UNITED STATES ARMY
SCHOOL OF AVIATION MEDICINE

AVIATION MEDICINE CLINIC
NCOIC HANDBOOK

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PREFACE

The Aviation Medicine Clinic provides health care to a highly specialized group. As the clinic non-commissioned officer in charge (NCOIC) you are charged with ensuring the clinic operates in an efficient manner and in accordance with (IAW) the appropriate regulations and technical bulletins.

The clinic NCOIC is often assigned with little or no knowledge of the Aviation Medicine Program or aviation experience. Knowledge of the Aviation Medicine Program enhances your ability to assist the Flight Surgeon.

The purpose of this handbook is to provide you that knowledge and to act as a reference guide in understanding the Aviation Medicine Program, establishing an Aviation Medicine Clinic, or enhancing clinic operations.

This handbook is not all-inclusive and suggestions for inclusions in to this handbook should be forwarded to:

Dean
US Army School of Aviation Medicine
Fort Rucker, Alabama 36362

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CHAPTER ONE

The History of Army Aviation Medicine

1-1. History

a. Aviation medicine is rooted in the early 18th-century physiological studies of balloonists, some of whom were physicians. In 1784, a year after the first balloon flight by the French physicist Jean Pilâtre de Rozier, (1756–85), John Jeffries (1744–1819), a Boston physician with loyalist sympathies (who found it advantageous to practice medicine in England in the 1770's and 80's) conducted the first study of upper-air composition from a balloon. The earliest comprehensive studies of health effects during air flight were done by the French physician/physiologist Paul Bert (1833–86), who became known as the "father of altitude physiology". With the advent of the airplane, the first standards for military pilots were established in 1912. Significant work in this area was directed by the physician Theodore Lyster (1875–1933), an American pioneer in aviation medicine. Lyster set up the Aviation Medicine Research Board in 1917, which opened a research laboratory at Hazelhurst Field in Mineola, N.Y., in January 1918. The School of Flight Surgeons opened the following year, and in 1929 the Aero Medical Association was founded under the direction of Louis H. Bauer (1888–1964). In 1931 the School of Aviation Medicine moved to Randolph Air Base in San Antonio, Texas. There it continued until 1 July 1949, when the fledgling U.S. Air Force (formerly the Army Air Corps) initiated its own medical department.

b. The Army reestablished its aviation medicine training program in 1953 at the Medical Field Service School, Fort Sam Houston, Texas. Aviation medicine was recognized as a sub-specialty of Preventive Medicine by the American Medical Association in 1953. The Army acknowledged its flight surgeons with the assignment of a separate military occupational specialty code (MOS)

c. In 1954 Army aviation medicine training moved to Fort Rucker, Alabama, the home of the Aviation Training Center. The late 1950s and early 1960s saw a growing interest and need for aviation medicine and its practioneers, culminating in the formation of the Department of Aeromedical Education and Training (DAET) under the Army Aviation School Command in 1964. Under the directorship of Colonel (now MG retired) Spurgeon Neel, the Army was again in the business of training its own flight surgeons. From 1966 through 1969, over 130 flight surgeons were graduated yearly from the school in support of the Vietnam Conflict.

d. Increased pilot training resulted in increased aeromedical demand, and in 1967, a new hospital was built at Fort Rucker, bearing the name of aviation medicine's patriarch Theodore Lyster (Lyster Army Community Hospital). In 1973, the U.S. Army Aeromedical Center was formed with the combination of Lyster Army Community Hospital, the Air Ambulance Company “Flatiron”, and the new U.S. Army Aeromedical Activity, which adopted the aeromedical education and training mission.

e. In 1984, the Academy of Health Sciences (now the Army Medical Department Center and School) and the Aeromedical Center formed the **United States Army School of Aviation Medicine (USASAM)** at Fort Rucker. USASAM's mission was expanded beyond training flight surgeons, and included the training of aeromedical physician assistants, flight medics, medical evacuation (MEDEVAC) pilots, aeromedical psychologists, and thousands of aviation personnel annually on the physiologic hazards of flight.

1-2. Army Aviation Medicine Today

a. The U.S. Army Aeromedical Center (USAAMC)

1. The United States Army Aeromedical Center provides a broad spectrum of health care services, working closely with several other AMEDD organizations, including an Air Ambulance Detachment of utility and fixed wing aircraft (known as Flatiron), the U.S. Army Aeromedical Activity, and Lyster Army Community Hospital. Lyster Army Community Hospital provides both general and specialized medical care and is located at Building 301, Andrews Avenue, Ft. Rucker, AL 36362.

2. The United States Army Aeromedical Center provides quality health care to a full range of beneficiaries for the United States Army Aviation War Fighting Center and its surrounding communities, while maintaining the highest standard of medical readiness.

3. USAAMC TELEPHONE LISTING

COMMAND GROUP (334) 255-7360/7361/7343

ACTIVITY	PHONE NUMBERS
AEROMEDICAL ACTIVITY	(334) 255-7430
AIR AMBULANCE DETACHMENT	(334) 255-8776
AVIATION MEDICINE CLINIC	(334) 255-7894

PHYSICAL EXAM (334) 255-7722

b. U.S. Army Aeromedical Activity (USAAMA)

1. The United States Army Aeromedical Activity (USAAMA) is the tertiary central aeromedical review authority for all Army aircrew members worldwide. Aerospace Medicine Specialists make final recommendations for flying duty fitness to the Army personnel system by review of flying duty medical examinations and aeromedical board summaries. The activity director manages the Aeromedical Consultant Advisory Panel, composed of aerospace medicine specialists, flight surgeons board certified in other disciplines, and senior Army aviators from the Fort Rucker area. Consultants develop and implement aeromedical policy and standards, monitor the quality of aviation medicine care, educate and consult with unit level flight surgeons, and study chronic disease and injury epidemiology in the aircrew member population. Computer specialists maintain the Aviation Epidemiology Data Register (AEDR) that archives history, physical, and aeromedical board information on aircrew members and aircrew member training applicants.

2. Aeromedical administration is detailed in Chapter 6 or AR 40-501. Questions pertaining to aeromedical consultation, policy, standards, and administration should be directed to Commander, USAAMC, ATTN: MCXY-AER, Fort Rucker, AL, 36362-5333.

3. Downloadable files from USAAMA: AERMED31.EXE and *AERMED95.EXE* are self-extracting compressed Windows Help files containing a flight surgeon oriented version of AR40-501, aeromedical policy letters and technical bulletins. AERMED31.EXE is 16-bit, Windows 3.1x version; and AERMED95 is a 32-bit, Windows 95/98 version. AERMED95 *does not* work on many Windows NT Workstations. After extracting the files into the directory you choose, run "policies.hlp" file to link to all of the help files in the series.

4. CR498E16.EXE is a self-extracting compressed file containing installation disk images for CADRISK calculator version 4.98E.16, dated 18 August 1998, 16-bit for Windows 3.1x. This version will run on most Windows 95/98/NT workstations as well. It supercedes version found on the 1998 US Army Flight Surgeon's Handbook CD-ROM, but is included on the 1999 and newer “Ultimate Flight Surgeon Guide” CD’s.

