions NLT 15 December 2009. The winning designer will be offered the numbered coin of their choosing courtesy of SoUSAFFS.

As always, I solicit your input for any and all topics related to SoUSAFFS and/or FlightLines. If you have any suggestions for improvements and/or ideas/topics you’d like to see covered in FlightLines, by all means, please share -- duncan.hughes@brooks.af.mil.

Volanti Subvenimus!

Slash

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Because every Squadron flight doc knows “Keep ‘em Flying!” doesn’t stop when your pilot hits the base gate.
As the weeks, months and years pass, one thing is always certain, “things change.” Hopefully all such change is for the better, not worse. Good strategic planning will tend to create changes for the better. This past year the AFMS has seen its share of change. From top leadership to individual clinic policy or additions to duty, nearly all change has been significantly positive. That’s a good thing! However, from where the authors of this article sit, we see and deal with the ‘not so positive’ change; specifically in the Aerospace/Flight Medicine department. You probably have already guessed where this article is heading.

Flight Medicine staffing has definitely changed! What happened? Lt Col Larry Parsons, AFPC assignments and Col Donald Christensen, AFMSA Aerospace Medicine Consultant, get asked that question quite a bit. As a matter of fact, we get asked many questions, hence the title of this article. Who are we going to get? What is their report no later than date? Where are they coming from? When will they be here? Why are we not getting more? How many docs will we get? How will we complete our mission? Help me please? The questions never seem to decrease in number. The answers are very simple...if we could clone flight surgeons! This article will attempt to address some of these questions:

Who are we going to get? How many docs can I have?

These two questions can be answered by addressing the Unit Manning Document (UMD). The UMD is the most important factor in determining the type and number of docs you will receive. This is the official document, which feeds from the personnel system of record, which tells you your authorized slots as well as specific AFSCs and ranks. A complete fill of authorizations is never a guarantee. The fill rate is dependent upon the available inventory of personnel. Since AFPC, AFMSA, and the MAJCOMs will assign flight surgeons according to the UMD that is on file in the personnel system, it is extremely important that it is correct and matches what you are viewing at base level.

Therefore, occasionally check and make sure that you, MAJCOM, and AFPC are all looking at the same document. Be sure you let us know about local special mission requirements you have such as PRP or support of Guard, Reserve, or tenant units. If you feel your UMD is inadequate, talk to your MAJCOM SGP about submitting an Authorized Change Request (ACR) for additional positions.

Of course, our ultimate goal is to staff all MTF flight medicine clinics at 100%. That has not occurred. For the past 3 years, our realistic goal has been to staff our flight medicine clinics at 80%. We often tell folks that we consider “80% is actually 100% filled.” Here comes the change. For a variety of reasons, the flight surgeon availability has gotten worse. We now tell field commanders “70% is the new 100%.” Air Force wide, we are staffed near 70% in flight medicine. As always, there are varia-

tions, mostly based on math (you can’t fill 70% of a two person shop), but we will try to keep it as equitable as possible. Keep in mind also, if your buddy’s shop is staffed at 100%, and nobody is scheduled to depart in the near future, chances are we won’t/can’t just yank somebody out of their shop and send them to you. We have to consider time-on-station minimums and other such personnel rules.

Also for the “who” part of this question, it does not simply refer to an individual’s name, but rather their level of flight medicine experience/training and credentials. This leads into the different types of docs that wear wings. There are three basic categories of Flight Surgeon “48” series Air Force Service Codes (AFSC). They are 48G, 48R, and 48A. Yes, they all are Flight Surgeons, but their only similarities are an internship year and the successful completion of the Aerospace Medicine Primary (AMP) course. Other than those two training events, they are very different physicians. Frequently, (especially when dealing with non-rated personnel) all three of these doc categories get lumped together as simply a “Flight Surgeon.” We believe it is important for all of us to understand the pathway in attaining each level and to be able to educate the field on the difference in training. We must ensure that the proper level of trained assets are placed in the correct positions and not unintentionally set one of our own up for failure.

Where do 48Gs come from?

The “G” designates “General Medical Officer” (GMO). These folks are Flight Surgeons who are not residency trained. AFMS policy states that every physician should become residency trained. So by definition, a GMO flight surgeon is a doc who either hasn’t decided which residency to enter, or hasn’t yet made themselves competitive enough for the residency of their choice. They are post internship and AMP training. Our GMO pool consists of two groups: those who haven’t applied for a residency and those who have applied, but failed to match. Every year approximately 300 Health Professions Scholarship Program (HPSP) and Uniformed Services University of the Health Sciences (USUHS) students enter medical school. Approximately 5-10% of these students will never enter the AF. Therefore, approximately 270 “new docs” will come to us from medical school. Anywhere from 180 to 200 of these new grads will be selected for residencies; the other 70-90 will go into PGY-1-only transitional internships. Of those 70-90 PGY-1s, approximately 30-40 will get into residencies after their internship year, leaving the AF around 40-60 GMOs. Approximately 10% of these will be unable to pass a flight physical, so they will work in the Family Practice clinic. That usually leaves about 35-50 GMOs who will attend AMP and become flight docs. These numbers vary from year to year, mostly based on residency match rates. These GMOs are our largest pool of available docs, and in general, they can go wherever the AF needs them.
Where do 48Rs come from?

The “R” designates “Residency.” These folks are Flight Surgeons who have previously completed a residency in some specialty. It matters not in “what” residency, simply the successful completion of a program. Residency-trained flight surgeons come from a wider array of sources than do the 48Gs. First, the 48Rs can transfer into flight medicine from their other specialty. Over 60% of all 48Rs come from Family Practice after any commitment/payback is completed. The second largest group comes from Internal Medicine, with minimal numbers from other AFSCs. Every year, about 6-10 docs will resign from their residencies, for a wide variety of reasons. When this happens, the doc must serve as a GMO for two years before applying to another residency. Since 2008 we have sent all resigned residents to family practice to serve as GMOs because family practice has lower staffing levels than flight medicine. Before 2008 these docs were coming to flight medicine and that could possibly resume in the future. Remember, docs can come to flight medicine from any specialty, and each specialty brings a unique skill set; so look around your facility for folks who are interested in flying, regardless of their specialty, and help our team in recruiting.

The second way to get 48Rs is though the “48R Residency.” Physicians enter a family practice residency with a commitment to go to flight medicine, not family practice, upon residency completion. This program has been around since 2007, and we only get 4-5 of these individuals per year. When your GMOs need counseling about residency selection, don’t forget to tell them about this one.

A third way to get a 48R is through the fully qualified accession program. These physicians usually come to the AF mid-career, already residency trained, and normally don’t incur any educational commitment. The good news is that these folks can show up at your base at any time throughout the year. The bad news is that they can usually pick their first base; so unless you are at some of the “premier” geographical locations, you may never see one of these.

Where do 48As come from?

