D E P A R T M E N T O F T H E A I R F O R C E

Presentation to the Committee on Appropriations

Subcommittee on Defense

United States Senate

SUBJECT: FY 2004 DOD Medical Programs

STATEMENT OF: **Lieutenant General (Dr.) George Peach Taylor Jr.**
Air Force Surgeon General

APRIL 2003

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Mr. Chairman and members of the committee, thank you for the opportunity to discuss with you some of the challenges and successes of the Air Force Medical Service, or the AFMS.

As with all other aspects of the military, the AFMS is transforming itself.

Transformation is a word that is being regularly used around Washington these days. To the Air Force, transformation is not just new technology, such as uninhabited combat aerial vehicles or space-based radars. Transformation is merging new technologies with new concepts of operations and new organizational structures.

Think about the Air Force combat controllers on the ground in Afghanistan directing B-52s to drop directed-munitions within 500 meters from their positions. This was accomplished by using global positioning satellites, laser range-finding devices, and new state-of-the-art munitions to provide a new kind of effect: enhanced close-air support, which proved to be pivotal in the fight with the Taliban. This success serves as an example of one of many progressive steps the Air Force is taking in its march toward Transformation.

The Air Force Medical Service is no stranger to transformational changes. In many ways we lead the Air Force and like to say "that we were transforming before transformation was cool." Our modular, lightweight medical and preventive medicine teams, same-day laparoscopic surgery, advanced imaging—among many other components—have changed the face of military medicine, from home base to battlefield.

Our five Air Force Medical Service core competencies provide compelling lenses through which we view the transformational activities.

I would like to briefly describe each core competency and share some of the exciting accomplishments we have achieved under each.

Our first Air Force Medical Service's core competency is **population-based health care**. As the name indicates, population-based health care strives to keep our entire beneficiary population healthy by preventing disease and injury. But, if any do become sick or injured, our system will provide exceptional care.

Our next core competency is **human performance enhancement and sustainment.** These include methods and equipment that protect our forces from harm and permit our troops to perform their missions better.

Fixed wing aeromedical evacuation, our third core competency, addresses the innovative and life-saving ways we use aircraft to transport patients from the theater of operations to the nearest capable medical treatment facility.

Our fourth core competency, **medical care in contingencies,** entails all the training, equipment, and logistics needed to provide care during humanitarian or combat operations.

World health interface, our final core competency, recognizes the importance of interaction with other nations. Air Force medics are called to serve from Atlanta to Afghanistan, and from San Antonio to Sierra Leone. Therefore, we have institutionalized training programs that teach medics the language and customs of those countries in which they might be called to serve.

These five core competencies are the heart and soul of the Air Force Medical Service. I would like to describe each in a bit more detail to better demonstrate to you the innovative ways in which the Air Force Medical Service is transforming itself.

Population-Based Health Care

The U.S. military health care system cares for 8.3 million people and costs $26 billion. This huge system is in every state and in numerous countries. Yet, as immense as this system is, I adhere to the philosophy that all health care is local.

What matters most in medicine and dentistry is the care our patients receive from their provider. It is my mission -- my passion -- to ensure that every provider has the leadership, training, people, facility space, and medical equipment he or she requires to give those patients the care they need, the care they deserve. Our first core competency, population–based health care, is critical to ensuring this becomes a reality.

We have transitioned from the old medical paradigm—treating sick people—to the new paradigm of preventing people from getting sick in the first place. The old way makes for better TV drama, but the new way makes for better medicine. This new paradigm is called population-based health care. The programs I will discuss support population-based health, especially how it applies to our active duty forces.

Because of the global war on terrorism, there has never been greater imperative to have a military force that is fully ready to "fly the mission." Our comprehensive Individual Medical Readiness program, ensures our military members are "medically ready" to perform.

To help illustrate the Individual Medical Readiness program, I ask you to think of an aircraft—a new F/A-22 fighter, for instance. From the moment each aircraft enters our arsenal, it undergoes continuous monitoring, routine inspections, preventive maintenance, and if needed, repairs. These activities happen before, during, and after this weapon system is employed.

A far more valuable resource—our airmen, the "human weapons system"—receive that same level, if not more, of devoted care. Through our Individual Medical Readiness program, we constantly monitor the health of our airmen through inspections and preventative maintenance—called Preventive Health Assessments—and, if needed, repairs.

