

# United States Air Force School of Aerospace Medicine

## *2001 Annual Report*





## From the Commander

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This year proved more than any other that readiness is *the* fundamental core competency of Air Force medics. The USAF School of Aerospace Medicine (USAFSAM) contributed proudly to AFMS's operations in NOBLE EAGLE and ENDURING FREEDOM.

In support of operations, we doubled the EMEDs Expeditionary Medical Support Training from two to four classes a month and incorporated a collective protection capability integrating specific deployment area biological and chemical safeguards. We also surged Critical Air Transport Team courses, more than doubling our expected output between October and December. This pace is likely to continue through most of 2002.

We integrated procedures for anthrax clearance sampling and risk management into selected courses. We supported the review and approval process for operational use of sleep aides for aviators. Our Aerospace Physiologists deployed in support of High Altitude Airdrop Mission Support actions resulting in a UTC tasking to sustain this support capability.

We continue to support the global-engagement mission and to shape the international environment. We provided training in 16 courses to 71 international professionals attending from 20 nations and completed in-depth discussions with medical leaders from Bulgaria, Canada, Germany, and Colombia.

The Aeromedical Consultation Service continues to pay huge dividends and ensure a fit force. Over 730 aircrew were evaluated for flight fitness and 85% received waiver recommendations. Our study of over 1,400 aviators with occupational cardiac catheterization identified additional aviators who could have been returned to flying status, thereby providing the scientific basis for significant changes in aeromedical standards, while further reducing the need for cardiac catheterizations.

In the educational cornerstone of USAFSAM's triad of education and training, research and clinical aerospace medicine, we have set new standards for efficiency and program execution. The Dental Investigative Service has instituted American Dental Association certified continuing education through interactive web-based Advanced Distributed Learning (ADL) – authoring 19 courses and developing 8 digitized presentations of annually required briefings. We are executing distance learning courses in Ergonomics and Radiation Safety and systematically reviewing all course material for efficiencies ADL can bring. We expect to make significant advances in this capability in 2002.

I can confidently report to you that the health and outlook for USAFSAM have never been brighter and that we are more committed and prepared than ever to educate medics, support the flyer, and expand the operational envelope of aerospace medicine in diverse missions and in the full spectrum of operations in this new millennium.

A handwritten signature in black ink, appearing to read "T. W. Travis".

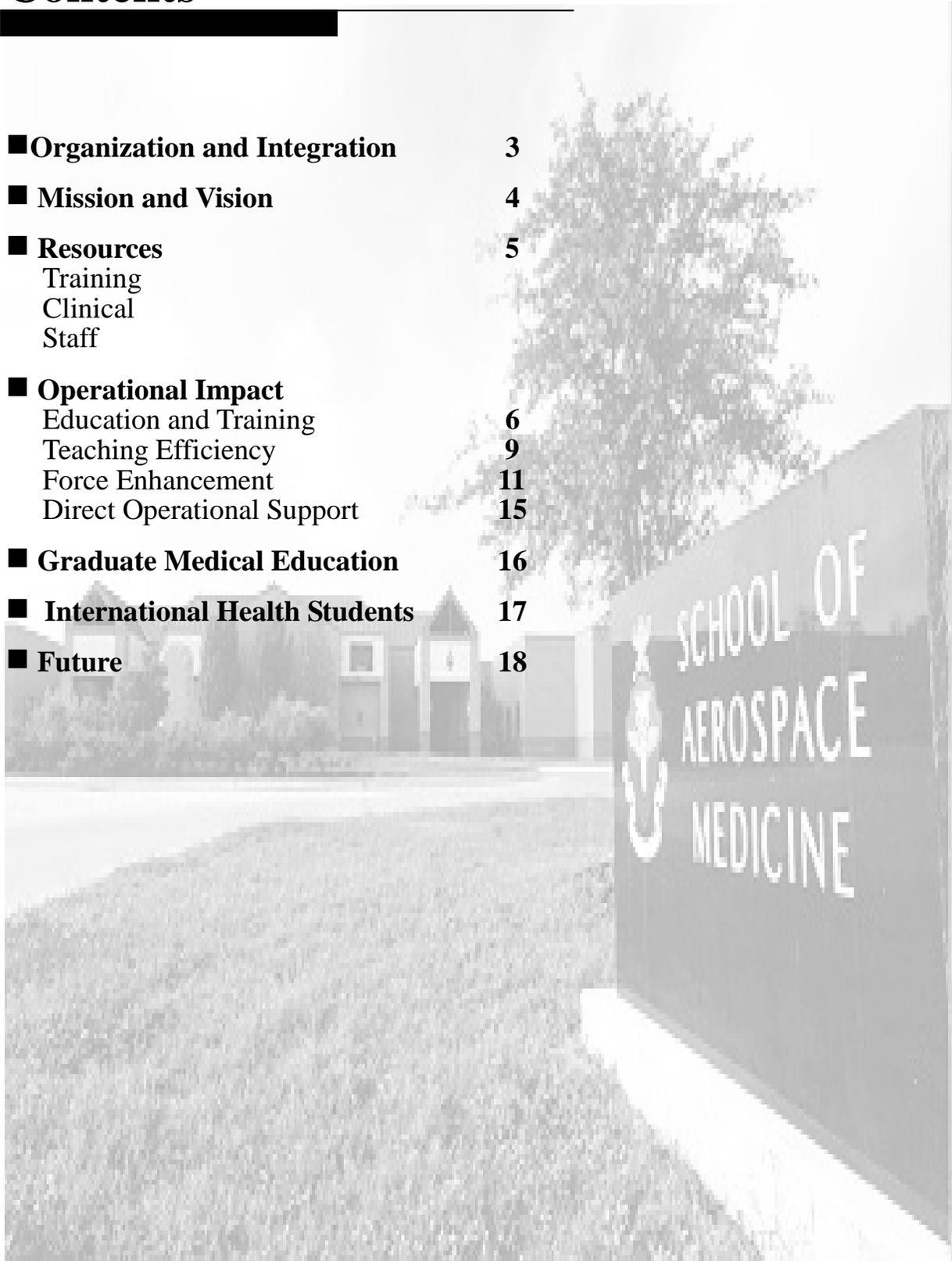
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**THOMAS W. TRAVIS**  
Colonel, USAF, MC, SFS  
Commander, USAF School of Aerospace Medicine