Click on each link to download the file:
AERMED31.EXE (1 meg, 16-bit, Win 3.1x)
AERMED95.EXE (1 meg, 32-bit, Win95/98)

CR498E16.EXE (3 meg, 4.98E16, CADRISK calculator, 16-bit, Win 3.1x)

Questions? Contact Adele Kynard at DSN 558-7430/7420 Com.334-255-7430/7420
Or Dayna Meuli at: DSN 558-6964 Com. 334-255-6964

c. The U.S. Army School of Aviation Medicine (USASAM)

1. USASAM was organized in 1984 at Fort Rucker, Alabama and is an off campus branch of the Army Medical Department Center and School (AMEDD C&S). With one of the most unique training missions in the US Army, USASAM has a dual mission of training both medical and aviation personnel in aviation medicine.

2. While small in size, the school operates the Army's only training hypobaric (altitude) chamber, and trains all of the Army's Flight Surgeons, Flight Medics, and Aeromedical Evacuation Officers. The only flight psychology course offered in the Department of Defense is taught annually at USASAM to train psychologists on the stresses associated with aviation and aviation missions. Concurrently, USASAM provides initial and sustainment training in 32 Training and Doctrine Command (TRADOC), U.S. Army Safety Center, as well as The School of the Americas programs of instruction (POI) for both fixed and rotary wing students. Subjects include a variety of flight physiology topics such as Noise, Gravitational-Forces, Altitude Physiology, Vibration, Night Vision, Hypoxia, and Spatial Disorientation.

3. Under the Office of the Dean, USASAM is divided into several branches, the Aeromedical Operations Branch, the Aviation Resource Management Branch, the Aeromedical Education Branch, and the Flight Physiology Branch. The Operations Branch schedules all of USASAM's training, monitors doctrine development and faculty training, and provides training for aeromedical evacuation pilots preparing to take command of air ambulance units. The Aviation Resource Management Branch conducts Aviation Resource Management Survey (ARMS) inspections in aviation units (Active, Reserve, and National Guard Component) throughout FORSCOM and TRADOC. This unique team allows the school to provide assistance to the field while also ascertaining how well recently graduated students are performing in their assigned positions in the operational Army. The Aeromedical Education Branch develops and conducts all training to Army Medical Department (AMEDD) personnel, to include flight surgeons and physician assistants, flight medics, and aeromedical psychologists, while the Flight Physiology Branch develops and conducts physiology training to Army aviators in TRADOC.

Note: See appendix A for Pre-Arms Checklist

4. For the most up to date names and phone numbers of those assigned to USASAM, please visit our web site at: http://usasam.amedd.army.mil/

CHAPTER TWO

AVIATION MEDICINE PROGRAM

2-1. Introduction

The Aviation Medicine (AVMED) Program is designed to promote and maintain the aviation fighting force through health promotion and sustainment of the mental and physical well being of aviation personnel. Chapter 3 of AR 40-3 (Army Aviation Medicine Program and Medical Care of Aviation Personnel) delineates the duties and responsibilities of the various medical units and personnel and their role in the Aviation Medicine Program.

2-2. Duties and Responsibilities

a. The Surgeon General (TSG) is responsible for the development, fiscal planning, and oversight of Department of the Army (DA) policies and programs for the AVMED Program.

(1). All major Army command (MACOM) commanders are responsible for enforcing the regulatory aspects of AVMED within their commands.

(2). The AVMED consultant (to TSG) will assist TSG in policy formulation and provide technical supervision of all aspects of the AVMED Program.

b. Regional Medical Command (RMC) commanders will

(1). Ensure implementation of the AVMED Program.

(2). Appoint a residency trained aerospace medicine (RAM) specialist as RMC Chief, AVMED. If not a RAM specialist, the chief will be a senior flight surgeon (FS) (military occupational specialty (MOS) 61N), usually the senior, and most experienced flight medicine officer, assigned to the region or installation.

(3). The RMC Chief, AVMED, will oversee the RMC AVMED Program.

c. The Commander, U.S. Army Aeromedical Center, will

(1). Provide worldwide support of Army AVMED Programs through consultations, supportive services, and training in the areas of aviation and military occupational disease prevention, surveillance, and evaluation.

(2). Review and recommend dispositions of flying duty medical examinations (FDME) and medical waiver requests for continued flying duty according to AR 40-501. See also DA Form 4186 (Medical Recommendation for Flying Duty) as prescribed in AR 40-501.

(3). Develop and maintain the Aviation Epidemiology Data Register (AEDR) to support research and clinical studies for aircrew medical standards and policy.

d. The Commander, U.S. Army Safety Center, will

Investigate human factors in aviation safety, aircraft design, and aviation mishaps.

e. The Commander, U.S. Army Aeromedical Research Laboratory, will

(1). Conduct research and development in aviation life support equipment.

(2). Conduct research in the effects of exogenous aeromedical factors in the aviation operational environment.

f. The Dean, U.S. Army School of Aviation Medicine (USASAM), will

(1). Serve as the AVMED consultant to TSG for all aspects of aeromedical education and training to include developing advanced aviation qualification courses and conducting the Army Aerospace Medicine Residency Training Program.

(2). If not appointed as the AVMED consultant to TSG, serve as assistant AVMED consultant to TSG for aeromedical education, training and doctrine.

(3). Supervise the aeromedical portion of the Aviation Resources Management Survey (ARMS).

g. The installation medical authority having aviation assets assigned to the installation will

(1). Establish, supervise, administer, and support the AVMED Program

(2). Appoint a Chief, AVMED.

The chief of AVMED will oversee the installation AVMED Program.

h. The aviation brigade/cavalry regiment surgeon will establish, supervise, and administer the brigade AVMED Program.

i. The aviation battalion/cavalry squadron level FS will implement the AVMED Program within the battalion/squadron to include all aviation personnel.

2-3. Flight Surgeon Clinical Duties

a. Primary Care:

(1). Provide routine primary medical care to all unit aviation personnel and to aviation support personnel.

(2). Ensure appropriate maintenance of medical records on all local area active duty, reserve component and civilian aviation personnel including air crewmembers in non-operational assignments even if not on active flying duty.

(3). Provide an AVMED primary care program, including health promotion and preventive medicine, for aviation personnel family members when mission requirements, staffing, and facilities can support such a program.

(4). Monitor and support the mental and physical well-being of aviation personnel, family members, and support personnel.

(5). Review care provided by other health care providers for impact on the flight status of aviation personnel.

b. Preventive Medicine and Occupational Health:

Promote the health and safety of aviation personnel by instituting a health education program and monitoring the conditions and hazards present in the work environment. The FS will advise the command when potential safety problems are identified.

c. Flying Duty Medical Examination (FDME):

(1) Conduct FDMEs as prescribed by AR 40-501 and other special medical examinations when indicated.