The Individual Medical Readiness program has four main components, the first of which is the Preventive Health Assessment. At least once a year, we review the total health care needs and medical readiness status for every airman. During this appointment we make sure they have received all recommended and required preventive care, screenings, immunizations, and assessments. Preventive Health Assessments are the equivalent of the routine inspections and preventive maintenance provided to aircraft.

Second, at each visit, whether in garrison or deployed, we take care of our troop's complaints, look for other preventive interventions, and ensure their fitness for duty.

Third, we perform medical evaluations before and after troops deploy so that we can monitor the effect—if any—the deployments have on their health.

Finally, we have created innovative new information systems designed to track all individual medical readiness and preventive health care requirements. It is called the Preventive Health Assessment Individual Medical Readiness program (PIMR).

At the local level, PIMR can tell the medics which troops need blood tests, evaluations, or vaccines, who is healthy enough to be sent to the field, and who should remain behind until they are healthy. At the global level, PIMR provides leaders near real-time statistics that tell them what percent of their troops are medically fit to deploy. PIMR's metrics are also used to provide feedback and shape policies and programs so we can continually improve the readiness of our force.

Population-Based Health Care is more than just the method to keep the active duty members healthy. It benefits all beneficiaries—active duty, their families, retirees and their families, and is our overarching model for healthcare. Our AFMS must accomplish three critical processes to ensure full-fledged Population-Base Health Care.

First, care team optimization. An optimized primary care team, for example, has as its members a provider, nurse, two medical technicians, and one administrative technician. The team is provided the optimal number of exam rooms, medical equipment, and support staff needed to ensure that such things as facility constraints and administrative responsibilities do not hinder their ability to provide care to our airmen and their families. In such teams, our medical staff flourish.

Where we have optimized our primary care clinics, we have enjoyed success. Based upon this success, the AFMS has embarked upon expanding this strategy. Soon, every clinical and non-clinical product line will undergo an expeditionary capability analysis, clinical currency analysis, and business case analysis to determine how best to optimize the use of our resources.

In short, we have seen that optimization has great potential in the primary care setting, so now we hope to spread that success by optimizing specialty care. This year we will launch pilot programs for the optimization of orthopedics, general surgery, otolaryngology, OB/GYN, and ophthalmology.

The result of optimization is clear: Our people are receiving outstanding healthcare delivered by highly trained teams.

A second critical process of Population-Based Health is “PCM by name.” PCM stands for “primary care manager.” A PCM is a provider who takes active oversight in every

aspect of a patient's care. Beneficiaries are assigned a "PCM by name," meaning they will routinely see that same provider. Previously, beneficiaries would arrive at the clinic and frequently did not know who their provider would be that day. Now, through PCM by name, they are assigned to a PCM who will see the patient for all routine medical care. The PCM becomes much like a trusted, small-town family doctor who becomes intimately involved in the care of the patient and his or her family.

We have over 1.2 million customers enrolled to our 74 medical locations—and 100% of those beneficiaries are enrolled to a PCM by name.

The tandem success of the Optimization and Primary Care Manager by Name efforts are serving our TRICARE beneficiaries well. The Health Employee Data Information Set Standards—or HEDIS—are the civilian national standards by which most Managed Care Organizations are measured. Here is how HEDIS ranks some of our efforts compared to civilian commercial health care plans:

- For providing timely cervical cancer screenings, the Air Force is in the top 10 percent of all health care plans in the United States.
- For breast cancer screenings the Air Force surpasses 66 percent of commercial plans.
- Our diabetic care program is in the top 9 percent of all similar plans nationwide.

And, recently, the Air Force Medical Service was recognized by civilian experts at the Kilo Foundation as one of two U.S. health care organizations on the cutting edge of optimizing health care delivery—the other organization being Kaiser-Permanente.

We optimized our care teams to deliver the best care, now we must also optimize the buildings in which our patients receive that care. Facility recapitalization is the third critical process that must be accomplished to support population-based health.

Whether we are talking about the human body, aircraft, or buildings, the more each ages, the more they wear out, break down, creak and leak. They become more expensive to maintain. For that reason, the Defense Health Program currently supports the goal of medical facility recapitalization at a 50-year rate rather than the 67-year rate provided to other, non-health-care facilities.