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# Organization and Integration

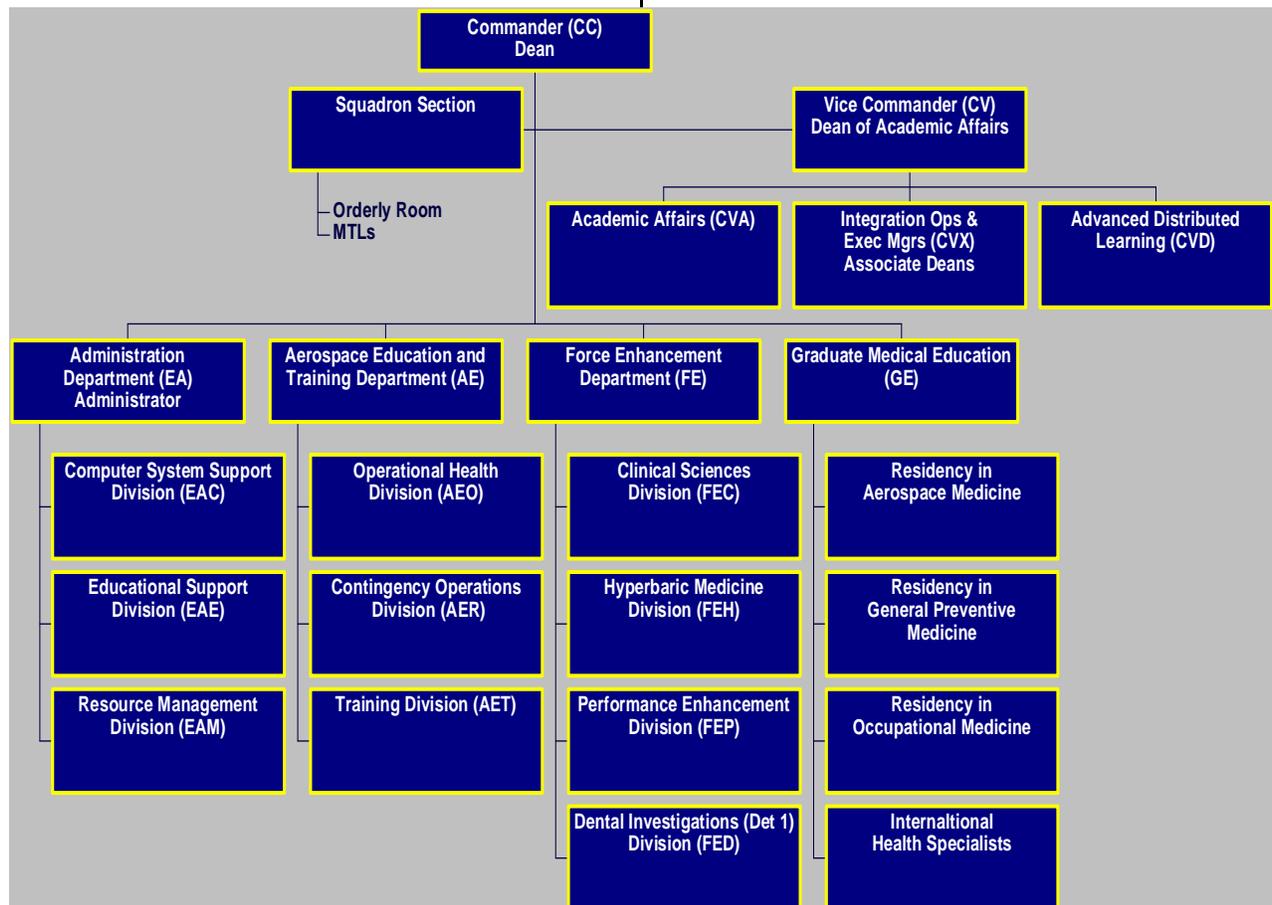
The organization of the USAF School of Aerospace Medicine (USAFSAM) focuses on the concept of integration. By integration, we maximize teamwork and resource efficiencies, and retain or improve quality through a more multidisciplinary product. In the past, training was primarily conducted by individual AFSCs. Today, training occurs by functional teams composed of interdisciplinary medical professionals. Cross-functional training and utilization are emphasized.

The advantage to such organization and subsequent integration is a more solid concept of Team Aerospace. All undergraduate education and training is over-

seen by one department allowing course management and business practice efficiencies.

Likewise, multi-AFSC skills awareness can be achieved by fostering joint Utilization and Training Workshops (U&TW) and integrating force performance enhancement activities.