(2) Review and monitor all FDMEs performed by other health care providers.

d. Aeromedical Consultation:

(1). Provide a 24-hour on-call service for aeromedical emergencies and aeromedical evacuation consultations.

(2). Interview newly assigned aviation personnel and review their medical records before granting a medical clearance to fly.

(3). Establish a procedure whereby an air crewmember is automatically grounded when treated in the emergency center (EC), specialty clinic, or hospitalized. The protocol should then require the air crewmember to report to the FS as soon as reasonably possible.

(4). Medically clear air crewmembers for further flight duty following temporary medical disqualification or aircraft mishap.

(5). Ensure timely evaluation of aviation personnel who are medically disqualified.

2-4. Flight Surgeon Non-clinical Support Duties

a. Liaison:

The FS will serve as a liaison between the medical and aviation elements and act as an advocate for the AVMED Program.

b. Readiness and Mobility Support Planning:

(1). Assist in medical staff planning activities associated with tactical aviation operations.

(2) Review aviation operations plans (OPLANS), to include individual aviation training, team training, and tactical field exercises to determine aeromedical factors that may adversely affect unit operations and ensure that these factors are considered in future OPLANS revision.

(3) Advise the commander of physiological and psychological factors affecting aviation operations.

(4) Recommend policies and procedures pertaining to exposure and decontamination of aviation personnel operating in the vicinity of toxic gaseous or particulate agents.

(5) Support the air crewmember endurance program.

c. Air Crewmember Aeromedical Training Program.

The FS will assist unit commanders in developing an air crewmember aeromedical training program to meet specific operational needs of the unit.

d. Air Ambulance Operations.

(1) Function as medical technical advisor to local air ambulance unit commanders and Medical Treatment Facilities(MTF) commanders.

(2) Participate in actual air evacuation missions as appropriate.

e. Flight Evaluation board.

(1) Serve as a member of or as a medical consultant to an FEB, according to AR 600-105, paragraph 4-6.

(2) Participate actively in the board proceedings, to include deliberations and drafting recommendations.

(3) Organize and report on special medical consultations as required by the flight evaluation board when human factors or medical laboratory findings are involved in the proceedings.

f. Flight Line Operations.

(1) Conduct aeromedical occupational inspections.

(2) Conduct aeromedical briefings held for both officer and enlisted personnel at unit level training or aviation safety meetings.

(3) Participate in aircraft emergency exercises and observe the effectiveness of response, equipment, communication of fire rescue, air ambulance, and medical teams.

(4) Observe flight operations in order to monitor physical and psychological stresses, which contribute to fatigue and human error in the flight environment.

(5) Participate in unit field training exercises and unit day-to-day activities.

(6) Be required to participate in an operational capacity as an air crewmember in flight in each type of aircraft assigned to supported units. FS's operational capacity will include observing crew members, monitoring patients, etc. Participate in all flight environments-including emergency procedures-and mission profiles (for example, nap of the earth, night vision goggles, etc.) according to AR 95-1 and AR 600-105.

2-5. The Aviation Medicine Healthcare Team

a. Flight Surgeons:

(1). Physicians (MD or DO) who have been specifically trained in aviation medicine. They attend the Army Flight Surgeon Primary Course (six week course), which teaches the Flight Surgeon to deal with the medical problems encountered in the aviation environment.

(2). Some physicians complete a Residency in Aerospace Medicine (2-3 year course) to become board certified as an Aerospace Medicine Specialist.

(3). Physicians are rated crewmembers and wear flight surgeon wings.

b. Army Aeromedical Physician Assistant

(1). Physician Assistants (PA) specifically trained in aviation medicine. They attend the Army Flight Surgeon Primary Course (six week course), which enables them to deal with medical problems encountered in the aviation environment. Duties are performed under the supervision of a flight surgeon, and will be as prescribed by AR 40-48.

(2). Aeromedical physician assistants (APA) are considered non-rated, non-crewmembers and are authorized to wear crewmember wings.

c. Army Flight Medic

(1). The flight medical aidman is a 91B who has also been trained in aviation medicine at the U.S. Army School of Aviation Medicine. He/she has successfully completed the four week Flight Medic Course, and is trained and supervised to provide-

(2). Medical aidman crew duties for air ambulance operations.

(3). The basics of emergency medical care.

(4). Administrative support of the AVMED clinic.

(5). Flight medical aidmen are considered non-rated crewmembers, and are authorized to wear crewmember medic wings.

d. Aeromedical Psychologist

(1). Clinical psychologists trained to provide the following services:

(a). Clinical consultation and support to flight surgeons and commanders regarding the assessment, treatment, readiness, and retention of aviation personnel.

(b). Consultation to commanders, unit safety officers, and accident investigation and flight evaluation boards on psychological and human factors affecting performance and aviation safety.

(c). Education and training to aviation personnel on human factors, stress and fatigue, and other safety issues related to the psychological status of individual aviators.

CHAPTER THREE

Aviation Medicine Clinic

3-1. Introduction

a. The Aviation Medicine Clinic exists to primarily provide medical care to the aviation community, other service members, and where applicable, those dependents entitled to care. The typical aviation medical clinic will conduct sick-call operations in the morning, and perform physical examinations in the afternoon. No two clinics are exactly alike, and clinics will change over time with variations in supported units, missions, and assigned personnel.

b. Things to consider when establishing or modifying your clinic's operation include but are not limited to the following areas of concern:

(1). Sick-call hours: do you have aviators who fly at night, and are unable to make it to early morning sick call? Some clinics have sick-call hours first thing in the morning, and then again immediately following lunch to accommodate those who work "reverse cycle" shifts.

(2). Up-slips (DA 4186): Is there a mechanism for providing up-slips (DA 4186) in an expeditious manner for those aviators who are reporting to a new duty station, or are ready to be cleared back to flight after a minor illness? It is imprudent to keep precious human resources sitting in a sick-call waiting room for hours waiting for an up-slip.

(3). What about immunizations? How will you run your anthrax program? Will you give PPD injections on Wednesday or Thursday, knowing they need to be read in 48-72 hours?

(4). How will you schedule physical exams? A 20 year old in for an abbreviated FDME will take a fraction of the time to examine that a 45 year old in for a retirement physical will require.

(c). The purpose of this chapter is not to answer all your questions, or dictate how you should run your clinic, but to start you thinking about what the best way might be for you to conduct the business of aviation medicine at your particular clinic. We have endeavored to provide numerous suggestions and techniques that you may choose to employ to successfully operate a more efficient aviation medicine clinic.

3-2. General:

a. The general characteristic of an Aviation Medicine Clinic is that it is a multi-functional general medicine clinic, specializing in Aviation Medicine. The clinic serves the active duty personnel, both flight status and non-flight status, Department of the Army and contract civilians, and the Army Aviation Reserve and National Guard population in the region. As discussed above, the clinic may also serve eligible dependents of aircrew and other military members when staffing resources and mission permit.

3-3. Responsibilities:

a. The responsibilities of the Aviation Medicine Clinic Officer in Charge (OIC), Non-Commissioned Officer in Charge (NCOIC), and staff are outlined in this section. These responsibilities can be the same as the duty description outline on support forms, NCOERs, and civilian job descriptions.