We use the funds we are provided annually to pay for necessary renovations, modernization, and replacement needs.

Before I discuss our remaining AFMS core competencies, I will mention a few population-based health care items I find worthy of mention, one of which is our success in suicide prevention.

Suicide is the most preventable cause of death, yet is the 11th leading cause of death in the United States. Among people of military age, it is the fourth leading cause of death behind accidents, cancer, and heart attacks.

Fortunately, suicide among our Air Force members and their families is nearly the lowest it has been in 20 years.

We teach our leadership, airmen, and family members how to recognize, assist, and intervene when they identify members who might be contemplating suicide. Our efforts are succeeding. Throughout the mid 1990s, there were over 14 Air Force suicides for every 100,000 members. That number is now just 8.3 for every 100,000. We are striving hard—very hard—to lower it yet more. We recognize that we can never completely eradicate

suicide, but every life saved is crucial to the Air Force. And the quality of life for all those who seek and receive care is immeasurably enhanced.

Another important quality of life initiative is our focus on enhancing obstetrical care in our military treatment facilities for our patients. We are working very hard across the Air Force, and indeed DoD, to optimize our OB programs. We are increasing routine prenatal ultrasound capability, improving continuity of care with patients and OB providers, and enhancing OB facilities to provide more comfortable labor and delivery rooms.

Preliminary findings from the specialty care optimization pilot at Nellis AFB, show increases in access to care, in patient-provider continuity, and an increase in mothers desiring to deliver their babies at Nellis. In the last year alone nearly 11,000 mothers-to-be visited our OB clinics for a total of 193,000 visits. Carrying through on these optimization efforts, we feel confident that when it is time for our OB patients to choose their provider, they will choose their local military treatment facility. They will choose us.

Our optimization efforts throughout the Air Force Medical Service are complemented by partnerships with Department of Veterans Affairs clinics and hospitals. The DoD has seven joint venture programs with the VA; the Air Force oversees four of them at Travis, Elmendorf, Kirtland, and Nellis Air Force Base Hospitals.

One of our most successful joint ventures is our first—Nellis Air Force Base's VA/DoD hospital. This joint venture replaced the outdated Nellis hospital and offered VA beneficiaries a local federal inpatient facility for the first time in the area's history. The facility enjoys a fully integrated Intensive Care Unit, operating suite, emergency room, post anesthesia care unit, and shared ancillary services.

Kirtland's joint venture is also impressive. There, the joint venture has gone beyond the sharing of staff and facilities. At Kirtland, the Air Force and VA have created Joint Decontamination and Weapons of Mass Destruction Response Teams. Their teamwork will permit a homeland defense capability that is superior to either organization could provide separately.

Our four joint venture opportunities saved $2.5 million and avoided over $16 million in the just the last two fiscal years. Not all DoD hospitals are candidates for joint ventures, but we are excited about finding those that are and investing in the opportunity.

Partnerships with the VA where they make good sense not only save money; they enhance care to both of our beneficiary populations. The new contracts promise enhanced pharmacy support and health care to beneficiaries.

An additional enhancement to the DoD's health care benefit is that of Tricare For Life—the extension of Tricare benefits to our retirees. This program has dramatically improved the quality of life for our Medicare-eligible retirees and their families. In the first year, Tricare for Life produced 30 million claims. The program also significantly improved access to pharmaceuticals to our retiree population. Retirees appreciate both the quality of care and the knowledge that the country they proudly served is now there to serve them.

I have described many activities the AFMS performs to ensure that the airmen we send into the field are healthy. But, once they are there, we must also work to ensure they stay that way -- that they are protected from injury, disease, and biological and chemical weapons. We must provide an operations environment that is safe. This leads me to our second core competency, Human Performance Enhancement and Sustainment.

Human Performance Enhancement and Sustainment

Airmen are our most valuable assets. Their readiness directly impacts the combat effectiveness of the United States Air Force. Therefore, it is not good enough to just have disease-free troops, they need to be working at their optimal performance level during strenuous military operations. To that end, the Air Force Medical Service has developed a Deployment Health Surveillance program that ensures and protects the health of its members from the day they enter service and don their first uniform, during deployments, and throughout their entire career.