The “A” designates “Aerospace Medicine.” Simply stated, “We make 48As!” These folks are flight surgeons who have previously completed a residency in Aerospace Medicine…aka “RAM” (Resident in Aerospace Medicine) from the United States Air Force School of Aerospace Medicine (USAFSAM) located in San Antonio…soon to move to Wright Patterson AFB. This residency consists of top quality training of up to 3 years, post internship and flight medicine tour, to include a Master’s in Public Health (MPH), clinical advancement, and knowledge in Occupational and Preventive Medicine. Successful completion of the RAM program makes one dual board eligible in Aerospace Medicine and Occupational Medicine or Preventive Medicine [editor’s note: if completing the three year program]. The RAM also trains flight surgeons to take on leadership positions in the AFMS. They leave the residency for positions as Chief of Aerospace Medicine (SGP) and/or squadron command positions. This is a well sought out residency for many who are out in the field. It remains obvious that previously trained RAMs are positively mentoring the younger docs who haven’t decided on their first or second residency of choice. To all of us “old guys” out there, keep up the great recruitment into the RAM program.

When can I have my docs?

Summertime is when 95% of all physician moves occur because nearly all of our docs are moving to enter or leave a residency/fellowship, or to replace someone who is. Autumn is a great time to start asking your local docs about their plans for the following summer. Encourage them to start planning early. It would behoove senior flight medicine staff to find out who is applying for a residency/fellowship, who wants to separate, retire or simply PCS. Obviously this would be a great time to provide career counseling as well. Once information is gathered, contact AFPC (Lt Col Larry Parsons) through the MAJCOM SGP and let it be known how many folks you think you will lose in the following summer. Both AFPC and AFMSA will also begin planning in the fall in trying to figure out how many docs we can send to each base. Keep AFPC updated as your folks may tend to change their mind. Please be aware that if you somehow lose a doc at some time other than the summer, you will probably not be able to replace them until next summer.

Why…?

Regarding the “Why” questions…they can be endless! We hear all sorts of “why” questions. All we will say on this is that AFPC and AFMSA may not actually be “out in the field” with “boots on the ground,” but we do have the global look at ALL base manning. Our decisions are focused for the good of ALL Air Force and its mission and not vectored towards any individual base. Sometimes, decisions may seem unbalanced from the local perspective, but for global Air Force, they do make sense.

So change, specifically “staffing change,” has come to your Flight Medicine clinics and we understand the constraints that you must work under. The AFMS leadership in coordination with AFMSA and AFPC are intensifying the collaborated effort with the Air Force Recruiting Service in the goal of increased Flight Surgeon recruitment. You also can help the entire flight medicine community by developing local marketing with recruiters and help us to bring in new docs. If there is a transitional resident in your area, help him or her out with maybe a flight physical, so they can attend the AMP course. In other words, take every chance you can get to visit local medical schools (maybe your alma mater) and large group practices, to let them know what you do and how much you enjoy it. Think about how difficult it must be for an enlisted recruiter trying to explain to physicians on how great it is to fly and treat patients. Finally, we ask that you give all your young docs the mentoring and attention they deserve. For every doc who decides to stay in, that’s one less new doc you’ll have to teach how to spell PRP or DNIF! 🌟

Cheers!
Great anticipation is usually an emotional feeling we experience when we receive a “certified letter” in the mail. However, such anticipation can be good, if it’s coming from a state lottery commission or bad if from an enemy’s personal attorney or an organization like the IRS. When the mail comes from the Federal Aviation Administration (FAA)...mmm, what’s up? Well, recently many of you FS out in the field had that exact thought a few weeks ago when you received such a letter from the FAA stating that you have been “de-certified” as an FAA AME (Aero-Medical Examiner)...Surprise! Trust me; this was NOT supposed to be a surprise. The timing of the letters sent and the resolution agreement on new rules governing the program were not exactly in sync.

Historically, there are different rules that govern AME certification and maintenance training between active duty FSs and civilian providers. I will briefly describe the difference.

A civilian physician must apply to the FAA, provide professional credentials, attend a week-long initial training class located in Oklahoma City, and adhere to the rules for maintenance of certification which includes a minimum of 10 exams performed/year, and completion of refresher/sustainment training every 3 years which could alternate between a CBT course or a weekend live attendance course (this course is always offered at AsMA).

An AD FS must apply to the FAA, receive written approval from Air Staff/Flight Medicine, complete CBT course and is NOT held to ANY quota or sustainment training.

A few months ago, the FAA underwent an audit that specifically looked at their AME program. They discovered that nearly 80% of military AMEs had not performed any FAA exams in the last 24 months. This has prompted the FAA to tighten up standards to be more consistent across the board. There have been significant and quite lively discussions on this issue between AFMSA and the FAA, for we strongly feel that there is a big difference between a civilian provider and a military FS who is actually “practicing” the specialty...hence the difference in refresher training and quotas.

The final result is now in and there is NOT much difference. The first act was to notify and de-certify all military AMEs that did not perform 10 exams in the last 12 months. These new rules have taken effect as of 1 Oct 2009. An AD FS who desires to be FAA certified must complete an application (contact Ms. Leah Olson by phone at (405) 954-4832 or e-mail at leah.olson@faa.gov), provide professional credentials, complete CBT course, and adhere to the rules of maintenance which include a minimum of 10 exams/year, and refresher training every 3 years alternating between CBT and the weekend course. The difference between the two groups is that the AD FS is exempt from attending the week-long course in Oklahoma City.

There you have it...new season, new rules! At the same time the FAA notifies you of your certification, they will also notify my office at AFMSA. My position in turn will simply notify the corresponding MAJCOM SGP of your certification for FY1 and tracking only. My position simply acts as a single point of contact for the FAA. For those who desire to be re-certified, simply contact Ms. Olson. Remember, when you are certified as an FAA AME, your certification is tied to the “facility” where you perform exams. Therefore, when you change facilities, you MUST notify the FAA of your change. Keep up the great work...and keep ‘em flying! Semper Gumby!

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AME’s Surprised by FAA New Rules

Col Donald “Klepto” Christensen, USAF, MC, SFS
AFMSA
One of the significant challenges for Air National Guard (ANG) flight surgeons in the coming years will be Survival, Evasion, Resistance, and Escape (SERE) training at Fairchild AFB, Washington. The SERE Level B training that many of us went through during the Aerospace Medicine Primary (AMP) Course at Brooks AFB has gone the way of the dinosaurs—it is gone, and there are no plans to bring it back. This leaves the full-on SERE Level C course at Fairchild AFB, Washington as the only survival course for all United States Air Force aircrew members: pilots, nabs, flight engineers, loadmasters, flight nurses, flight attendants, flight surgeons, etc. The bottom line is that every new physician with aspirations of becoming a flight surgeon in the Air National Guard will need to successfully accomplish SERE Level C training starting sometime in the Fall of 2009. If you already have your wings and have completed the B Level course, you will be “grandfathered” into the new requirement. However, all new aircrew members will be going to Fairchild AFB for survival training. There is no other choice, and there is no “Guard Waiver” possible because there are no other courses, and this decision has been made at the highest levels of the Air Force.

SERE Level C is an extremely challenging 19-day course which will not be broken up into increments for Guardsmen or Reservists. The course is physically and mentally demanding, and parts of the course are classified for good reasons. The reasons for not breaking this up into increments for Guardsmen and Reservists are valid. This is some of the best training anyone will receive in their military career, and its methods have been proven to keep people alive and strong under the worst conditions imaginable. It is training that is useful and necessary for anyone who is deploying, and there are things taught at SERE that can keep you alive right here at home, too. The course is well designed for maximum effect, and it is difficult to argue with the success graduates of this course have had in real life situations around the world in staying alive when things go badly. The SERE course is not easy, and it takes preparation to succeed.