(1). Aviation Medicine Clinic Officer in Charge (OIC) responsibilities includes but not limited to be:

(a). Provide technical assistance to all Physicians and APA’s working in the clinic.

(b). Coordinate, through the Aviation Medicine Clinic NCOIC, supervision of enlisted personnel working in the clinic.

(c). Work with the Division Surgeon's and Corp Flight Surgeon's Offices to supervise the certifying process for non-physician health care practitioners IAW AR 40-66 and AR 40-48.

(2). Aviation Medicine Clinic Non-Commissioned Officer in Charge (NCOIC) responsibilities are:

(a). Supervise all enlisted and civilian personnel who work in the clinic.

(b). Ensure proper acquisition, maintenance, utilization, and accountability of medical supplies, equipment, and facilities.

(c). Develop, in cooperation with the Department of Nursing (DON) if applicable, training in both medical tasks (e.g. 91B) and soldier tasks (e.g. NBC, rifle marksmanship) which support the unit's METL.

(d). Perform those duties common to the leaders in the Non-Commissioned Officer Corps, including: counseling of subordinates, ensuring the health, morale, and welfare of assigned soldiers; implementing the vision and objectives of the clinic Officer in Charge.

3-4. Scope of Practice/ Patient Care Protocols

a. All aviation personnel will be provided ambulatory care by or under the direct supervision of an FS if available. If such care is not available, other health care providers will ensure adherence to the requirements in paragraph 3-8a and b of AR 40-3.

b. Fitness for flying duty

(1). When Army aviators and other personnel are on flight status, their fitness for flying duty must be determined according to AR 40-501 and AR 40-8. Admission to an MTF or being placed on "quarters" status, dental treatment requiring agents with systemic effects, and conditions specified in the above regulations are causes for removal from flight status. (See AR 600-105.) The MTF will notify the person's commander by means of DA Form 4186 as prescribed in AR 40-501. For aviators in non-operational flying jobs, DA Form 4186 is not required but all other procedures stated above apply.

(2). Medical personnel administering or prescribing any type of treatment or evaluating any health-related condition of aviation personnel will ensure that proper entries are made in their patient's health records (HRECs). They will also refer their patients (with records) to an FS for further evaluation. However, aviators in non-operational flying jobs who have minor temporary conditions need not be referred to an FS.

c. The purpose of scope of practice and patient care protocols is to provide guidelines for the orientation and job responsibilities of the medics assigned or attached to the Aviation Medicine Clinic. The OIC of the AMC is responsible for establishing a scope of practice and patient care protocols. This is usually done in close coordination with the senior clinician (physician) assigned to the clinic, and can be supplemented by input from the Department of Nursing (DON) where appropriate.

3-5. Competency Based Training

a. Competency-Based Training (CBT) is a function of scope of practice, and is concerned with what a person can do as a result of training rather than necessarily what training they have had, or how much time has been spent in training. It focuses on the skills and knowledge an individual has, rather than on how they attained them. CBT gives individuals and units greater

choice and diversity in what, where and how they learn. Whether training is undertaken in a unit classroom, college, workshop, in the workplace or a combination of any or all of these, it can result in a qualification that is recognizable, standardized, and consistent across the Army. What an individual already knows is also taken into account, irrespective of how the knowledge and skills were gained. A CBT system is primarily concerned with ensuring workers are equipped with the skills needed by their particular unit, clinic, or workplace.

b. WHAT IS COMPETENCY? The concept of competency focuses on workplace expectations rather than on the actual learning process. It refers to skills and knowledge that can be transferred and applied to new situations and environments. It is imperative that the expectations are clearly thought out, and agreed upon by the entire medical staff (clinicians, nurses, and administrators). Not all participants will necessarily have equal weight apportioned to their opinions, however.

(1). The key features of such a system are that it:

(a). Is based directly on the skills and abilities required to do a job.

(b). Takes account of learners' existing level of competency, irrespective of how it was acquired.

(c). Allows learners to enter and exit training programs at various stages.

(d). Suits both the unit’s mission and the learner's pace and style of learning.

(e). Allows training to take place in a variety of settings including workplaces, simulated work environments, and training rooms.

(f). Allows learners to be assessed when they are ready; and provides learners with a record of the competencies they have achieved (e.g. “job book” concept).

(2). Competency based training should be used to ensure that all assigned soldiers are able to perform safely and effectively within their scope of practice.

3-6. Quality Assurance Program

a. The purpose of this program is to establish a formal Quality Assurance program for the Aviation Medicine Clinic (AMC). This section describes organizational structures and functions for gathering, analyzing, and using information relevant to providing optimal, achievable levels of patient care, quality and efficiency, and for assuring sufficient oversight of the medical care provided at the AMC. The quality and appropriateness of patient care provided by the AMC should be monitored and evaluated to assure that problems are identified and resolved.

b. The goal of the section is to fulfill the AMC's responsibilities to its patients, its professional staff, and to the soldiers that it supports, by delivering patient care that is optimal, within available resources and consistent with achievable goals.

c. The AMC should have a planned and systematic process for the monitoring and evaluation of the quality and appropriateness of patient care and for resolving identified problems. The physician director of the AMC is responsible for assuring that the process is implemented.

d. The quality and appropriateness of patient care should be monitored and evaluated in all major clinical functions of the AMC. Such monitoring and evaluation are accomplished through the following means:

(1). The AMC Medical officers agree on objective criteria that reflect current knowledge and clinical experience.

(2). These criteria are used by the AMC or by the hospital's quality assurance program in the monitoring and evaluation of patient care.

e. When important problems in patient care or opportunities to improve care are identified, actions are taken; and the effectiveness of the actions taken is evaluated. The findings and conclusions of monitoring, evaluation, and problem-solving activities are documented and, as appropriate, are reported. The actions taken to resolve problems and improve patient care, and information about the impact of the actions taken, are documented and, as appropriate, are reported. As part of the stated reappraisal of the clinic's quality assurance program, the effectiveness of the monitoring, evaluation, and problem-solving activities in the AMC is evaluated.

g. The medical staff is responsible for assuring that a planned and systematic process for such monitoring, evaluation, and problem-solving activities is implemented.

(1). Program objectives are:

(a). To complement Regulations for Quality Assurance Program QAP), by insuring that the requirements of AR 40-68 are fulfilled at the AMC level.

(b). To assure that evaluation results are integrated as appropriate and reported through the appropriate QAP channels.

(c). To provide a means of fulfilling and integrating the Quality Assurance responsibilities for all professional, managerial, technical, and support personnel.

(d) To provide a system for fulfillment of regulatory, statutory, and JCAHO standards.

h. Scope and Design:

To accomplish its objectives, this Quality Assurance Program is planned and systematically designed to:

(a) Identify services, patterns of practice, professional performance, and patient outcomes that differ from what is generally accepted as being achievable quality care at the AMC.