Deployment Health Surveillance is more than just the application of exams immediately before and after a deployment; it is a Life Cycle approach to health care that lasts as long as the member is in uniform and beyond. Some of the most recent developments in Deployment Health Surveillance are the most exciting. These include technologies that rapidly detect and identify the presence of weapons of mass destruction, technologies such as genomics, bio-informatics, and proteomic clinical tools.

Each of these state-of-the-art efforts promises speedy revolutionary diagnostics, enabling near real-time bio-surveillance. And, whereas, most bio-chemical detectors take hours or days to detect and warn us that agents have been released into the environment, the sensors we are now developing will have near real-time capability to warn us of an attack.

The AFMS was the first to transition polymerase chain reaction technologies into a fielded biological diagnostic detection system. This technology keeps watch over troops in the field and our homeland. It provides better protection for our entire nation while simultaneously revolutionizing daily medical practice.

Whether these detection units stand sentinel over military men and women overseas or guard major population centers here at home, their presence translates into markedly decreased mortality and morbidity. Additionally, because it can quickly detect and identify pathogens, it decreases wasted time and resources in laboratory and therapeutic interventions.

The AFMS is working to overcome another threat to our troops and citizenry—a threat more often associated with science fiction than with current events: directed energy weapons—lasers. Directed energy devices are now commonplace. Hundreds of thousands of lasers are employed by many countries around the world . . . mostly for peace, many for war. Militaries, including our own, use lasers in weapons guidance systems to help them drop bombs with pinpoint accuracy.

In response to this threat from our enemies, we developed—and continue to improve upon—protective eyewear and helmet faceplates. These devices are designed to absorb and deflect harmful laser energy, thus protecting pilots from the damaging and perhaps permanent eye injuries these weapons inflict.

We are also investigating commercial off-the-shelf, portable medical equipment that can quickly scan retinas and automatically determine if a person's eye has suffered damage from lasers.

The AFMS is teaming with other Air Force organizations to transition several protecting and surveillance technologies to allow our forces to enter, operate and safely prevail within the laser-dominated battle space.

Lasers are not the only threat to our forces. There is also the familiar threat of biological and chemical weaponry. Congressional members and their staff, journalists, post office workers, and average citizens fell victim to anthrax attacks in the fall of 2001. As

sobering as these attacks were, we were fortunate they were committed with a biological weapon for which we had a ready defense—an antibiotic—and that the anthrax was delivered in small amounts.

Our nation and its medical community learned much from the incident; so did our enemies. They will know better how to strike us next time, and we must be prepared.

To detect and combat such a threat, the AFMS is developing detection, surveillance, and documentation systems to help us recognize and respond to future biological and chemical warfare attacks. The Global Expeditionary Medical System—or GEMS—is one such system.

GEMS was first developed and deployed during Operation DESERT SHIELD/DESERT STORM as a means to monitor and help protect the health of deployed forces. During that initial deployment, it captured over 11,000 patient encounters in the field and relayed this valuable information to what is now the Brooks City Base in Texas for analysis.

GEMS is now a mature, fully functioning asset. It establishes a record of every medical encounter in the field. It then rapidly identifies clinical events such as a potential epidemic. Whether the outbreak is accidental such as food poisoning, or intentional such as the release of a weapon of mass destruction like Anthrax at an airbase, GEMS can quickly alert medics about the presence of the weapon and allows our medics to attack and defeat the biological or chemical agent before its effect can become catastrophic.

GEMS does not look like much . . . it is a ruggedized laptop computer with a few small attachments, but its toughness and small size make it ideal for troops in the field. GEMS will soon be incorporated into the Epidemic Outlook Surveillance system, or EOS.

EOS is an initiative to network—to link together—all systems that detect and identify biological and chemical warfare agents. It also incorporates all data produced from provider-patient encounters. From this, medics and leadership can monitor the possible presence of weapons of mass destruction, determine their current and predicted impact on troops, and respond with precision to defeat their effect. This is all accomplished to protect not just a base, nor theater of operations; rather EOS will provide overarching, *worldwide* oversight of the health of our troops.