I went through the SERE Level C course last year at age 48, and I can tell you that it will require mental and physical preparation to succeed—lots of physical preparation. If you are just getting by on your Air Force Physical Fitness Test, you only have a slim chance of succeeding at SERE. It takes stamina and endurance, and it takes upper and lower body strength to move through some of the toughest mountain terrain in North America for days on end trying to keep up with mostly 18 and 22 year old classmates at high altitude. Prospective flight surgeons will be assigned to a class with all variety of aeronautical AFSCs (there were even some Air Force Academy graduates in my class), and the majority of the people will be young, extremely fit, and highly motivated to succeed. Anyone who believes there will be any slack cut for age, rank, or professional standing will be in for a rude awakening at SERE. In fact, it is just the opposite, and there are bound to be some “special moments” for field grade officers. I am telling you this now because I want all of our people to succeed, and in order to accomplish this, we need to manage expectations and provide encouragement. There are several things we can do to help our prospective flight docs.

First, have them study the SERE student handout a few months prior to arriving at Fairchild. The handout is pretty much “no kidding,” and it gives tips on how to succeed in the class. Secondly, have them start physical conditioning at least three months in advance, and include carrying and running with a sixty pound pack in the training regimen. Include flexibility training (trust me on this one) and strength training for the upper and lower body. The third thing is to try and schedule the SERE training in late spring through early fall because it is probably somewhat less painful when you do not have to evade on snow shoes—literally. Most importantly, provide your prospective flight docs with encouragement. Generations of Air Force aircrew members have done this type of training including all of the people in your home unit flying squadron. The message should be, “We did it, and you can do it, too.” Remember, your prospective flight surgeons may be a little older and a little less in shape than your average SERE student, but youth and skill are rarely a match for old age and treachery.

---Editor’s note: the S-V80-A & B student handout and all pertinent information regarding this training are available at the 336th Training Group (TRG) site and may be viewed through the Air Force Portal.

–Return with Honor.
The following is an excerpt from the Milestones section of the 28 August 1944 edition of TIME:

 Died. Lieut. Colonel Melbourne W. Boynton, 39, medical chief of the Air Forces' Office of Flying Safety, in a 42,000-foot fall, when he failed, for reasons unaccounted for, to open his parachute while making a test of high-altitude jumping conditions; at the Clinton County Air Base near Wilmington, Ohio.

We have an inherent responsibility as flight surgeons to acknowledge and honor our past. We are privileged to work in the noblest of professions: the healing arts and the profession of arms. Those who came before us effectively communicated common sense solutions to seemingly complex problems. These flight surgeons developed aviation-medical standards, invented life-sustaining and life-enhancing devices, and kept our warriors flying while keeping a constant vigil for squadron and wing morale. Among the heroes were World War II flight surgeons that pushed the envelope of human performance in increasingly hazardous conditions. The urgent need for air platforms that could sway air superiority to the Allies pressed flight surgeons into high-risk/high-reward research.

The researchers relentlessly pursued the objective of reducing the hazards of high-altitude/high-speed flight. Research of the human in perilous conditions often involved the subject controlling the experiment. These researchers were just as brave as the men on the front-lines as they accepted a high level of risk on a daily basis. Some paid the ultimate price.

The Army Air Corps was very interested in the potential of high-altitude jumps. In June 1943, Lt Col William Randolph Lovelace II, the Chief of the Aeromedical Laboratory at Wright Field, jumped from an altitude of 40,200 feet in Ephrata, Washington. This was the highest jump ever attempted. He reportedly wore and used standard parachute equipment. Lt Col Lovelace landed safely but was suffering from frostbite and severe shock. The problem, they determined, was that opening a parachute above 30,000 feet was too dangerous to be effective operationally.

Lt Col Melbourne W. Boynton, Chief of the Medical Division, Office of Flying Safety, took it upon himself to continue the original Lovelace experiment. Lt Col Boynton had always lived an adventurous life. As the son of a preacher, he continued his father’s calling by serving as a missionary in Rangoon. He became an obstetrician and settled in Chicago. After accepting a Reserve commission, he entered active duty in April 1941. He soon earned his flight surgeon wings at Randolph Field and jump qualification at Fort Benning. It would appear that Lt Col Boynton was particularly suited for this experiment given his vast parachuting experience. He had previously participated in altitude jumping and sea survival experiments. One such experiment included surviving a ninety-six hour life-raft excursion in the Gulf of Mexico with eight other volunteers while forgoing food and water.

To avoid the harmful effects of a high-altitude parachute opening, Lt Col Boynton planned to jump from a high altitude, free-fall, and open his chute at around 5,000 feet AGL. The jump had three scientific objectives: to establish free-fall characteristics, to determine the rate of deceleration, and to determine the path of fall. The intent was to develop procedures for aircrews bailing out at high altitudes.

On 19 August 1944, Lt Col Boynton took off from Clinton County Air Base near Wilmington, OH. Around one-hundred spectators gathered in a nearby field to observe the jump. Like Lt Col Lovelace, he wore standard equipment. At 13:13, Lt Col Boynton dropped through the bomb bay at about 43,000 feet. Two minutes and fifteen seconds later, he impacted the ground. Lt Col Boynton’s parachute had failed to open, not because it malfunctioned, but because he made no apparent attempt to open his parachute. At the time, it was not known if he was incapacitated because of the fall or because of the altitude.

Lt Col Boynton’s sacrifice came during a time of great national peril. He simply risked his life so that others may live. It is important to honor his sacrifice and the sacrifice of many like him. His life was a profile in courage. He found his calling and lived without fear or regret. What’s your calling?

More than likely you’re reading this to fill the time while waiting for someone - your SGP, your squadron commander, Col Lee if you’re still in AMP, or maybe you’re waiting for something such as medical records so you can conduct your Certifying Medical Authority review for the Personnel Reliability Program. You’re also likely to be a person who became a flight surgeon to act as a bridge to another residency. Or you’re already board certified and wanted to do something different. Regardless of the above, keep reading. You have an interesting story to tell about yourself. And I think it’s worth spreading the word about how you came to be a flight doc. Not just the positive aspects. Tell the good and the bad. In this article, I hope to convey to you some ways to let people know who you are.

Let me briefly tell you about my journey. I graduated from the Air Force Academy and served as an aircraft maintenance officer for six years (B-2 and F-117), most of which was spent in flying squadrons. It was at my initial Air Force assignment at Whiteman AFB, MO that I first met a flight surgeon (outside the clinic). I had a budding interest in medicine and discussed medical careers with him to include his duties. Initially, I didn’t quite get what his job entailed. I subsequently PCSed to Holloman AFB and moved right down the street from a flight surgeon. I learned a lot about what he did and why he chose flight medicine. He told me of his involvement to support NASA astronauts (to include John Glenn at the time) in case of a divert. He shared with me the time he had to jump on one of the rescue helicopters to be a first responder when an F-4 augered in on the range (all survived). And we talked about being a doctor in general. Of note, he is now a Musculoskeletal Radiologist in Minneapolis.