(b) Aggregate patient care service, practice performance, and patient outcome data so that patterns are identifiable.

(c) Evaluate these patterns of practice, performance, and patient outcome for their impact on quality of care.

(d) Affect change so that problems are overcome or at least reduced, consonant with the established priorities.

(e) Provide mechanisms for the reporting of Quality Assurance information through the committee structure of the local MEDDAC, in support of the MEDDAC's Quality Assurance Program.

(i). Responsibilities:

(1). The OIC, Aviation Medical Clinic, through the Chief, Department of Primary Care and Community Medicine, is responsible to the MEDDAC commander for the conduct of an effective Quality Assurance Program at the AMC.

(2). The AMC OIC is designated as the POC for compliance with all requirements specified in this section.

(3). The various chiefs of divisions/sections/departments identified in AR 40-68 are responsible for the conduct of quarterly liaison visits to the AMC to insure that the functions within their areas of expertise are being adequately performed at the AMC level.

(4). The Chief, Clinical Support Division, and the Chief, Ambulatory Nursing Section, are responsible for supporting the Quality Assurance Plan by providing support to the coordinating activities of the AMC.

(j). Functions:

(1). The Ambulatory Patient Care (APC) Committee, as described in MEDDAC Regulations, will typically serve as the Quality Assurance coordinating committee for all activities at the AMC. This committee has responsibility for overseeing all QA activities and integrating QA activities with the AMC staff and all hospital services. The results of all Quality Assurance efforts will be reported through the appropriate supervisory channels to the APC committee.

(2). HSC Pam 40-7-21 provides an effective audit system for reviewing work performed by screeners in accordance with the Algorithm-Directed Troop Medical Care (A-DTMC) system. When this pamphlet is used at the battalion screening stations and/or AMC, this audit system will be used to monitor and evaluate the quality of work performed. The results of these audits will be presented to the APC Committee for review, follow-up, and/or further action as appropriate.

(3). Physician supervisors in accordance with established procedures will audit Physician Assistant (PA) records (e.g. the physician supervisors audit a minimum of 10% of all PA records). The results of these audits will be summarized and presented to the APC Committee.

(4). A sampling of physician records will be audited at the APC Committee meeting for completeness and appropriateness of care.

(5). The tasks performed by 9l series (B/C/W)/LPNs/nursing assistants will be closely monitored by supervisory personnel to insure that the actions taken are consistent with acceptable methods of health care delivery. In addition, it is incumbent upon the NCOIC, PAs, physicians, and OIC to insure that all tasks outlined in the individual's Scope of Practice are not exceeded at the individual provider's level of certification.

(6). Any individual performing duties within the AMC who identifies a Quality Assurance problem should report the problem through his supervisory chain to the AMC OIC for review. A listing of data sources, which may provide information regarding Quality Assurance problems, is provided in the regulation. It is vitally important that any problems identified which have resulted or could result in less than optimal care be evaluated effectively and efficiently. This requires prompt notification and follow-up. Quality Assurance is the responsibility of all personnel working in the AMC. All personnel should be familiar with these responsibilities.

(7). To insure that the personnel assigned to the AMC do not exceed their level of expertise in providing patient care, it is incumbent upon the AMC OIC to become intimately familiar with the credentials granted to each individual. These credentials may not be exceeded under any circumstance and must be appropriately monitored to insure compliance. Newly assigned personnel must be expeditiously credentialed in accordance with the provisions outlined in regulations.

3-7. Aviation Medical Records Administration and Health Care Documentation

a. AR 40-66 is the foundation for the operation of the records holding area in an Aviation Medicine Clinic, The purpose of this regulation is to prescribe the policies, responsibilities, and procedures for working with medical records.

b. It is recommended that a Medical Records Clerk be designated responsible for the proper maintenance of the health care records of those personnel designated to receive primary care at Aviation Medicine Clinics. This person should become familiar with, and have a working knowledge of AR 40–66.

c. IAW AR 40-66 all health records for personnel on flight status *will be filed separately from non-flight status personnel.* This is a frequently cited regulatory violation on inspections of aviation medicine clinics, and is not a frivolous or onerous requirement. Medical records of personnel on flight status must be able to be immediately secured and safeguarded in the event of an aircraft mishap.

3-8. Determining Eligibility:

a. When a soldier arrives at the Aviation Medicine Clinic for medical treatment, an identification card, DA Form 2A, should be presented. The plastic, raised character medical card is not an acceptable means of identification. All staff-members of the Clinic are responsible for

verifying the eligibility of soldiers before providing medical care IAW AR 40-66 and AR 40-3. Active duty personnel should be the priority patients, when considering who will be routinely treated in Aviation Medicine Clinics.

b. Examine the Active Duty ID card for the following:

(1). Photo - Insure the picture is of the soldier presenting the ID card.

(2). Expiration Date - Insure the card is still current. A specific date may be written in this block or the word "Indefinite" may appear there.

(3). If the ID card is excessively worn, mutilated, or modified, request to see another type of ID (i.e. driver's license), and then inform the soldier that he/she will have to obtain a *new* ID card *ASAP*. It is rarely appropriate to confiscate a soldier’s ID card. Refer questionable situations to the Clinic NCOIC or OIC.

(4). Whenever there is a reason to suspect fraudulent use of an ID card, or if there is a question concerning eligibility of a patient, immediately refer the situation to the NCOIC of the Clinic.

(5). Patients who are eligible for care, but lack an ID card, will have their proof of eligibility verified through DEERS, via CHCS. Information needed for DEERS verification includes the patient's name, SSN, and sponsor's SSN.

3-9. Protection Of Medical Records:

a. Health records generated within the Army are the property of the United States Government and are subject to control by military law and regulation. While it may be unpopular with patients, it is imperative that all medical records be properly controlled.

b. Health records are personal and private in nature and are subject to limited access. Within the Department of the Army, information from health records, or the records themselves, will be made available ONLY for treatment and other OFFICIAL purposes. Access will be limited to the following personnel:

(1). Medical personnel for the purpose of diagnosing, treating, or preventing a medical condition and for medical research.

(2). Personnel to whom the health record pertains, providing the information would not prove to be injurious to his/her health.

(3). Inspectors of the TMC, evaluating compliance with regulations.

(4). Non-medical personnel, such as JAG, IG, CID, MP, and personnel officers, must submit a request for medical information utilizing DA Form 4254-R to the Chief, Aviation Medicine Clinic or the Chief, Patient Administration Department when available. The Chief, Patient Administration Department (PAD), must approve the release of medical information for any purpose. When a soldier cannot be present to process him/herself out of Aviation Medicine Clinic, the unit commander must assign a representative on orders, to complete the out-processing. The representative must present the assigning orders at the Clinic before the Medical Records Clerk will release the soldier's health records.