What is fascinating about this system is its speed. The current standard to detect and identify a biological or chemical agent—*and contain the epidemic it could create*--is five to nine days. Aboard ship, or in a military base, the resources needed to care for the infected and the high casualty rate would overwhelm the mission. Even if the agent were detected in the first three days, we expect that up to 30 percent of our troops would fall ill or worse.

When it comes to identifying chemical and biological weapons attacks, lost time means lost lives. We are fast now. We strive to be faster. Our goal is to recognize and combat a potential epidemic within the first three hours of its introduction into the population. We are working with the other services to create sensors with this capability. These technologies are just over the horizon, but we are developing man-portable sensors capable of detecting chemicals and pathogens almost instantly. When fully developed, these sensors will have the capability to read the genetic structure of a biological agent to tell us exactly what it is and what antibiotics would best defeat the attack.

Obviously, such programs have both military and civilian application, so we are working with many other military, federal, university, and civilian organizations to develop, deploy, and share this amazing technology.

The enemy is not the only threat our troops face. During extended operations, our airmen find themselves combating fatigue. Physical and mental exhaustion lead to judgment errors, errors that in combat can cost lives. With its "Global Reach, Power and Vigilance" mission, the Air Force continues to strain the physiologic limits of its aircrews. It must develop methods of protecting its troops from the dangers of fatigue, for fatigue is a killer in the battlefield.

We have been working hard with the Air Force Research Laboratory, Air Combat Command and our aircrews to develop advanced techniques to maximize performance and safety on long-duration missions. These techniques include planning missions around the body's natural sleep cycles—the circadian rhythm—diet manipulation, and pharmacological and environmental assistance.

Such activities greatly aid our force-protection measures in an ever-changing battle space. But, during operations, the AFMS' "bread and butter" is the level to which we can properly treat and move wounded battle participants.

This leads me to our third core competency: Fixed Wing Aeromedical Evacuation.

Fixed Wing Aeromedical Evacuation

We have invested many resources and much time into keeping troops healthy and enhancing their performance. But in the operational environment, people do become sick. They do get injured. For such cases we developed an aeromedical evacuation system that can move patients from the field to definitive care, often within hours of their acquiring the illness or injury.

The Aeromedical Evacuation System is a unique and critical part of our nation's mobility resources. The need to move critically injured, stabilized patients from forward areas to increasing levels of definitive care has driven significant changes in the fixed-wing environment.

In the past, Aeromedical missions were limited to certain airframes such as the C-141 cargo aircraft or our special C-9 Nightingale AE aircraft. However, aeromedical evacuation is a mission and not a particular aircraft platform; and it is a mission recognized as a core competency within the larger airlift mission. As we retire our aging AE platforms and transition from dedicated to designated aircraft in the mainstream of airlift flow, we are developing new tools such as the Patient Support Pallet, or PSP.

The PSP is a collection of medical equipment compactly assembled so that it can easily fit into most any cargo or transport aircraft. When needed, it is brought aboard, unpacked, and within a short time is transformed into a small patient care area. This means that patients no longer have to wait hours or even days for an aeromedical evacuation flight. Just give our medics a PSP and an hour, and they will take the C-5 that just unloaded troops and tanks, and will convert a small corner of that plane into an air ambulance.

Our 41 PSPs strategically positioned around the globe permit any suitable airframe in the airlift flow to be used. This awesome capability minimizes delay of movement, maximizes available airlift, and most importantly, saves lives. We plan to buy more.

Insertion of critical care skills early in this process is provided in the form of specially trained Critical Care Air Transport Teams, or CCAT teams. These teams—comprised of a physician, nurse and cardiopulmonary technician—receive special training that enables them to augment our air evacuation crews and deliver intensive care support in the airborne

environment. Our Active Duty medics have 42 CCAT teams, but our ARC forces are full partners in this new capability. The Air Force Reserve contributes 25 CCAT teams, and the Air National Guard 32 teams to our AE mission. Each is ready for rotation into the AEF along with their Active Duty counterparts.

Another valuable tool is the TRANSCOM Regulating and Command & Control Evacuation System, otherwise known as TRAC2ES. TRAC2ES is a DOD/Joint enterprise that allows us to plan which patients should fly out on what aircraft, what equipment is needed to support each patient, and what hospital they should fly to; and it provides us in-transit visibility of all patients all the time. TRAC2ES provides command and control of global patient movement in peacetime, contingencies and war.