**Train As We “Fight” –  
A Fully Integrated TEAM!**



# Mission and Vision

**T**he USAF School of Aerospace Medicine's mission...

*Provide aerospace medicine training, education, and consultation to enhance war-fighter performance and combat casualty care for world-wide peacetime and contingency operations.*

From the inception of the school, we have striven to be the foremost authority regarding aerospace medical issues.

Therefore, it's no surprise that our vision is to be...

**“The International Center of Excellence for Aerospace Medicine”**



USAF School of Aerospace Medicine “Coat of Arms” originated on March 21, 1925 stating “Volanti Subvenimus” which translates to “We Support the Flyer”. The shield is composed of the colors of the Medical Corps and the Air Force. The caduceus is the mythological symbol of medicine. With the supporting wings it is symbolic of the mission of aerospace medicine. The lamp of knowledge and motto are symbolic representations of the humanitarian and enlightened aims and accomplishments of the school.



# Resources

## Training Resources

The facilities and equipment used for education and training include...

- Three instructional buildings comprised of 33 classrooms and three auditoriums totaling more than 136,000 sq ft
- All classrooms electronically “smart” and compatible with a wide variety of multimedia presentation modes
- Three 30-station and one 23-station computer laboratories
- Training laboratories for industrial hygiene, entomology, food safety, and water analysis
- Four wingless aircraft and mock-ups (C-141, C-130, C-9, and later in FY02... 767 CRAF) for aeromedical evacuation training
- Two 20-person altitude chambers
- Full Pressure Suit Training Operating Location at Beale AFB CA
- Satellite data link video download capability
- Over 50 acres for field training to give our pipeline students an extension of their Warrior Week training and our TDY students a “deployment-like” quality to their contingency training. Training at the field site includes the aircraft accident investigation courses, contingency skills training, and the Expeditionary Medical Support training
- 43,000 sq ft student dormitory with 20 “common-use” computers and computer connections in each room



## Clinical Resources

The aerospace medicine/diagnostic portion of USAFSAM provides comprehensive medical evaluations for military aviators.

- Over 137,000 sq ft for clinical services and clinical training
- Davis Hyperbaric Lab (DoD lead agent for hyperbaric medicine)
  - 12-person multiplace, man-lock chamber
  - 4-person multiplace, man-lock chamber
  - 1 Sechrist monoplace chamber
- Human Performance Lab
  - Cardiorespiratory, Muscular Strength and Endurance, Flexibility and Body Composition Assessment
  - Environmental and Human Thermal Physiology measurement/assessment
  - Fatigue Counter Measures
- 2,200 sq ft cell/molecular laboratory for investigational programs and Development Center for Advanced Technology Composite Chambers
- Aeromedical Consultation Services:
  - On-site clinical services include Aerospace Medicine, Cardiology/Internal Medicine, Clinical Psychology, Neurology, Neuro-psychology, Ophthalmology, Optometry, Psychiatry, and Radiology
  - Clinical procedures provided include aeromedical psychological testing, echocardiogram, ETT-TM, closed-head injury evaluation, corneal topography, medically-monitored centrifuge testing, pulmonary function testing, radiology services, scotopic and mesopic vision evaluation, sleep apnea evaluation, thallium scintigraphy, visual acuity/perception
- USAF Optical Fabrication Lab
- Night Vision Lab
- DoD’s only Vision Electrodiagnostics Lab
- Dental Investigation Service at Great Lakes IL

**Professional Staff:** USAFSAM’s 308 member team includes 110 officers, 136 enlisted, and 62 civilians representing specialties in adult education, aeromedical evacuation, aerospace physiology, audiology, basic medical readiness, bioenvironmental engineering, cardiology, computer programming, dentistry, environmental physiology, flight medicine, flight and battlefield nursing, graduate medical education, human performance enhancement, exercise physiology, hyperbarics, information management, internal medicine, medical entomology, medical survival, microbiology, neurology, nuclear medicine, ophthalmology, optometry, psychiatry, psychology, public health, radiology, and resource management.

Instructors, specialists, and support team members are handpicked to ensure USAF School of Aerospace Medicine’s products, services, and graduates are the highest caliber.

# Operational Impact – What We Produced in CY01

## *Education and Training*

**4,769  
GRADUATES!**



**Enlisted AFSCs Awarded 1,413**  
**Officer AFSCs or Equivalent Awarded 409**  
(numbers include initial AFSC, upgrade training & AFSC modification)

**48 International Students  
from 21 Countries**

UTC Qualifying Course	# Students now UTC Qualified
Flight Nurse	92
Aeromedical Evacuation Technician	90
BEE NBC Operations	92
Critical Care Air Transport Team	162
Expeditionary Medical Support (EMEDS)	404

Course	Organization Awarding Certification	# Awarded
Aeromedical Apprentice	National Registry for Emergency Medical Technicians, American Heart Association, & Council for Accreditation in Hearing Conservation	234
Aerospace Physiology Apprentice	as AETC Instructors	26
Aerospace Medicine Primary	Federal Aviation Administration	129
HAZWOPER & HAZWOPER Re-fresher	Environmental Protection Agency	103
Hearing Conservation Certification & Re-certification	Council for Accreditation in Hearing Conservation	287
Contingency Operations	Federal Emergency Management Administration	121

USAFSAM Aerospace Physiology	
Altitude Chamber flights	80
Number of students qualified	1,456

Medical Specialty Boards	# Qualified
American College of Preventive Medicine, Occupational Medicine Boards	9
American College of Preventive Medicine, Preventive Medicine Boards	7
American College of Preventive Medicine, Aerospace Medicine Boards	15
American Osteopathic Board of Preventive Medicine, Aerospace Medicine	1

# Operational Impact – What We Produced in CY01

## *Education and Training*

**Initial Training** – Whether coming directly out of basic training at Lackland AFB, officer training at Maxwell AFB, or cross training from a different career field, USAFSAM’s education mission is to train new Team Aerospace members.