I got interested enough to decide to take a career broadening tour as an Air Force ROTC instructor. The plan was to take prerequisite classes, volunteer at a hospital, and take the MCAT. And the plan worked. As I made my way through medical school, I became involved in the Military Medical Student Association which had a reserve flight surgeon as its faculty sponsor. He was a pathologist and had numerous experiences to share involving deploying with his A-10 unit (namely Operation Iraqi Freedom). We also had guest speakers come in during the lunch hour (free pizza hour). As I progressed, I started looking at different specialties and couldn’t decide where to settle. Everything was interesting. So an internal medicine preliminary year later I found myself a B-52 flight surgeon at Barksdale AFB, LA. And after a year, decided this is what I want to do, so let’s get into the RAM. I found the mix of management, public health, and clinical medicine to support the flying mission enticing. I have thoroughly enjoyed my military career despite some of the costs e.g. 5 month deployment when my twins were 6 weeks old.

As you can see, I had several exposures to flight surgeons along my career path. As you know, most people don’t get those opportunities. However, you can make it possible for an individual to consider flight medicine. First, take the time to talk to other officers where you work. There might be a Biomedical Service Corps Officer or an Intelligence Officer interested in medicine. Share with them your experiences. Second, see if there is a local Air Force ROTC Detachment at the local university. From experience, the staffs are always looking for guest speakers or even a low threat “round table.” Take an afternoon to speak with those young cadets. Third, if you have a medical school nearby, make yourself available to speak to them. Typically, there is someone on faculty with military experience. This person might know the best way for you to talk about yourself. Fourth, consider talking to medical residents, especially those that will become General Medical Officers. Tell them about your experiences, both the good and the bad. Don’t worry about being a recruiter (whose livelihood depends on recruitment numbers). Just be honest with them. If your plan is to spend enough time as a flight doc to get into dermatology, then tell them. But don’t forget to tell them some of the other benefits such as the squadron camaraderie, the flying, the opportunity to take care of a motivated (overall) group of patients, and the acquisition of public health skills. My only caution is to give yourself a year before you establish an opinion, since it takes 6-12 months to really get a handle on what a flight surgeon is all about.

Bottom line: this really is a low input, high gain maneuver, both for you (who doesn’t like talking about themselves a little?) and the Air Force. I realize most clinics are very busy and that you likely do not have enough time to get your own work done; much less making the time to describe your work. However, sharing your experiences can be done in one afternoon every 6 months or so as a speaker or for 5 minutes a day at work. Yet you could be planting a seed (sts). And who doesn’t want to do that? ♠
Recruiting; You are the Health Professions Recruiter!

Lt Col Anthony “Shiner” Waldroup, USAF, MC, SFS
Bravo RAM

Writing has been difficult for me because I don’t have much worthy
to say as the Bravo RAMs can attest. However, I sit here in my house
robe contemplating why I ever promised to write about flight surgeon
recruiting when I have no formal or practical experience in recruiting
physicians into USAF flight medicine. I am certainly not aware of any
flight surgeons assigned to health professions recruiting; and if there
were I’d say give them back -- we need them in the fight. As I contem-
plate my lack of expertise, I acknowledge that I have plenty of personal
experience, at least from a direct accession point of view, and I would
like to make a few points.

Talk to your colleagues about what you do. I find that many physicians
are really interested in flight medicine if I am willing to provide my
time to speak to the profession. Peak their interest by being positive
and giving enough of your time to touch on the broad scope of flight
medicine. Pay and bonuses are important topics as most physicians will
affirm, but the data we have from previous State of the Flight Surgeon
surveys indicate that flying, operational, and leadership opportunities are
important to retention and I personally was interested in these opportuni-
ties when I was recruited. The quality of care, clinical and professional
environment, and capabilities of our Service’s health care system are
tremendous and I would bet surprising to unfamiliar physicians. Just
think of what our Air Force’s deployed medical assets are accomplishing
in support of the Global War on Terrorism.

It’s important to provide good information to colleagues as we are
accustomed to when giving informed consent to our patients. Not sugar-
coating our responsibilities for deployment, physical fitness training,
professional development, etc. is important to avoid the perception of
hornswoogling a colleague into military service; however, these respon-
sibilities when discussed in the light of evidence suggests the burden is
not all that great for flight surgeons. For example, one-third of the 2009
State of the Flight Surgeon respondents had not deployed in the last three
years. And who can argue that improved physical fitness among our
ranks is too burdensome. A sense of duty and responsibility which has
been a strong factor in the retention of flight surgeons as demonstrated
in previous State of the Flight Surgeon surveys will overshadow the
perceived negatives of military service and strengthen the resolve of
colleagues considering joining our ranks.

Be supportive. This may mean staying late to perform a flight physical
for a physician who wishes to enter the Air Force, or calling a physician
at the request of a health professions recruiter to discuss becoming a
flight surgeon. Be willing to go the extra mile because this physician
is interested and may be able to fill a critical position -- we all know
the impact of our current staffing. The process for a trained physician
to enter the Air Force is surprisingly long and wrought with potential
pitfalls that may discourage great applicants. In my personal experience,
I had a delay of two years due to a misunderstanding and I was a fully
trained flight surgeon in the Air National Guard.

 Believe it or not, the recruiting office is not the place a physician can go
to get the scoop on flight medicine. My first health professions recruiter
was a medical technician by training and the second was a civil engi-
neer. The OIC for the station was a nurse. None of them were experts
in flight medicine; but you are! So I would urge you to please contact
your local health professions recruiter and let them know you are willing
to help them.

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Human Retention Factors

Maj Kevin “Schweaty” Bohnsack, USAF, MC, FS
55th MDG SGP, Offutt AFB
Bravo RAM

Retention is difficult to analyze without a framework that could explain the past, current, and future directions of flight medicine and the Air Force Medical Service (AFMS). My own research into AHLTA over the past two years led me to Col Lex Brown’s Human Performance directorate at Brooks City-Base where the concept of Human Systems Integration (HSI) has been thoroughly developed and refined. This essay will attempt to apply retention issues to the HSI domains of manpower, personnel, training, human factors engineering, environment, and habitability. The remaining domains in the HSI model were excluded for brevity and difficulty in applicability.

Manpower is the number and mix of personnel to train, operate, maintain and support a system. In the last Flight Lines, Col Matarese noted that flight surgeon numbers are scarce for FY10 with 65% coverage of flight surgeon billets in the AFMS. Certainly, under these conditions, it is difficult to operate, let alone maintain or support our aeromedical mission. Prioritizations of mission-essential tasks become the mainstay of all base-level flight surgeons when they have to cover sick call or knock out overdue waivers instead of perform rapport-building shop visits or address capability gaps for their operators. When the main metric for any clinic is the RVU, our hands are tied and our wings are clipped. Is there an end in sight from this in garrison rat race? The answer is maybe but the 50% clinic versus operational support time is a metric that is not achievable for many bases – a somewhat demoralizing circumstance for both the new accession and the supervising SGP. The challenge is therefore to recruit and retain more flight surgeons - the purpose of this essay and the theme of this Flight Lines.

The personnel domain includes the skills, knowledge, and abilities required for the manpower that you do have. Our current manpower mix is typically a gaggle of first-base flight surgeons with little corporate aeromedical knowledge, placing a higher burden on the one or two more experienced flight surgeons for mentorship and direction. We can no longer depend on the more operationally-savvy technicians that we had in the 4FOX career field to support and grow the fresh AMP grad. Mentoring is now a top-down venture and a peach-fuzzed captain is not raised by the crusty and experienced 4FOXs that were just as comfortable in an ambulance for an IFE as they were applying 48-123 standards to an initial flying class applicant. Simply put, our current personnel in numbers and mix do not supply an optimal package for the aeromedical mission.