TRAC2ES is an overwhelming success. It has accomplished all of the goals specified in the re-engineering process and has produced benefits that no one anticipated. To date:

- There have been more than 1,700 patients/soldiers moved as a result of activities during OEF, and nearly 17,000 such moves worldwide last year.
- Every patient was directed to the appropriate treatment facility for the needed care.
- And an amazing 100 percent in-transit visibility has been maintained on all patients moved through the TRAC2ES system.

TRAC2ES is also de-linked to specific aircraft. This is critical to its success, especially during the activation of our Civil Reserve Air Fleet or CRAF. The CRAF is comprised of up to 78 commercial aircraft—both cargo and passenger—that are provided to the Department of Defense by civilian airline companies. We use them to transport material and people into the theater of operations. We could also use them to potentially evacuate

sick or injured troops out of the theater. If so, TRAC2ES will still function, regardless of the service, regardless of the aircraft.

Patient movement during current operations has incorporated all aspects of this continuum: maintenance of health in the field, use of organic airlift, versatile equipment support packages, early-on critical care intervention, and information systems that track and inform leadership of the health and location of their troops.

From battlefield injury to home station, there is seamless patient movement under the umbrella of qualified, capable aircrew members and trained critical care professionals.

I must mention here, that 87 percent of the aeromedical evacuation capability I have described resides within the Air Force Reserve Command and Air National Guard. These dedicated men and women of these organizations are truly our Total Force partners.

Medical Care in Contingencies

Medical Care in Contingencies, is our fourth core competency and one in which we have also seen significant transformation.

The Air Force Medical Service provides the full spectrum of ground-based medical care during contingencies. Described as a "Red Wedge" capability, expeditionary medical care begins with a rapid ramp-up of medical capability. First into the field is our small Prevention and Aerospace Medicine—or PAM—Team. PAM teams are 2- to 4-person teams who are our first-in-and-last-out medics. They are inserted with the very first troops and are capable of providing health care, on location, before the first tent stake is in the ground.

Team members include an aerospace medicine physician, bioenvironmental engineer, public health officer and an independent duty medical technician. They provide initial health threat assessment and the surveillance, control, and mitigation of the effects of the threat. Additionally, the aerospace medicine physician and independent duty medical technician provide primary and emergency medical care and limited flight medicine.

As forces start to build in theater, so does the size of the medical contingency. The PAM team is quickly followed by a small but exceptionally skilled Mobile Field Surgical Team [MFST].

This highly trained surgical team includes a general surgeon, an orthopedic surgeon, an emergency medical physician and operating room staff, including an anesthesia provider and an operating room nurse or technician. The 5 team members each carry a 70-pound, specially equipped backpack of medical and surgical equipment. Within these few backpacks is enough medical equipment to perform 10 emergency, life-or-limb-saving surgeries without resupply.

By putting backpack providers deep into the theater or operations we save time and we save lives. No longer do we wait for the wounded to come to us, we take the surgery to the soldier.

The MFST's capability has been proven in Operation Enduring Freedom. For example, less than one month after Sept. 11, Air Force medics assigned to Air Force Special Operations in OEF saved the life of an Army sergeant who lost nearly two-thirds of his blood volume when he fell and severely damaged his internal pelvic region. Within minutes, an Air Force MFST reached him and worked more than four hours to stabilize him enough for transportation to a U.S. military medical facility.

A Canadian journalist at Bagram Air Base—not far from Kabul, Afghanistan—was horribly injured when a grenade ripped open her side. Our medics were there instantly to provide initial stabilization, treatment, and her first surgery. Our Aeromedical and CCATT teams arranged rapid aeromedical evacuation and provided care in the air. The TRAC2ES system tracked her movement from Southwest Asia to Europe. It provided early warning to the receiving facility of her condition and extent of her wounds. When she landed she was met by our medics and taken to a military hospital for definitive care.

Both patients survived. Just a few years ago, before we created this capability, both would have died.

We can provide full spectrum care – anytime –anywhere.