<u>Enlisted Entry-Level Courses</u>	<u># Grads</u>
Aerospace Medicine	234
Aerospace Physiology	26
Bioenvironmental Engineering	126
Public Health	87
<b>Total</b>	<b>473</b>

<u>Officer Entry-Level Courses</u>	<u># Grads</u>
Aerospace Medicine Primary	129
Aerospace Physiologists (both rated and non-rated)	24
Bioenvironmental Engineering	23
Public Health	31
<b>Total</b>	<b>207</b>



**Advanced Training:** Aerospace Education and Training ensures members of Team Aerospace learn new information/techniques, become familiar with new procedures, and strengthen upgrade training. Two of the three department divisions, Operational Health and Contingency Operations, offer advanced courses for multiple AFSCs.



**Operational Health Courses**

- Applied Epidemiology
- Environmental Management Information System
- Hazardous Waste and Environmental Reporting
- Hazardous Waste Operations (HAZWOPER)
- Hearing Conservation Certification/Recertification
- Human Performance Enhancement
- Hyperbaric Medicine Courses
- Industrial Hygiene Measurements
- Non-ionizing/Ionizing Radiation Measurements
- Team Aerospace Funding Workshop
- Team Aerospace Operational Solutions
- Others...

**TOTAL PERSONNEL TRAINED: 1,924**



**Contingency Operations Courses**

- Aeromedical Evacuation Technician Course
- ***Critical Care Air Transport (CCAT)***
- ***EMEDS Basic and +10 Courses***
- Flight Nursing
- Global Medicine
- Medical SERE Training
- BEE Nuclear, Biological and Chemical (NBC) Operations
- Operational Entomology
- Contingency Operations
- Contingency/Counter-terrorism Casualty Decon

**TOTAL PERSONNEL TRAINED: 1,564**

# Operational Impact – What We Produced in CY01

## *Teaching Efficiency...Teaching Excellence*

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### **Courses Converted To Distance Learning**

USAFSAM's Distance Learning Manager heads up the Distance Learning Integration Team (DLIT). This team researches, evaluates and recommends innovative technological and instructional methodologies to enhance USAFSAM courses. Some course conversions have been completed with some new innovations on the horizon.

- Radiation Safety Officer course - activated in August 2000
- USAF Ergonomics course - activated in July 2001
- Bioenvironmental Engineering Advanced Officer course - a new resident course with a DL prerequisite requirement, first class in FY02
- LearnLinc - Synchronous computer-based training desk-top, first classes in FY02
- TestLinc - Web-based testing for LearnLinc classes and more
- Completed Introduction to Medical Readiness for BEE 5-level upgrade CD
- Completed Patient Decontamination and Chemically Hardened ATH CDs

- Satellite Broadcasts received
  - Medical Response to Chemical and Biological Warfare and Terrorism from USAMRIID
  - Career Development Course writers quarterly updates

### **Course Efficiencies**

- BEE Craftsman course was reduced from 10 to 5 training days eliminating redundancies with other courses
- Integrated Contingency Operations and BEE NBC courses field exercises to enhance real world training — train as we fight
- Deleted the Fitness Program Manager course and incorporated required training into the new Health Promotion Workshop. This course trains personnel from multiple AFSCs working in our Health Promotion functions
- An MOU has been established with the Air Force Institute for Advanced Distributed Learning (AFIADL) for management, reproduction and distribution of USAFSAM courses converted to CD-ROM

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### **Courses Added or Revised for CY01**

- Deployed EMEDS training to other locations
- Initiated and incorporated Collective Protected EMEDS training (CP-EMEDS)
- Surged EMEDS and CCAT training in support of Operation ENDURING FREEDOM
- Added overnight training at a private wildlife reserve near the Texas coast to the Operational Entomology course to enhance real world vector surveillance training
- Revamped CONOPS and BEE NBC courses to incorporate latest UTC taskings and technologies (including EMEDS package, medical and CE)
- Added the Contingency/Counter-terrorism Casualty Decontamination Course; the AF's first and only medically focused wartime decontamination training
- Developed the Bioenvironmental Engineering Officer Advanced course incorporating distance learning and in-residence training
- SERE training advanced from Level A to B which included classified POW resistance training; students are better prepared to handle adverse situations
- Added the Health Promotion Workshop for multiple AFSCs
- Added the Occupational Medicine Course for providers
- Added a Medical Standards Course for nursing and administrative technicians performing medical standards functions

# Operational Impact – What We Produced in CY01

## *Teaching Efficiency...Teaching Excellence*

**Course Accreditation via the Community College of the Air Force - USAF-SAM** is an affiliate school of the Community College of the Air Force (CCAF) which is accredited by the Southern Association of Colleges and Schools, Commission on Colleges. Because of this affiliate status, USAFSAM courses attended by enlisted personnel are eligible for evaluation for credit by CCAF. All eligible USAFSAM courses have been evaluated and students completing these courses will receive the semester hour credit indicated from CCAF.