The family health initiative (FHI) is an attempt to address the manpower and personnel domain shortfalls in primary care but its success has significant implications for the flight medicine clinic as well. Primary care optimization (PCO) was an effort to apply the flight medicine model to primary care by encouraging cooperation between medics and the line through the ownership of defined patient populations. FHI, with the goals of primary prevention and targeted disease management, takes this ownership to the next level by stepping up the participation of non-provider staff in administering these programs. Lest you think that the civilian world is any different, the current drive for patient-centered care and medical homes is the newest attempt at reinvigorating primary care in a way that capitation did not. To address this issue, physicians need to empower their nurses and technicians with more trust and responsibility, regardless of the current model du jour or clinical setting. Evidence-based practices and standardized protocols need to be developed and enforced internally between professional partners, translating to clearly-defined roles and greater autonomy for support staff on a team. Optimization initiatives need to start with the resources you already have. Retention, in turn, is dependent on proactive approaches to addressing problems right now, not relying on the potentially broken promises of manning in a future POM that many will never stick around to see.

The training domain addresses the instruction and resources required to deliver capabilities. The AMP course is now as lean as it possibly can be and provides a more practical and relevant experience for flight surgeon students. Besides the usual chamber flights and fuge rides, students receive some of the same didactic briefings from the old school but also attend workshops in the new school that cover such topics as waiver work-ups or mishap response scenarios. The more robust clinical and aeromedical briefings of the past are no longer delivered via a face-to-face platform, these are now relegated to the WebAMP that must be accomplished by AMP attendee wannabees in the comfort of their own busy work cubicle or at home. Granted, the proverbial Death by PowerPoint is no longer the AMP standard but concerns have been raised that computer-based training (CBT) is more of a square-filler than a value-added exercise in transferring knowledge from 50 pound craniums. Efforts have also been made on the technician side. 4N’s that work in flight medicine now have an extra educational opportunity at Brooks where they learn the nuts and bolts of aeromedical program management. Time will tell whether these new training approaches deliver the full-up rounds that we need at the base-level. My impression is that most of our training is more exposure than in-depth integration anyway. Practical OJT at the base-level is where the majority of true learning happens. As a result, WebAMP resources may prove to be a more up-to-date reachback resource than the binder or CD-ROM that you may have sitting on a shelf somewhere in your pro-gear. Additional training opportunities at the schoolhouse and other settings can provide reasonable ways to mentor and nurture the younger flight surgeons as well. The most recent State of the Flight Surgeon survey results seem to emphasize this point; our main challenge is finding time to send those individuals on the good deal TDY’s without compromising the home mission.

Human factors engineering (HFE) is the comprehensive integration of human capabilities and limitations into systems design to optimize human interfaces and facilitate human performance. The most obvious limfac to clinical optimization is our continued effort to incorporate
technology into all aspects of our medical paradigm. Processes that previously belonged to technicians such as reviewing a SF600 overprint are now relegated to template-building and -filling within AHLTA. Physicians, including flight surgeons, have become their own medical transcriptionists and coders, pushing the clerical work to the tip of the scalpel. The implementation of AHLTA was too quick and too complex for most clinics and we are now playing catch-up to this massive enterprise-wide undertaking. The sad part is that commercial products in electronic health records are just as tedious on the outside. Regardless, providers who leave the DoD continue to cite AHLTA as one of the reasons they leave – a testament to the failure of HFE and appropriate acquisitions in the most expensive medical software package in the DoD. If we simply moved toward the aforementioned style of using our staff more comprehensively, we could leverage their skills and capabilities to shorten our days and make everyone’s participation more value-added. Why do so many of you insist on loading the S/O portion of your AHLTA notes yourselves? Trust, train, and treat your staff as partners on a team and you may be able to manage your patients more effectively.

The environment domain is the context of HSI that includes conditions in and around the system that affect the human’s ability to function as a part of the system. These factors are most apparent in how the external medical market influences personal choices and behavior. We now have second and third career colleagues who joined the military well after they had cut their first medical teeth in the civilian world or a sister service. This diversity expands a clinic’s collective skillsets but it also indicates that the skies can appear bluer on both sides of the mil-civ cockpit. Nonetheless, we continue to see rookie and seasoned flight surgeons opt for specialty training by cashing in their hard-earned operational points at the military GME board on the inside or a non-military career altogether on the outside. Additional opportunities in the Guard or Reserves may also draw experienced flight surgeons into military service options that are off the prescribed active duty flight path – a noble venture that acknowledges the citizen warrior role. Their personal choices will be affected by many issues that are outside the realm of a standard pyramid scheme and there is frankly little any of us can do but to support their decisions and allow them to follow their dreams.

Finally, habitability describes the factors of living and working conditions that are necessary to sustain the morale, safety, health, and comfort of the user population. The ops tempo has not stopped since 9/11 and there is no predictable break any time soon. The 1 on, 3 off band system is even more aggressive than previous AEF cycles. In addition, numerous operational squadrons do not adhere to these notional schedules because of other requirements or the unique mission they prosecute. The effects on family relationships and friendships are, at times, overwhelming and adverse to the seemingly normal life that the rest of our civilian colleagues enjoy. At the same time, the reason we choose this adverse-appearing lifestyle is the opportunity to serve our great country and protect the ones we love.

Each of these HSI domains presents a perspective on the issues surrounding retention for flight surgeons within the AFMS. The challenges may not be unique to the Air Force nor even medicine but they are certainly human retention factors that need to be addressed by local SGP’s and higher-level policymakers. Ultimately, our drive needs to be an internal one based on core values and dedication to the mission. If those more universal principles are instilled in at least some of our members, our ranks may occasionally falter in numbers, mix, training, and execution, but we will not fail. ♠
A New Combat Paradigm: Distributed Ops

Col H. J. “Bugs” Ortega
AF ISR Agency/SG

Today’s AF has a long and proud, expeditionary heritage. Our relative geographic isolation has made this a viable strategy for the world’s greatest air and space force. But the information age is having transformational effects on the way the USAF fights its nation’s wars and keeps the nation secure. Just think “cyber.” I’ll call it “distributed operations.”

Let’s think about this from an operational medical support perspective. Traditionally, the USAF has deployed forces to hot spots around the globe. This model has served us well for over a century, through WWI, WWII, Desert Storm, and even OIF. How do we medics support these operations? Over the years, the AFMS has dropped the DNBI rate to the lowest in history with a comprehensive system that uses medical standards, pre-deployment screening with applicable preventive measures, and post-deployment monitoring. Additionally, we have medical force planning formulas that provide a “combat level” of medical access at the forward deployed location, based on the PAR (population at risk) and our highly successful EMEDS concept. It is fairly safe to say that the “combat level” of medical support provides a higher level of access that is weighted toward surgical intervention than typically available at home station. And those deployed medics begin the re-deployment monitoring process just prior to redeployment. Back at home station, the PDHA and PDHRA programs help to identify those with health or mental health problems related to their deployments.