3-10. Filing And Accountability:

a. Health records will be filed in terminal digit order by organizational unit.

b. Records will not be removed from file area unless they have been properly signed out. A MEDDAC Form (patient information sign out card) will be completed with the patient's NAME, SSN, UNIT, Phone #, CLINIC to which going, and DATE, each time the health record leaves the Clinic.

c. Medical Records will not be removed from the files, (except for in-clinic use), unless properly replaced by the appropriate color charge out folder. The color sequences of the charge out card should be AR40-66 with the color changing on a weekly basis.

(1). Charge outs should be identified as below:

(a). Blue: First week of each month.
(b). Orange: Second week of each month.
(c). Red/Pink: Third week of each month.
(d). Green: Fourth week of each month.
(e). White: Records charged out to Patient Administration
(f). Black: Records charged out for purpose of TDY.
(g). Yellow - Records charged out for greater than 4 weeks.

d. All health records will be picked up daily and returned to the Aviation medicine Clinic by authorized medical personnel. Circumstances may occur which require those soldiers on flight status (or PRP), to hand-carry their records. These situations should be the exception, not the rule, and strict record accountability is imperative.

e. Filing of the medical treatment forms for each patient will be IAW AR 40-66. The treatment forms should be filed in the health record within 72 hours after receiving the forms from other facilities. There should be no drop filing in health records. Documents should be filed in the health record in the appropriate location.

f. The return time of the health record from the hospital should be no longer than three days. If a health record does not return to the Clinic within seven days, a delinquent list should be generated and forwarded to the soldier's commander for appropriate action.

g. If all attempts to retrieve a medical record fail, a temporary record will be established within 30 days, if the soldier is still assigned to the unit. If the original health record does not return to the Clinic within 60 days, the temporary record will become the soldier's permanent health record.

3-11. In-Processing Newly Arrived Personnel:

a. The medical record personnel of the Clinic should screen all newly assigned soldiers’ health records IAW AR 40-66. This initial screening will entail the following:

(1). Checking for filing sequence.

(2). Color taping for identification of the servicing Clinic.

(3). Insure that the proper numerical designator of the Clinic is annotated on the front of the health record.

(4). Obtaining the soldier's unit from their orders or memo given to the soldier at In-processing. Pencil in the unit on the face of the health record.

(5). Privacy Act must be signed and dated by the patient.

(6). The health record folder will be changed if the record is mutilated, faded, or stickers, identifiers, or other materials excessively mark the face of the health record.

b. When the soldier reports to the Clinic for In-processing, the soldier will:

(1). Fill out the Patient Registration Form.

(2). Fill out the Patient Recording Card information form.

(3). Sign Privacy Act if it is not already signed.

(4). Be referred to the medical staff for screening.

(5). It is imperative that all aircrew members and their records be screened by the flight surgeon upon arrival to a new duty station to complete a records review and In-processing interview. Aircrew members must receive a DA 4186 (up slip), signed by a flight surgeon, prior to participating in flight duties at a new duty station.

(6). Establish health records for soldiers that do not have health records (e.g. soldiers coming on active duty from AR/NG or other reserve status), and gather the information needed to request the health record from the duty station where it was last seen for those soldiers who have had health records, but did not PCS with them.

(7). Insure that the patient's plastic medical card is made as soon as possible. The plastic medical card will contain the following information:

(a). Line 1 - 20 XXX-XX-XXXX

(b). Line 2 - Patient's name (Last, First, MI)

(c). Line 3 - DOB (yy,mm,dd), Sex (M or F only), AD

(d). Line 4 - Pay Grade, Unit, Unit Phone #

(e). Line 5 - Special Category symbols as appropriate:

(1). Flight Status (FS)

(2). Nuclear Surety Personnel (PRP)

(f). Line 6 – UNIT

c. To reiterate: *All newly assigned aircrew must be identified and referred, with their medical records to the flight surgeon for records review, In-processing interview, and completion of a reporting to new duty station DA Form 4186 (up-slip).*

3-12. Procedures For Out Processing

Out-processing procedures should be available to departing soldiers on a daily basis. The Clinic NCOIC should schedule specific hours, so as not to interfere with the functioning of the Clinic treatment hours.

NOTE: For all aircrew members, the flight surgeon or APA should directly inform the Aeromedical Activity at Fort Rucker (AAMA) of any and all of the following circumstances:

a.) Death
1.) Chapter/Discharge
2.) Medical retirement
3.) Confinement as prisoner

a. Out-processing for PCS (Permanent Change of Station):

(1). Obtain clearance papers, check whether the soldier is going overseas (Alaska and Hawaii are considered overseas). If the soldier is going overseas, he/she will be required to receive a PPD skin test, be checked for HIV status and may require immunizations. Screen the soldier's health records and refer him/her as needed to the medical staff of the Clinic. Soldiers will be required to return to the Clinic *72 hours after* having PPD test. For this reason, PPD's should be done Monday, Tuesday, Wednesday, and Friday (but not Fridays before three day weekends).

(2). After 72 hours, the soldier will return. Pull the health records, insert the POR (Preparation for Overseas Relocation) sheet into the health record and refer to the medical staff of the Clinic if needed.

(3). The medical records clerk should accomplish the following actions:

(a). Obtain a copy of orders, which should be kept on file in the records room for 30 days. Any additional documentation of care on the soldier should be attached to the orders and, after 30 days, be mailed to the gaining station. When there is no paperwork, dispose of the orders.

(b). Have the soldier sign out in a PCS/ETS/Chapter logbook. This lo book should be maintained chronologically, by last name, utilizing an alphabetically divided logbook.

(c). Provide soldier with his/her health record.

(d). Initial and stamp the soldier's clearance papers with the appropriate clinic stamp and return clearance papers to the soldier.

b. Out-processing ETS (Expiration of Term of Service)

(1). Obtain copy of orders. A copy will be kept on file for 30 days.

(2). Have the soldier sign out in the PCS/ETS/Chapter logbook.

(3). Provide soldier with his/her health records.

(4). Initial and stamp the soldier's clearance papers with the appropriate Clinic stamp and return to the soldier.

c. Temporary Duty (TDY)

(1). Obtain copy of soldier's TDY orders.

(2). Place TDY orders into a black charge-out folder, replace health record with the charge-out folder, then give the soldier his/her health records.

d. Out processing soldiers who are chaptered, deceased, or confined as prisoner.

(1). If the soldier is being chaptered out of the service and is present with an assigned escort, follow the same instructions as if the soldier were ETS'ing.

(2). If the soldier is being chaptered out of the service and is not present with an assigned escort, assignment orders delegating the escort will be requested by the medical records clerk. These assignment orders should be as follows:

(a). On a memorandum, Subject: Additional Duty Appointment.

(b). NAME, SSN, RANK, and STATUS of soldier being cleared.

(c). NAME, SSN, RANK, and STATUS of soldier assigned to act on behalf of soldier on line 2.

(d). Commander's signature block and signature.

(3). If the soldier is deceased, follow instructions as if the soldier is being chaptered out of the service and is not present to out process him/herself.

(4). The Medical Records clerk should place the soldier's health record into an envelope, seal the envelope, and place instructional label stating that the envelope will not be opened by anyone except medical personnel.