<u>Course Title</u>	<u>Semester Hours</u>	<u>Course Title</u>	<u>Semester Hours</u>
Aeromedical Apprentice Course	18	Aeromedical Craftsman	5
USAF Hearing Conservation	1	Enlisted Human Perform Enhance	5
Clinical Hyperbaric Technician	6	Hyperbaric Training	1
Aeromedical Evacuation Tech Cert	8	Critical Care Air Transport Team	5
Aerospace Physiology Apprentice	17	Aerospace Physiology Craftsman	11
Bioenvironmental Engineering App	20	Bioenvironmental Engineering CRA	3
Environmental Quality Sampling	3	Non-Ionizing Radiation Measure	1
Ionizing Radiation Measurements	2	Industrial Hygiene Measurements	5
Bioenvironmental Engineering NBC	3	Hazardous Waste Ops/Emerg Respon	2
AF-EMIS User's Training	2	AF-EMIS Hazardous Waste	1
USAF Radiation Safety Officer	2	Teaching Practicum	8
Public Health Apprentice	22	Public Health Craftsman	4
Public Health Journeyman	2	Operational Entomology	4
Applied Epidemiology	3	Contingency Public Health Op Cert	4
Medical Sere Training	4	USAF Ergonomics	2
Contingency/Counterterrorism Casualty Decontamination	2	Expeditionary Medical Support (EMEDS) Basic	3

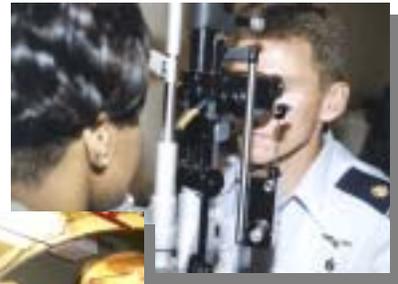


# Operational Impact – What We Produced in CY01

## *Force Enhancement*

### Clinical Sciences Division

- Completed 600 comprehensive, multi-specialty, “fitness-to-fly” evaluations
- Examined human performance and disease patterns in the aviator population
- Returned 76% of otherwise grounded aircrew to the cockpit, with an estimated savings of \$191 million
- One of two USAF Medical Flight Screening (MFS) Programs
  - 1,074 candidates processed CY01
  - 95% recommended for Undergraduate Pilot Training (UPT) with an estimated \$38-39 million saved
- Non-aircrew Photorefractive Keratectomy (PRK) Refractive Surgery Study 95% completed
- Developed USAF Aviation and Special Duty Personnel PRK Waiver and Surveillance Program implementation plan
- 25 publications in peer reviewed journals, 53 presentations at national/international conferences
- Published internationally coordinated guidelines for aircrew medication usage within NATO alliance that maximized performance effects for health and operations
- Reported results Aeromedical Consultation Service coronary artery disease natural history in aircrew study that substantiated current program’s positive effects on operational performance
- Contributed textbook chapters in cardiology and pulmonology for new editions of Clinical Aviation Medicine and Aerospace Medicine; textbook chapter in ophthalmology for Medical Aspects of Long-Distance Aeromedical Evacuation
- Developed guidelines for International Civil Aviation Organization concerning Laser Emitters and Flight Safety
- Improved Aircrew Spectacle fielded as replacement for HGU-4/P aircrew spectacle frame
- Operational Support: AFSOC, ACC, AEF, NASA, NATO, ASCC, Aircraft Mishap Boards
- Ongoing clinical investigations: Aircrew Aeromedical Standards, Clinical Epidemiology/ Effects-based Ops, Performance Enhancement, Crew Protection Devices, Night Vision Goggles/ Performance, Contact Lenses

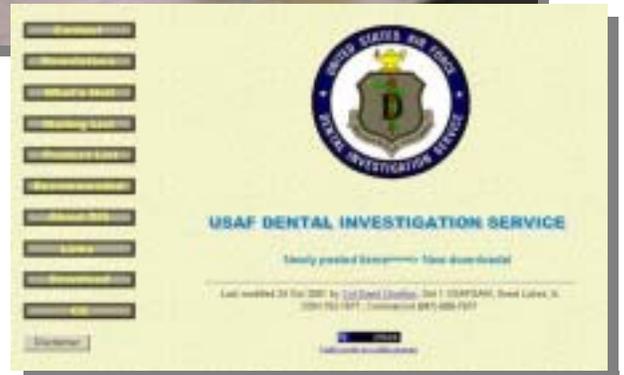


# Operational Impact – What We Produced in CY01

## *Force Enhancement*

### Dental Investigations Division

- Detachment 1, USAFSAM is colocated with Army and Navy Dental Research establishing Tri-service Military Dental Research at Great Lakes Naval Training Center, Illinois
- Instituted American Dental Association (ADA) certified continuing education program through interactive web-based distance learning. Det 1 staff authored 19 courses totaling 28 hours of CME credit. Provides a readily available asset for DoD health providers improving patient care
- Responded to over 4,500 requests for guidance in solving operational problems for USAF Dental Corps
- Provided oversight and design guidance for nine dental clinic construction projects including over 100 new dental operatories
- Developed digitized presentations of annually required briefings that can be downloaded and tailored for individual dental facility use: Radiation Safety, Infection Control, Bloodborne Pathogens, Dental Forensics, Maxillofacial Trauma, Mercury Hygiene, HazCom
- Provided ongoing technical evaluations of dental products and equipment to identify best buy for DOD purchase. Optimized patient care and provider satisfaction, direct savings to USAF of over \$4M in 2001



- Authored/co-authored 8 dental articles and abstracts in peer-reviewed professional journals
- Published 70 technical reports
- Presented 102 Certified Medical/Dental Education (CME) hours of continuing education
- Published 50-page newsletter, dental infection control newsletter, and product evaluation reports on fully interactive web-based format for immediate dissemination of information
- Collaborated with Naval Dental Research Center for development of a far-forward dental restorative material for use on military deployments and humanitarian missions.
- Ongoing Technical Evaluations include adhesive dentistry systems, tooth bleaching products, digital radiography for office and field use, infection control surveillance methodology, dental air-turbine handpieces, non-invasive caries diagnostic systems