But just as the industrial age changed warfare for the 20th century, the information age is affecting 21st century warfare and our current warriors. Witness the rise of networks, cyberspace, and UAVs. These technologies have altered the centrality of the expeditionary mindset. As you all know, the internet has made the world a smaller place. Via the network of cyberspace, you can instantly have effects on any part of the globe - virtually. As a matter of fact, an AFB in Nevada flies nearly all of the UAV sorties world-wide via the net! More and more personnel are actively involved in combat operations from home station. These airmen are organized in ISR wings, but many are distributed as tenant groups on other bases. Most are low density, high demand specialties. Many work 12 hour shifts 5-6 days a week. Since the internet can send work anywhere on the globe, these personnel can be located, well… anywhere on the globe. These personnel are physically separated from the combat zone but may be intimately involved, both mentally and emotionally, with ongoing combat operations. Today’s combat requires them to be in place at home station for that support (think UAVs again), and currently calls them “deployed in place.” The AFMS uses the PLATT model and the new FHI numbers you have probably heard about to provide planning and resource guidance to staff up our home station medical groups.

We medics must consider the “distributed” environment, characterize the stresses, and mitigate the risks that this novel situation presents our young airmen. Access by medics to these workplaces has traditionally been limited but must occur. We must then develop processes or systems that provide the required medical support. The medical specialty best suited to doing this work is Aerospace Medicine, for it is preventive and occupational in nature. Yes, this operator lacks the traditional exposure to the gravito-inertial, hypobaric aviation environment. But in the end, it is still all about the combat effectiveness of the USAF. Our operational medical support models have served us well for aviation related warriors. We can look to our past for ideas that work, such as the flight surgeon and the SME. We could invent novel solutions, as well. Solutions will require tradeoffs and vigorous debates not just about resources, but about the future of the specialty of Aerospace Medicine and indeed of the AFMS itself. I look forward to the opportunities which will present with the coming transformation. Keep those “distributed operators” flyin’ and fightin’! 🌟
The Sky Is NOT Falling!
Building on Force Strength

Col Carroll H. Greene III, USAF
Chief, Operational Psychology
Air Force Special Operations Command

It might surprise many of us familiar with the messages fed through our mass “information” media that through the ages, adversity, when met with accountability, positive attitude, and faith, has consistently bred strength and human growth. However, our protected and privileged contemporary culture, fed by a systematic media focus on negativity and fault finding, may be slipping toward even broader acceptance of values that undermine resilience and recovery. Our medical model of health care is designed to scan for and recognize pathology and vulnerability. Although excellent at what it does, we must realize our medical care system is NOT designed to detect or support strength and resilience. Resilience and strength are sometimes the goal of the confidential doctor-patient interaction; but the more visible system focus is on detection of vulnerability and disease. This naturally conditioned orientation—useful in the healthcare setting—makes it extremely difficult for most health care professionals to develop a strength-based focus for interventions outside of that setting. To facilitate individual and collective strength, leaders must publicly proclaim and champion the strength and growth that result from adversity and injury, when it is met with positive attitudes and action. I want to focus on one particular area of interest to us all: COMBAT STRESS.

Combat stress is an issue that concerns us as healthcare professionals and as military officers responsible for supporting and facilitating military readiness. When you consider this phenomenon we call Combat Stress, do you consider it as an undesirable consequence of war, a disabling force affecting our military men and women; or a source of growth and strength voluntarily sought by those with hardy attitudes, a challenging test one takes to affirm and strengthen personal values for success in life?

In fact, combat stress is a source of all these things and many more, most of which are positive for the vast majority of our people. However, when we lose sight of the fact that combat stress is a predominantly positive force—or we fail to use its positive influence—then the impact we have as healthcare “experts” can become negatively skewed by our own loss of perspective. A negatively biased view can degrade our approach to patient care, and can shape the subtle suggestions we convey to our patients, and the other airmen we support. A great deal of research supports the fact that human expectations—and “expert” influence (i.e. suggestion)—have tremendous impact on treatment outcomes. This effect has been termed “placebo,” “Pygmalion effect,” “power of suggestion,” and “power of expectation,” among others. Any competent sports coach knows that the clearly communicated positive expectations of a respected authority are very powerful in helping to determine outcomes. Despite that, the media (including many medical sources), are filled with reports of negative outcomes such as suicide, homicide, family abuse, denial of access to care, soldiers abandoned by military medicine, and soldiers mental health needs neglected by leadership. What are in fact incidents representing a small minority of troop behaviors and experiences are sensationalized and used to fill the vast majority of the “information” window.

Additionally, recent research findings suggest that projections of negative outcomes have even greater behavioral impact than positive projections (Dodge, 2008). We see few—if any—media reports of the beneficial personal development effects of combat stress; families strengthened by the loneliness of separation—and joy of reunion, love of our country strengthened by deployment experience, family pride and intimacy strengthened by shared sacrifice, desire for spiritual growth fuelled by survival and the pain of loss, courage for the future strengthened by adversity confronted and defeated, new personal goals fed by the energy derived from survival, and self-image improvements derived from pride in one’s response under pressure.

I can understand that the “information” media are much more concerned with generating revenues than in representative reporting of world events: their goal is to keep us tuned in and anxiously awaiting the latest or next disaster or heinous act. I also understand that our medical system is designed to detect and remedy vulnerability and pathology. It is one of the best in the world for this purpose.

However, it is a BIG mistake to allow the “negative outcomes” orientation, prevalent in these venues, to set the tone for our focus or approach to leadership of our forces. In order to respect and support our warriors effectively, we need to relegate media sensationalism to the tiny realm of personal amusement, or ignore it! Also, if medical professionals are to provide significant support to resilience of the force, they must be able to recognize and promote the qualities and values that make our force strong in the face of danger. We must not allow a negative media or the naturally negative bias of our medical focus to sway our objectivity—or the exercise of positive influence in our interactions with patients and colleagues.

The fact is, research in all military Services continues to show that 7-18% of our members return from deployments with diagnosable problems such as Post Traumatic Stress Disorder (PTSD), Depression, Traumatic Brain Injury (TBI), and Anxiety Disorders. That percentage can rise to 20% in some of the units that have seen heavy combat in
multiple deployments. Even if we assume that disorders are under-reported, this would still indicate that the prevalence of actual disorders is still in the minority. I certainly believe every one of these 7-20% of our people deserve the best care we can afford, and that each one is significant in regard to their own personal pain. Also, 7-20% is a large actual number of members, because we are sending large numbers of Servicemembers to dangerous areas. However, we need to remember that 7-20% is still a small PORTION of our force, and that the strengths inherent in the vast majority of our men and women are ignored when we support—or allow—the message that “large percentages have some stress related disorder.” “Large percentage,” in this context, suggests a level of dysfunction that is simply untrue.

I do not mean to imply that the other 80 to 93% are unaffected. Of course it is natural to return from any life-threatening situation with hyper-vigilance, exaggerated startle response, re-prioritization of mental focus, and other behaviours indicative of conditioned survival responses. But the 7-20% figure does mean that 80 to 93% of our people experience the beneficial effects of combat stress—without developing related dysfunction that rises to the level of a “disorder.” The Army has wisely coined the term “Battlemind” to name these conditioned survival responses, and is reducing the use of the negatively suggestive term “symptoms of PTSD.” Just walk or drive through any dangerous neighborhood late some night, and you’ll be glad that hyper-vigilance and adrenalin are still there. We don’t want to get rid of these responses; they are actually normal and useful. We must simply learn to manage them better, to dial them up or down as the need presents.