As a reminder: NOTE: For all aircrew members, the flight surgeon or APA should directly inform the Aeromedical Activity at Fort Rucker (AAMA) of any and all of the following circumstances as they relate to aviation personnel:

(a). Death
(b). Chapter/Discharge
(c). Medical retirement
(d). Confinement as prisoner

3-13. Procedures for Locating Lost Health Records

(1). Determine or ask the patient where he/she had the health records last.

(2). Check whether the health record has been misfiled in another battalion's files.

(3). Check whether the health record has been misfiled numerically in another area in the parent unit.

(4). Check all distribution boxes, desks, treatment rooms, and physician/PA offices.

(5). If the health records are still missing, then check with the following:

(a). Outpatient Records

(b). ALL OTHER POST TMC’s

(c). MAIN IN-PROCESSING CENTER

(d). For patients that are in-processing and out-processing, their health records may be at the in-processing center.

(e). Check with the clinic that the records were signed out, if available.

(f). If all attempts to locate the health records fail, establish a temporary record.

3-14. Disposing of Health Records and Medical Forms

a. When stray records and medical documents are found during semiannual reviews, (typically January and July of each year) the following procedures will take place, IAW AR 40-66, Chapter 5, Section 11, 5-9, paragraph d(1) through (3)e, and paragraph 5-10, as stated below:

(1) The health record and forms will be screened against the Clinic files, including the suspense cards. Those that can be identified, (i.e. matched with a record or suspense card), will be sent to the proper custodian.

(2) When the proper custodians cannot be determined, the Clinic will make a list of the members to whom the records belong. This list will give each member's FULL NAME and SSN. The list will be sent to MILPO, SIDPERS section, with a cover letter requesting that the names be checked, recording the soldier's unit of assignment if possible.

(3) After MILPO, SIDPERS has searched its files, the list will be forwarded to the POST LOCATOR, and the branch within the AG, which maintains the world-wide locator.

(4) If the MILPO, SIDPERS/Post Locators cannot find the address of the proper custodian before the files are given two semiannual reviews, the Clinic will draft a letter stating that the serving MILPO, SIDPERS, and Post Locator have done the proper screening and cannot find the correct custodian. With this letter, the identifiable records and forms will be disposed of as outlined in AR 40-66. For sample letter, see Fig 5-4, AR 40-66, p. 37.

(5). An unidentifiable record or form is one that contains either no demographic data or such a small amount that trying to identify the person to whom it belongs to is impossible. Before destroying these records, the Patient Administrator will send a report to the MTF committee that audits health records. The Clinic's medical records clerk will be responsible for listing the type of records, i.e. number of *SF 600's,* laboratory forms, and X-ray forms, that are to be destroyed, and forwarding that information to PAD.

Note: See Appendix B for Standard Operating Procedure (SOP) Guidelines

CHAPTER FOUR

Flying Duty Medical Examination (FDME)

4-1. Definitions and Responsibilities:

a. The FDME is a periodic screening medical examination performed for occupational and preventive medicine purposes. The FDME is used as a starting point for the careful evaluation and treatment of aircrew members. It promotes and preserves the fitness, deployability, and safety of aviation personnel.

b. The aircrew member is responsible for maintaining his/her medical certification. The following publications address the importance of the FDME as well as whose responsibility it is to accomplish it in a timely fashion.

(1). AR 600-105/AR 600-106 – Training for aviation service is voluntary. Army officers and enlisted personnel who enter aviation service must continually maintain medical and professional standards {Para 3-1(a)}. Failure to maintain medical certification is reason to convene a Flying Evaluation Board (FEB). All officers regardless of component or whether or not assigned to operational flying duties must maintain certification for flying duty through timely FDME (Para 3-5).

(2). IAW FM 1-300 - Individuals who do not have a current flight physical or flight physical extension will be suspended from flying status until medical clearance is given.

(3). IAW AR 40-3, Chapter 3 and AR 40-501, Chapter 6, it is the responsibility of the AMEDD to provide the resources for a comprehensive Aviation Medicine Program. The local flight surgeon is responsible for administering that program on a day-to-day basis. One vital component of the Aviation Medicine Program is the FDME and aeromedical evaluation. These services must be provided in a timely and convenient manner. At stake are people’s careers, Army readiness, and aviation safety.

4-2. Supporting Agencies

a. US Army Aeromedical Activity (USAAMA) responsible for:

(1). Writing, implementing and interpreting aeromedical policy.

(2). Review and disposition of Class 1, 2 and 4 flight physicals.

(3). Final aeromedical recommendation regarding waivers in cases of disqualified Class 1,2, and 4 aircrew.

(4). Maintaining the Aviation Epidemiology Data Register (AEDR) in conjunction with the US Army Aeromedical Research Lab (USAARL).

b. US Army Aeromedical Center (USAAMC) responsible for:

The commander of USAAMC is ultimately responsible for resourcing USAAMA and overseeing its operation.

4-3. Classes of FDME:

a. The class of FDME refers to the medical standards applied to a crewmember. The following is a list of classes and a brief description of those personnel to whom those standards apply. The aeromedical standards for all classes are found in AR 40-501, Chapters 2 and 4.

(1). Class 1:

Initial entrance physical examination for warrant officer candidates and commissioned officers respectively. These standards are similar to the standards for trained aviators (Class 2 FDME) except that a cycloplegic refraction standard for vision must be met. Valid up to 18 months from date of examination.

(2). Class 2:

Annual FDME standards are applied to rated aviators, flight surgeons, aeromedical physician assistants, and flight students. An annual FDME is generally valid for a period of 12 months. Exceptions will be discussed in following sections.

(a). The annual FDME must be taken within a three-month period preceding the end of the birth month. All exams taken within this period are considered to have been taken within the birth month and will be good until the end of the birth month of the following year. For example, a “July baby” can commence his FDME three months prior to 31 July. That means he can start the process on 1 May and he must complete it no later than 31 July. By the same token, if he completes it in May it will still be valid until the last day of July in the following year -- “All exams taken within this period are *considered to have been taken within the birth month…*”

(b). These standards are also applied to initial applicants for the flight surgeon course (both flight surgeon and aeromedical physician assistant candidates). Just like a Class 1 FDME, all initial FDME's (e.g. 2F) are valid for a period of 18 months.

(3). Class 3:

(1). Class 3 standards apply to both crewmembers (e.g. crew chiefs, flight medics, aerial gunners), and non-crewmembers (e.g. aeromedical physician assistants, aeromedical psychologists and any other personnel required by competent authority to fly in Army aircraft).

(2). Again, an initial Class 3 FDME is valid for a period of 18 months and an annual Class 3 is generally valid for 12 months. The FDME can be initiated three months prior to the end of the birth month and must be completed prior to end of the birth month.

(d). Class 4:

(1). These standards are applied to air traffic controllers, both military and civilian.

(2). As with the other classes of FDME, an initial Class 4 FDME is valid for a period of 18 months and an annual Class 4 is generally valid for 12 months. The FDME can be initiated three months prior to the end of the birth month and must be completed prior to end of the birth month.