# Operational Impact – What We Produced in CY01

## *Force Enhancement*

### Performance Enhancement Division

*...We translate and transition human related science to the warfighter*

#### Mission

- Advise novice and expert customers on human performance, occupational health, and physical fitness
- Initiate and conduct scientific investigations and evaluations
- Provide performance enhancement tools to give warfighters the winning edge in combat
- Develop and define human performance enhancement requirements, policies, and standards

#### Impact

- Supports the AF Medical Service Core Competency “Human Performance Sustainment and Enhancement”



#### FY 01

- Deployed data base tool to report Human Performance Training Teams (HPTTs) monthly activities for Major Command and HQ AF
- Provided operational support to Direct Reporting Units and line commanders on operations in extreme environments (temperatures, high altitude, and acceleration)
- Isolated problems and protected resources in quick turn response to HQ AETC and AFO-TEC request to assess modified environmental control system in T-6 Texan for flight safety and pilot performance
- Developed and distributed training video on hazards of alternative medicines
- Expert guidance on Basic Military Training’s daily physical fitness regime reduced test group injuries 45% and increased test scores and morale of new accessions
- Supplied HQ AETC with improved guidelines for hydration and flight line exposure limits
- Completed greater than 500 formal and informal written consultations, 2 Reports, 1 Compendium (state-of-the-art report), and 2 Studies

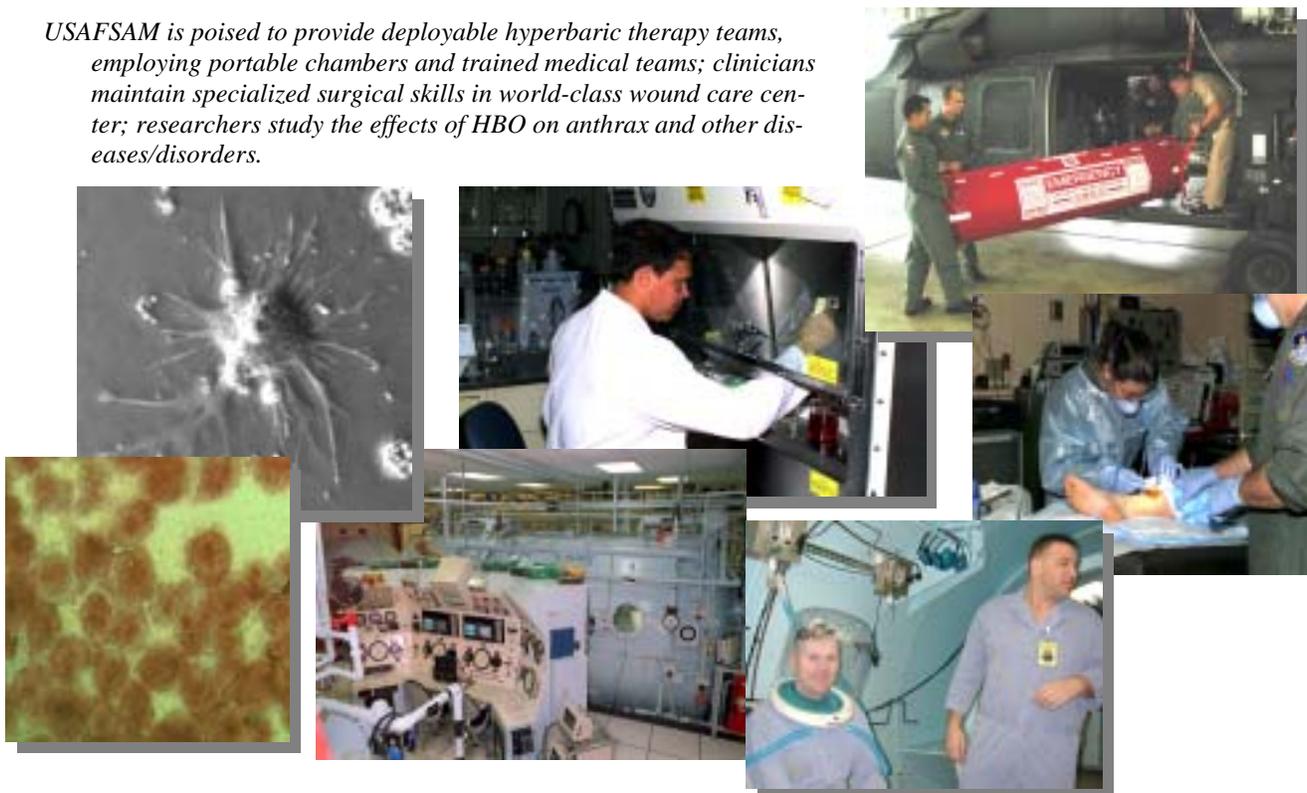
# Operational Impact – What We Produced in CY01