However, due to the predominant focus on the few negative effects of combat stress—that affect a minority of our people—the positive effects of this powerful phenomenon are not commonly discussed, or even known. And because they are not commonly known, their potential to inspire positive expectations and outcomes is ignored. Over the past two years, I have had the opportunity to present this perspective to many medical audiences. Many medical professionals seem surprised by the fact that “combat stress” actually produces positive outcomes. And that says to me that we may not be using the positive power of expectation in the way beneficial to our patients—or to the larger number of military men and women who listen to medical “experts” for perspective and guidance.

Let’s take a look at what I propose may be the TOP 10 COMBAT STRESS MYTHS:

- Combat Stress has mostly negative effects on our people
- A large percentage of our troops return with PTSD, Depression, or Anxiety Disorders
- A large percentage of people who have combat-related PTSD or other disorders are disabled
- Many military veterans who have PTSD are overly impulsive and/or dangerous
- All deployed members should be screened by a mental health professional
- The military has done a poor job of encouraging members to get help when they need it
- Learning about combat stress can help warriors avoid the negative effects
- Combat Stress is causing lots of service members to leave the military
- PTSD is a disorder that primarily affects combat-exposed military members
- The effect of combat stress on families is primarily negative

A Rand study (Hosek, Cavanaugh, and Miller, 2006) reported that deployments have many positive effects for morale and even reenlistment rates. Of course I believe that overly frequent or lengthy deployments can cause members and families to be less committed to military life. However, I believe this reaction, for most, is due more to FATIGUE of overworked members and families, and less to the stress attributable to COMBAT itself. This is an important distinction.

The Predominant Effects of Combat Stress

- Increased appreciation for American values and lifestyle
- Increased respect for other cultures and people
- Strengthened love for home and family
- Enhanced respect of others for military service
- Strengthened commitment to loved ones
- Affirmation of personal service at the “point of our nation’s spear”
- Strengthening a part of self-image
- Strengthening of spiritual development
- Tests and defines you as a man or woman… and a warrior
- Forever strengthens you for future challenges
- Broadens your perspective on our world issues
- Energizes new personal goals and efforts

It is also important to differentiate between those members who joined the military predominantly to experience military life, express their patriotism, test their values, or test themselves under stress (Group 1), and the relative few who joined only to have a stable pay check, avoid less
People with a warrior mindset seek challenges and adventure; they confront and study threats to develop confidence in personal control, commitment, and skill. They want to be confident that their honor and success will be insured by their positive attitude, action, perseverance, teamwork, and training. They expect to have to act to accomplish their goals and seldom wait for others to act on their behalf. These people want to test themselves, want to challenge their skills and character, want to develop personal strength for success in life, value adversity as a strength builder, and want to be a part of a close-knit team, want to win the respect of their peers, want responsibility, and significant role in team success, look for excitement to energize their life, want to feel pride in service to their nation and their unit heritage, are energetic and take pride in their work, recognize danger and adversity as facts of life—and strive for mastery of it.

People with an acquiescent mindset actively avoid adversity, avoid adventure, seek mainly comfort, and see others as action agents and themselves as an action recipient. They want to be reassured that those in authority will protect them and rescue them if they are confronted with adversity. They often seek an external source of power or influence to help them manage the stresses they face. They seldom acknowledge their own behavior as a source of their own adversity. They relax in the belief that someone else is in control, but may also be easily angered when others don’t act to protect them.

I believe most of our Servicemembers have a more warrior-like mindset. I do not mean that I think they all want to confront terrorists in direct-fire combat. I do think most of our military members want to serve in settings that challenge them to confront some level of adversity and danger, and that will strengthen their pride and self-image, making them more confident about facing other challenges in life.

Shifting to a Positive Perspective and Using Positive Suggestion

Medical professionals need to consider the following perspective: whether strength and resilience is to be a focus of our efforts. We must avoid perpetuating negative suggestion or inaccurate information for our troops. Even the language we use daily is based on presumption of illness. Talking medical concepts (jargon, diagnostic terms, etc.) with colleagues may save time, but using that same jargon with Servicemembers can unintentionally project negative suggestion. Let’s examine medical language from the perspective of the warrior.

- If you don’t actually have PTSD – Can you have “symptoms of PTSD”?
  ANSWER: No, you can’t! You have “battle-mind”—or—“conditioned survival reaction.” Even the word “symptom” implies pathology.

- Are some events “traumatic”?
  ANSWER: No! An event is not traumatic in itself! Trauma occurs through interaction between individual vulnerability and an event. “Traumatic Event” is a medical term that has meaning only in relation to an individual patient’s injury. People that generally believe a type of EVENT itself is traumatic—they then expect that anyone affected by it will be” traumatized.”

The way we describe or define a concept or conditioned reaction is crucial to its positive or negative suggestive power. For example:

- Battlemind: “the warrior’s inner strength to face fear and adversity in combat with courage; an element of resilience.” The term “battle-mind” is a positive vision suggesting the psychological strength of our troops. It is a term to replace the psychologically negative suggestive term “symptom” or “symptoms of PTSD.”

- PTSD: an otherwise useless doctor’s shorthand term. It describes an automatic and miraculous set of quickly conditioned life-saving behaviors—that are valued and understood best by those who have faced their own potential death. These powerful tools are least respected by those who live in protected circumstances and rarely face fear. Like any weapon system they must be mastered and managed safely through effective coaching!

- Combat Stress: is a high-risk personal challenge—a test—that strong people voluntarily enter to express and test their values, and develop their strengths. Those who enter—and emerge on the other side with the proper attitudes—will be forever changed for the better, and will seldom be defeated by lesser challenges in life.
There are cultural and attitudinal factors that give warriors strength to face adversity. Understanding, valuing and enhancing these factors is crucial to the process of forging resilience. The following are positive elements of personal attitude, philosophy and skill that are protective for our Servicemembers. In order to foster strength and resilience medical professionals must be just as comfortable speaking about these concepts as we are discussing diagnoses, treatments and test results. For most of us these things sound like what a sports coach would discuss before the big game. In fact they are what any competent coach emphasizes and teaches when unit strength is demanded. Important elements of resilience and strength include, an attitude of invulnerability balanced by serious training/skill development, evidence of skills that are effective in the situation you now face, faith in conditioning, training and self-preservation reactions, knowledge that some self-doubt is common among our strongest warriors, belief that self-doubt will stop when my focus shifts to mission and survival, fear of letting down your team or dishonoring your values, seeing high value and honor in one’s personal service and sacrifice, personal emotional attachment to our military heritage of service and courage, desire to be tested against an ultimate standard of man/womanhood, philosophy of life embracing the defensibility of violence, recognition of danger as a fact of everyday life—and striving for mastery of it, lower physiological reactivity bred by stress inoculation through training, effective relaxation skills to balance and control high stress states.

Beliefs, concepts, and faith elements that strengthen warriors as they deploy or move to battle include a value of aggressiveness, fear and adversity—to develop lifelong strength and confidence, personal honor, sacrifice and selflessness, training and conditioning, the human body, a brotherhood of warriors, teamwork, personal moral values, human strength, spirituality, faith and prayer, unit heritage, the warrior’s ability to transcend mortal vulnerability—and do superhuman things, respected leadership, adrenalin to produce super-normal strength and speed, the crucible of combat stress: to form lifelong strengths, broader perspective, irreplaceable bonds and the cornerstone of lifelong confidence!

In Conclusion, our medical system is world class, and is designed to detect, name and treat vulnerability and illness. It is not designed to detect strength—or to build psychological resilience—except in its most confidential settings. If medical professionals are to focus effectively on resilience support, they must re-orient themselves and develop a greater respect for, and fluency in, the language and character of warriors. Some already do this well, most do not.