Expeditionary Medical Support—EMEDS—is the name we give our deployed *inpatient* capability. The small PAM and MFST teams I described are the first two building blocks of an EMEDS. To them, we add 17 more medical, surgical, and dental personnel. These medics bring with them enough tents and supplies to support four inpatient beds. We can keep adding people and equipment in increments as needed until we have erected a 125-bed field hospital. A unique capability of EMEDS is that they are equipped with special liners, ventilation and accessories to protect against biological and chemical warfare attacks.

As an additional measure to defend against these weapons, we field Biological Augmentation Teams. They provide advanced diagnostic identification to analyze clinical and environmental samples centered around RAPIDS, our Rapid Pathogen Identification System. Each team has two laboratory personnel who can deploy as a stand-alone team or in conjunction with an EMEDS package.

After our successful deployment of Biological Augmentation Teams to New York City in response to the October 2001 anthrax attack, we realized just how invaluable these teams were to local public health and Centers for Disease Control officials. Since then, we have reached a total of 30 fully staffed and equipped teams, and additional 14 manpower teams designed to backfill or augment the other teams. They have been—and continue to be—deployed throughout OPERATION Enduring Freedom.

A common attribute of each medical team I have described is that they are small. The Air Force expeditionary medical footprint is shrinking. These smaller units can be assembled in increments; therefore, are flexible to the base commander's requirements.

Their small size makes them cheaper, easier, and faster to transport. A few years ago we used to talk about how many aircraft we needed to move our huge Air Transportable Hospitals into a theater. Now we talk about how many *pallets* we need on ***an*** aircraft.

In just a little over a decade, we have become far more capable with fewer people, less size, less weight, less space. . . and less *time*.

This is important. Speed counts. CNN claims it can have a journalist anywhere in the world reporting within seven minutes of an incident. We may not beat CNN to the scene, but our light, highly-mobile expeditionary medical support teams will be on the ground shortly thereafter—perhaps within as little as three to five hours. For any humanitarian or combat contingency, our EMEDS concept is a true force multiplier. It gives the combatant commander state-of-the-art, worldwide medical care for his deployed forces.

Our transformation has accelerated the speed with which Air Force medics get to where they are needed. Our *training programs* ensure that once they get there, they are fully capable of providing life-saving care.

Two medical training programs are especially crucial to this capability; one is our Readiness Skills Verification Program (RSVP).

Each member of a deploying health care team, whether a physician, logistician, administrator or nurse, will be called upon to perform numerous tasks in the field, tasks they would never encounter in their home-base medical facility. The RSVP ensures these troops train on, and master, each of these must-know tasks.

Our medics practice them routinely. The list is varied: treating tropical diseases, linking our computer to foreign networks, using ruggedized surgical equipment in field tents . . . troops must master these tasks before their boots touch the ground in a deployed location.

The other medical training program vital to our expeditionary medicine mission is the Center for the Sustainment of Trauma and Readiness Skills, or C-STARS.

Because our military physicians care for arguably the healthiest population in the world, the medical problems they see during the normal duty day are different from the traumatic and life-threatening injuries the providers will encounter in the battlefield.

To prepare our medics to care for these injuries, we train them in one of three C-STARS locations: civilian hospitals in Cincinnati—where our Reserve personnel train; St. Louis—where Air National Guard medics train; and Baltimore where active duty personnel train. Our staff work side-by-side with civilians in these facilities to care for patients suffering from knife and gunshot wounds, crushing injuries, and other traumatic wounds; the kind of injuries our medics can expect to encounter while deployed.

Hundreds of our medics have trained at C-STARS over the last 2 years. At one time, more than 75 percent of the Air Force special operations medics in Afghanistan received

their first "battle-field medicine" experience at C-STARS, as have all of the CCAT care-in-the-air teams I mentioned earlier.

Interfacing with World Health

Our allies and coalition partners around the world are paying close attention to these initiatives. They are eager to work with us in improving their military medicine programs. This leads me to discuss our final core competency, Interfacing with World Health.

The Department of Defense's Joint Vision 2020 states that today's US forces must be prepared to operate with multinational forces, government agencies, and international organizations. The Air Force International Health Specialist Program fulfills this mission. The International Health Specialist program identifies medics with specialized language and/or cultural skills, trains these airmen to enhance their skills, and provides a database of medics tailor-made for specific international missions.