## *Force Enhancement*

### Hyperbaric Medicine Division

- Hyperbaric oxygen (HBO) treatment speeds healing/saves limbs and returns warriors/support personnel to duty
- Division's Davis Hyperbaric Laboratory provided 2,425 HBO treatments for 120 patients in CY01; included:
  - 36 cases of Decompression Sickness in AF personnel – 97 % resolved; returned to duty
  - 1 case of deadly Necrotizing Fasciitis on local Air Force trainee – dramatic recovery; returned to duty
- Proposed and implemented Hyperbaric Care Action Team (HCAT) to address combatant's requirement for far-forward enhanced medical capabilities responding to mass casualties
  - Working on development of 4-person deployable UTC, capable of delivering hyperbaric oxygen therapy in and during evacuation from far-forward battlefield or mass casualty disaster sites
- World's premier hyperbaric medical education and training program – trained 367 US and international aeromedical specialists in DoD's only Hyperbaric Training and Certification Facility
- Active clinical investigation program:
  - Demonstrated successful alternative treatments for anthrax infection using an immuno-modulation approach
  - Developed methods for implementing new treatment strategies for injuries sustained from exposure to directed energy (microwaves/lasers); if prevention fails, valid treatment options must be available
  - Developed clinical and therapeutic guidelines for conserving blood and for resuscitation in austere environments where blood is not available
  - Demonstrated efficacy of novel approaches to wound healing, expediting healing of wounds; preserves combatant's optimal mission capability -- reduces magnitude of the injury and speeds recovery
  - Teamed with industry to evaluate (for battlefield use) hemostatic dressings already demonstrated effective in the private sector; teaming will bring to Team Aerospace superior technology in minimal time
  - Developed high-energy, ballistic wound model collaboratively with USA to characterize wound injury dynamics and repair; model is expected to result in improved healing of gunshot and projectile wounds

*USAFSAM is poised to provide deployable hyperbaric therapy teams, employing portable chambers and trained medical teams; clinicians maintain specialized surgical skills in world-class wound care center; researchers study the effects of HBO on anthrax and other diseases/disorders.*



# Operational Impact – What We Produced in CY01

## Direct Operational Support

USAFSAM continues its long tradition of “staying in the fight” by directly supporting line commanders and the war-fighters. Expeditionary Medical Support (EMEDS) training continued. Multidisciplinary teams were trained in rapid response in support of both peacetime and wartime operations.



*...light, lean, and lifesaving...*

- Collaborated with Disaster Medical Assistance Team (DMAT) to assess capabilities and potential for military and civilian liaison, joint training, and use opportunities
- EMEDS staff attended Pacific Warrior at Schoeffer Barracks in Hawaii to participate in a collaborative effort to validate GEMS and transfer of training for participants who had already had EMEDS training. They also took the opportunity to compare US Army capabilities and observe and evaluate the use of Experimental Technology Insertion (XTI)
  - USAFSAM EMEDS staff was tasked to provide just-in-time training on site in Houston, Texas, with Wilford Hall Medical Center EMEDS team. Disastrous floods hit Houston resulting in a real world humanitarian relief effort. The Houston medical system was severely limited when flood waters shut down many fixed hospital facilities. The USAFSAM EMEDS team deployed to Houston in less than 24 hours and validated capability to provide just-in-time training
  - Surged CCAT/EMEDS training in response to 11 Sep 01 terrorist strike and Operation Enduring Freedom. ACC and AF SG requested surge capability; USAFSAM responded with immediate delivery. CCAT training surged to train AFRES and ANG assets as well as staying on pace with regularly scheduled courses



- Detection System Program working group to make recommendations regarding AF training requirements; the only medical representative on this DoD working group
- SERE personnel participated in AFMC flight test certification for personnel parachute deployments for the C130J
- Deployed a 2-member High Altitude Airdrop Mission Support (HAAMS) team in support of Operation Enduring Freedom
- Delivered just-in-time training for the Collectively Protected EMEDS (CPEMEDS), still in prototype phase, to Wilford Hall Medical Center in response to short-notice deployment as a result of the 11 Sep 01 attacks. Training delivered in concert with the 311<sup>th</sup> Human Systems Wing Systems Program Office staff
- Set up a functional EMEDS+10 with U.S. Army. XTI once again utilized with ongoing testing of systems capability. This served as a “test bed” for the introduction and assessment of state-of-the-art medical technologies and associated processes to support expeditionary medical and aeromedical evacuation operations



# Graduate Medical Education

## GME Staff

- Five physicians, 3 support personnel, 1 international training officer
- Most hold appointments as adjunct faculty assistants (UTHSC, USUHS, NSHS)
- Support Defense Security Assistance initiatives
  - SOUTHCOM Chile Assistance
  - Aerospace Medical training in Lithuania
- Faculty as DoD Ambassadors – requested by name to give international briefings, consultation, and assistance in developing aerospace medicine training
- Collaboration with
  - Aerospace Medical Association
  - American College of Preventive Medicine
  - Defense Language Institute
  - Royal Air Force Centre for Aviation Medicine
  - Uniformed Services University
  - Defense and Civil Institute of Environmental Medicine, Canada

## Residency in Aerospace Medicine (RAM)

- World's oldest and largest; 31 Residents in FY01 plus one Canadian RAM (first since 1988)
- Includes Master of Public Health (MPH)
- Partnered with major industries: Exxon USA, Boeing, American and Delta Airlines, others
- 100% eligible for board certification in Aerospace Medicine, and Occupational Medicine, or Preventive Medicine
- All Residents graduate with PME appropriate for grade



# International Health Students

## International Initiatives at USAFSAM

### International Training Programs

- Advanced Aerospace Medicine for International Medical Officers (AAMIMO)
  - Students from 86 countries; 29 have gone on to become the USAF SG equivalent
  - CY01 11 AAMIMO graduates from 10 different countries
  - Entire course curriculum re-vamped for CY02
- Graduated 31 more students from 15 countries in 11 other courses
- 1 international physician residency trained International Health Specialist (IHS) program
- Working in concert with the USAF Institute for Global Health (IGH)
  - Nine courses in development for export to international partners
- Training program for IHS career field; evolving new product line
  - Needs assessment underway with IPT established