Some of our professionals are capable of making this shift, and may be willing to do this to some degree. If so, then to the rest of us, they will sound more like sports coaches, self-help gurus and motivational speakers. But these approaches address the critical concepts that underlie warrior strength and success.

I do not suggest that all healthcare professionals should change for this effect. Our system is not designed to support such an approach. I do suggest that we should be respectful of our limitations—and avoid trying to be all things to all people.

References

Menstrual Suppression for Air Crew during Combat

MAJ Nicole Powell-Dunford, USA, MC, FS, FAAFP

Menstruation does not preclude outstanding performance in the combat theatre for a growing number of deployed women. However, menstruation can be inconvenient and logistically burdensome in an austere setting with limited privacy and resources. Modern women are estimated to have many more menstrual cycles than in all previous historical times – due to changes in nutrition, childbearing and breast-feeding patterns.\(^1,2\) Currently, many women desire reduced menstruation, with only a third desiring a monthly cycle.\(^3\) Yet many military women remain unaware that safe and effective methods of menstrual suppression are available.\(^4\) Military flight surgeons, being well-integrated into the aviation environment, are in an ideal position to educate women about the risks, benefits and range of options available for menstrual suppression. Certain medications may reduce lost duty days as well as risk for sudden incapacitation and evacuation from theater. The higher hemoglobin/hematocrit levels that menstrual suppression affords is another important consideration should emergent surgery be required in an austere setting. With increasing numbers of women deployed to combat zones, menstrual suppression is a topic of increasing importance.

Q: How can the menstrual cycle be suppressed and/or eliminated? A: Depo medroxy-progesterone (Depo-Provera) and the levonorgestrel-releasing intrauterine system (Mirena) will cause a reduction and/or elimination of menstruation for many women.\(^5,6\) with over 50% of Depo users experiencing amenorrhea within 12 months.\(^6\) Skipping the active hormone free interval of combination estrogen-progestin contraceptives also typically results in reduced menstrual bleeding.\(^7,8,9\) Seasonale, Seasonique and Lybrel are currently the only hormonal preparations specifically Food and Drug Administration (FDA) approved for delaying the menstrual cycle, but off-label use of other oral contraceptive pills (OCPs) has been employed for decades for elective suppression; the safety and efficacy of this practice has been substantiated in multiple randomized controlled trials (RCT) as well as a Cochrane analysis.\(^7,9,10,11,12\) Monophase pills are anecdotally superior to triphasic pills for menstrual suppression, but evidence suggests that triphasic pills may also be effective and well tolerated.\(^13\) For women who don’t want to skip periods but who desire shorter cycles, Yaz, Loestrin 24 and Mircette are formulated with fewer placebo pills than standard OCPs. For women who desire menstrual suppression through a combination hormonal contraceptive with convenient dosing, the contraceptive vaginal ring (NuvaRing) and transdermal patch (Ortho-Evra) have also been used without a hormone free interval for menstrual suppression.\(^14,15\)

Q: When OCPs, contraceptive vaginal rings (NuvaRing), and/or transdermal patches (Ortho-Evra) are used continuously, won’t this cause the endometrium to continually build up in a dangerous fashion? A: On the contrary, continuous exposure of the endometrium to progestrone/progesterin suppresses endometrial build up.\(^16\) The progestin component in hormonal contraceptives may actually reduce the long term risk of endometrial cancer.\(^17\) Irregular bleeding may occur during the first three months of any new hormonal contraceptive use as the endometrium stabilizes. A study of extended OCP use for a full year demonstrated some irregularities in novel OCP users as well as in a subset of women who were unable to achieve complete amenorrhea over the course of one year. However, multiple aspects of menstruation improved in extended OCP users compared to conventionally dosed users, including improved menstrual symptoms and reduced blood loss, without additional risks.\(^18\) A 6-month study of continuous Nuva Ring users and a 12 week study of continuous transdermal patch users also demonstrated safety and efficacy with reduced menstrual bleeding.\(^14,15\)

Q: What are the dangers of not having a period? A: When amenorrhea is part of the female athlete triad (amenorrhea, osteoporosis and disordered eating), low endogenous estrogen levels contribute to stress fractures – a dangerous condition; Estrogen, often in the form of OCPs, is a recommended treatment.\(^19\) So far, no physiological benefit has been established for monthly menstruation in OCP users compared to the less frequent menstruation of extended cycle OCP users.\(^20,21\) However, debilitating and even life threatening conditions with the potential for sudden incapacitation such as endometriosis, ovarian torsion, pelvic inflammatory disease, hemorrhagic ovarian cyst and ectopic pregnancy, may be prevented through OCP use.\(^22,23\) Pregnancy, in particular, carries numerous health risks and mandates evacuation out of Iraq and Afghanistan.

Q: Nothing’s perfect - what are some of the specific benefits and draw backs to each of these methods? A: Consideration of each method can optimize selection for the individual woman. Patches may lose adhesiveness and/or cause skin irritation. Nuva rings and Mirena might not be available in theatre, but may be beneficial for women with erratic schedules and/or who cannot remember to take a daily pill. The weekly patch is associated with high compliance rates compared to OCPs.\(^24\) Mirena use is just as effective as surgical endometrial resection for women with menorrhagia and is also a very effective for dysmenorrhea.\(^25,26\) but may be a dangerous set up for pelvic inflammatory disease when placed in women with multiple sexual partners. Depo-Provera requires refrigeration as well as the capability to deliver injections every 3 months. Depo also should not be used for longer than 2 years due to its adverse effects on bone mineral density. Weight gain, depressed mood as well as a delayed return to fertility is also possible with this medication – unlike estrogen-progestin contraceptives.\(^6\)

OCP use can lead to benefits for acne and bone mineral density and may be preventative against ACL tears.\(^22,27\) However, users need to be compliant with daily pill use – often a difficult undertaking during a deployment. If pills are frequently missed, erratic bleeding and unintended pregnancy can result. Chances for a blood clot from OCP use are low - about 1 in 20 million per year even in users of formulations associated with higher risk.\(^28,29\) however, that risk is increased for smokers, women over 35 years old and for women with known clotting disorders.\(^30\)

For any new hormonal contraception user, bloating, nausea and irregular bleeding can occur during the first 3 months of use – a major cause of discontinuance in new users. For this reason it is critical to counsel new users and to begin any new method of menstrual suppression well in advance of a deployment where irregularities are even less desirable. Although all these methods of menstrual suppression can prevent pregnancy if used correctly, none prevent sexually transmitted diseases.
Q: What medication is best for women who want to shorten the menstrual cycle during deployment?
A: It is important to consider a patient’s ability to remember to take a daily pill, smoking status and other potential risk factors that could predispose towards a specific adverse event with a given medication (i.e., history of stress fracture, clotting, number of sexual partners). Depo-Provera is not an ideal medication for women who wish to conceive shortly after a deployment. Combination estrogen-progestin medications are excellent choices for young women with dysmenorrhea or menorrhagia. The contraceptive vaginal ring and Depo-Provera both require refrigeration, an important deployment consideration.

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Anthony.Waldroup@brooks.af.mil

Valerie.Johnson@brooks.af.mil

Raymond.Clydesdale@brooks.af.mil
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