Active Duty, Air National Guard, and Air Force Reserve International Health Specialists regularly interact with the U.S. Unified Command Staff, non-governmental agencies, members of foreign military units, and interagency personnel. They provide insightful recommendations on a variety of issues and situations.

Whether assisting with blast resuscitation and victim assistance missions in Cambodia, conducting on-site capability surveys in Sierra Leone and Senegal, or by participating in discussions on international humanitarian law, our International Health Specialists are at the forefront of global health engagement. Their involvement in host-nation exercises and civic assistance activities ensures we are ready to deploy assets

wherever and whenever needed, and that the Air Force Medical Service can effectively engage in multi-national environments.

Through our Professional Exchange Program, foreign military physicians provide care shoulder-to-shoulder with our staff in Air Force medical facilities. In addition, our Expanded International Military Education and Training Program uses Air Force medics to "train the trainers" of foreign military and civilian medical facilities. In the last couple of years we have trained 1,700 healthcare providers in 18 countries. We share our expertise on how to train and prepare for, and react to, medical contingencies. Often, our foreign students are receiving such instruction for the very first time.

Ultimately, if a regional contingency does occur, our medics will be able to respond to it as one of many partners in a carefully orchestrated international coalition of medics.

To summarize, those are our five core competencies: Population-based Health Care, Human Performance Enhancement and Sustainment, Fixed Wing Aeromedical Evacuation, Medical Care in Contingencies, and Interfacing with World Health.

Human Resources

Our successes in these core competencies could not be accomplished were it not for the phenomenal people whom we recruit and maintain among our ranks. We know our medics are among the best in their fields. For example, the internal medicine program at Wilford Hall Medical Center at Lackland AFB, Texas, recently scored third out of 398 programs nationwide during the Medical Resident in Training examinations, placing them in the top 1 percent in the nation. This is extremely impressive when one considers we're being

compared to medical programs such as Harvard's. This is but one example of the caliber of our nearly 45,500 Active Duty and Reserve Component medical personnel. This number includes more nearly 1,400 dentists, 5,000 physicians, and 7,000 nurses. However, attracting and keeping these troops is difficult. We seek only the most educated and dedicated nurses, physicians, and dentists. Obviously, those attributes are also highly sought by civilian health care organizations.

The Air Force offers these young professionals a career of great self-fulfillment, awesome responsibility, and excitement. The civilian market offers these incentives, too, but in many cases—in most cases—provides a far more attractive financial compensation. Furthermore, the life and family of a civilian provider is not interrupted by deployments—something our troops are experiencing at a frequency not seen since World War II.

These deployments are a burden to our active and reserve forces. I am keenly aware of the elevated use of our Air Reserve Component over the last decade, and the difficulties deployments create for their family and work lives. My staff does their utmost to only use ARC forces on voluntary status, to activate them for the shortest time possible, and to call upon their services only when other options are not available.

However, it is for these reasons—the lure of more attractive civilian compensation and the frequent deployments—that we find it difficult to attract the kind of medical professionals we badly need.

For instance, our Fiscal Year 2002 recruiting goal was to acquire over 300 fully trained physicians -- we recruited 41. We required 150 new dentists -- we recruited 39. Nurses, we needed nearly 400 – we recruited 228.

Fortunately, last year's National Defense Authorization Act permits increased compensation for these skills. It allows for loan repayment, increased accession bonuses and specialty pay. I thank you for providing these incentives. They are very useful tools and a good start toward obtaining the quality and quantity of medical professionals we so urgently need.

Conclusion

In conclusion, I am incredibly proud of our Air Force medics and honored to lead them. Each of these five core competencies demonstrates how far the Air Force Medical Service has transformed since the fall of the Berlin Wall, especially in the last five years. We will continue to anticipate the challenges of tomorrow to meet them effectively.

We are very proud to have a leading role in support of our expeditionary Air Force. As the U.S. Air Force focuses more and more on improved effects, we are in lockstep with the line in our ability to provide the right care at the right time with the right capability. We remain at the right shoulder of war fighters, at *home base* to provide for a healthy workplace and home, and *in the field* to keep war fighters protected and at the peak of their mental and physical capabilities.

We thank you for the critical support you provide that makes this possible.