### Foreign Nation Partnering program

- Successful visits hosted for demonstration of vast USAFSAM capabilities
- Productive delegation visits from Germany, Colombia, Canada, Bulgaria
- Has directly led to “export” course development for SOUTHCOM regional presentation
- USAFSAM/CC visited Hungary, Poland, and Czech Republic Institutes of Aviation Medicine

### Global Casualty Care Management Institute

- Course documents completed, certified and validated by USAFSAM
- C-STARS initiative supports all advanced trauma training
- Instructors to directly support Expanded-International Military Education and Training (E-IMET) course in conjunction with IGH



## International Students

Afghanistan	Croatia	India	Netherlands *****	Switzerland
Argentina	Cuba	Indonesia *	Nicaragua	Tanzania
Australia	Czech Republic	Iran	Niger	Taiwan
Austria	Denmark *	Iraq	Nigeria	Thailand
Bahrain	Dominican Republic	Ireland	Norway	Tunisia
Bangladesh *	Ecuador	Israel *	Pakistan *	Turkey
Belgium	Ethiopia	Italy	Paraguay	Uruguay
Bolivia	Egypt	Japan *	Peru *	United Arab Emirates
Botswana	El Salvador	Jordan	Philippines *	Vietnam
Brazil *	England	Kenya	Poland	Venezuela
Burma *	Finland	Republic of Korea *	Portugal *	Yemen
Canada	France	Kuwait	Qatar	Yugoslavia
Cambodia	Germany *****	Laos	Rep of South Africa	Zaire
Cameroon	Greece *	Malaysia	Saudi Arabia *	Zimbabwe
Chad	Guatemala	Maldives	Singapore *	
Chile	Guinea	Mali	Spain	
China	Honduras	Mexico	Sudan	
Colombia	Hungary	Morocco	Sweden *	

\* - Graduate became USAF/SG equivalent

# Future...*Projects and Initiatives*

USAFSAM's initiatives are aligned toward increasing productivity, enhancing our education component, and supporting current and future military operations.

- Screen all flying training applicants for anthropometric measurements
- Improve food safety via USAF policy revisions and focus of medical resources on safety versus quality assurance
- Add familiarization with Chemically Hardened Air Transportable Hospital chemical countermeasures to contingency courses
- Provide Emerging Infectious Disease Course
- Develop Computer-Based Instruction, distance learning, and mobile courses to increase effectiveness and reduce training costs
- Complete the Bioenvironmental Engineering Technician Career Development Course as a fully interactive web-based application
- Fully automate testing, curriculum, course development, scheduling, and budgeting
- Develop web-based monthly reporting tool for fielding Human Performance Training Teams
- Work to ensure the training platforms necessary to support the 4FOX1 merger into the 4NOX1 and 4EOX1 career fields are in place by 1 Nov 02. With the 4EOX1 community taking over management of medical standards for the Air Force Medical Service, significant training will be required both for the 4FOX1s becoming 4EOX1s, as well as the officers and enlisted members of Public Health
- Hyperbaric Care Air Transport (HCAT) team concept of operations drafted and presented for review. Enhanced air evacuation support provides in-flight critical care using HCAT teams who provide the hyperbaric care expertise and capability to monitor and manage patients in transit to a definitive care destination
- Increase the medical and scientific understanding of the cellular and tissue response to elevated oxygen concentrations described as hyperbaric oxygen (HBO), which if used properly, will reduce the magnitude of injury and minimize the duration of medical therapies
- Provide homeland security training for military and civilian decision makers on the medical aspects of biochemical threats in planning, response and recovery. Predict full implementation of course within 12 months of start date
- Exploring acquisition of the Aeromedical Library with a vision of expanding hours and access of "virtual library" search and lending services to satisfy worldwide DoD user requirements
- Further expand COPE capabilities
  - Improved advocacy and facilitation of warfighter performance enhancement and requirement issues
  - Function as the "Hub" for all concerns and activities related to operational human performance, while successfully integrating and interacting with Air Force operational communities
  - Maintain a stable base of scientific and unique medical expertise and provide operational support and consultation, research on selected projects, evaluation and analysis, and education and training
  - Increase customer recognition, support and program marketing
  - Expand role involving Alternative/ Complimentary medicine
- Refinement of the AF performance enhancement role & Human Weapons System Increase Human Performance Training Teams capabilities thru improved RAM support

# Future...*Projects and Initiatives*

- Serve as liaison between AF operational customers and AFRL/HEP in the development and employment of the Fatigue Avoidance Scheduling Tool (FAST)
  - Provides technical consultations and performs operational modeling
  - Manages information gathered on the operational effectiveness of FAST
  - Develops and maintains tools for maintaining and improving FAST
  - Provides formal training on FAST to a variety of operational customers
- Consolidate Residency in Aerospace Medicine (RAM) and Advanced Aerospace Medicine for International Medical Officers (AAMIMO) in building 110; in close proximity to the Aeromedical Consultation Service
- Team with 59 Medical Wing (Lackland AFB) to develop proposal for stand-up of hyperbaric treatment facility at WHMC – Anticipate monoplace operations in CY02 and multiplace (10-person) chamber operations in CY04
- Provide academic guidance and administrative support for Sustainment of Trauma and Readiness Skills (STARS) courses