4-4. Types of FDME:

There are two types of FDME. The contents are essentially the same for all comprehensive FDME's regardless of class. Similarly, all interim FDME's are similar, regardless of class.

(1). Comprehensive (Long):

. Performed at age 19,22,25,28,31,34,37,40,43,46, 49 and annually after age 49. A comprehensive FDME is required for permanently disqualifying illness or injury, when requesting return to aviation service after medical termination, following aircraft accidents, and for retirement.

(2). Interim (Short):

. Performed during the interim years when comprehensive or initial exams are not required. For example, a crewmember will receive a comprehensive FDME for his 28th birthday and an interim FDME on his 29th and 30th birthday.

4-5. Birth Month Alignment

a. Just as the type of FDME (comprehensive or interim) is aligned with a crew members age, his FDME is aligned with his birth month. The FDME is completed in conjunction with his birth month (in the three-month window) and it is valid until the last day of the birth month the following year.

b. As noted previously, the period of validity for an FDME is 12 months. It is common for an FDME to be up to 14 months old -- remember that the crewmember had a three-month window in which to complete his FDME and that an FDME performed in this window is considered to have occurred in the birth month. However, there will be times when the FDME is not performed in this three-month window. For example:

(1). Initial FDME's (they are performed when needed and not with regard to birth month). Deployment can impact and upset the birth month cycle. FDME's performed for termination of permanent medical suspension, FEB, or in conjunction with an accident investigation may not align with birth month.

(2). In these cases, we want to *realign* the crewmember with his birth month without performing excessively frequent FDME's. In such cases, Table 1 may be used. It will tell you when the crewmember needs his next FDME. In no case will an FDME be valid for more than 18 months. Remember, the goal here is to realign the crewmember with his birth month he must still complete the FDME prior to the end of the birth month in which it is due. For example, if his birth month is in July, but he just had an FDME post-mishap in February, the flight surgeon can use the following table to extend that FDME until July of the following year instead of performing another FDME in five months.

NOTE: This has nothing to do with extensions *beyond the end of the birth month*. That topic follows next. The FDME MUST be completed prior to the end of the birth month in which it is due.

4-6. Extensions

In the event that an FDME cannot be completed prior to the end of the birth month, the flight surgeon may grant a one calendar month extension. For example, our “July baby” fails to complete his FDME before 31 July. The flight surgeon may grant him an extension and upslip to cover him through 31 August. Under no condition can an extension exceed one calendar month nor can back dated extensions be granted. If on 31 August this crewmember still has not completed his FDME, he MUST be grounded no exceptions.

NOTE:

Extensions are not automatic.

Extensions are granted at the discretion of the flight surgeon.

Extensions must be granted prior to the expiration of the current upslip; they are never retroactive.

In the case of our "July baby", he may be granted an extension on 28 July, being unable to complete the FDME by 31 July. The 4186 is completed 28 July, the effective date of the extension is 1 Aug, with an expiration date of 31 Aug.

TABLE 1

Maximum number of months for which an FDME is valid:

Read down the left column to the examinee's birth month; read across to month of last FDME; intersection number is the maximum validity period.

	Jan	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
JAN	13	14	15	16	17	18						
FEB		13	14	15	16	17	18					
MAR			13	14	15	16	17	18				
APR				13	14	15	16	17	18			
MAY				13	`13	14	15	16	17	18		
JUN						13	14	15	16	17	18	
JUL							13	14	15	16	17	18
AUG	18							13	14	15	16	17
SEP	17	18							13	14	15	16
OCT	16	17	18							13	14	15
NOV	15	16	17	18							13	14
DEC	14	15	16	17	18							13

4-7. The Army Flight Physical Process

a. FDME's are commonly broken down into two parts. This is an artificial breakdown and not required. It is however employed by most Army clinics PART 1 of a physical consists of compiling all the information/data that the flight surgeon will need. These items are completed and available for review by the flight surgeon when the patient returns for "PART 2" It covers:

1. Personal (demographic) information
2. Past medical history
3. Vital signs/Anthropometrics (see Appendix H)
4. Vision testing (see Appendix D)
5. Audiology (see Appendix E)
6. ECG (see appendix I)
7. Dental
8. Pap (and when required mammogram)
9. Lab

Note: See appendix D-I on instruction for conducting the testing.

b. Part 2 of a physical consists of the actual physical examination ("hands on") portion of the FDME. This way, once the flight surgeon performs the physical exam, he has a complete packet that is ready to ship to its final destination and the crewmember gets an upslip immediately upon completion of the physical. It is not uncommon for the flight surgeon to ask for repeat or additional studies upon review of the FDME packet, or after the physical exam.

c. Never forget that it is our responsibility to provide our soldiers with a timely product/service. Some of the crewmembers seeking an FDME at you facility may not be assigned on your installation. You may be providing area support to a large catchment area. In some places it is common for crewmembers to travel well over two hours one-way to get an FDME.

d. In these cases, every effort should be made to do both part 1 and part 2 on the same day. Granted, the flight surgeon may not have all the lab results to review that day and the crewmember may need to return should there be any values out of the normal range. But then again, there is a very good chance everything will be in order and he will not have to return.

e. In order to ensure that an FDME is completed properly; it is best to use a checklist during completion of the FDME and during the review process; provides checklists for both the FDME and Special Operations-type physicals.

Both checklists are intended to aid the ancillary staff (front desk, technicians, etc) in completing “PART 1” of the FDME

(1). Checklists

(a). Checklists have several features to ensure accuracy and completeness.

(1). DOB and “age for this exam” noted at the very top. This will help you determine 3 things:

(a). Does he require a comprehensive or interim exam?

(b). Is the patient over 40 or over 50?

(c). Does the patient require an HIV test this year? (see b. below)

NOTE: *See Appendix J FDME Checklist. When a crewmember reports for his FDME, he is usually reporting one or two months prior to his birth month. In determining the type of physical (comprehensive or abbreviated) you must use his age for the upcoming birthday. Example: A crewmember is 38 today but will be 39 next month. Use 39 as the “age for this exam”.*

(2). Aviation requirements for HIV testing are identical to the Army Force Protection requirements - every two years. Of course, this does not match our three-year FDME cycle. Therefore, we can’t just make it a requirement on comprehensive FDME’s. Our suggestion is to tie it to the persons age - perform an HIV screening if the aircrew members’ age is even (e.g. 34, 36, 38) regardless if it is a comprehensive or interim exam.

(3). Good points of contact are needed in order to facilitate contact with the patient.

(4). Notice there are only three types of FDME’s regardless of the class Select the applicable column and ensure all items in the column are completed.:

(a). Initial
(b). Comprehensive
(c). Interim

(5). There are three additional sections that are age dependent and may be applicable. If they are applicable, ensure they are completed. These sections are listed immediately following the three main columns.

(a). Over 40
(b). Over 50
(c). Retirement/Separation

(6). The last section allows the front desk to note any additional tests or studies that may be required. The easiest way to determine this is to ask the patient if he has any “waivers”. It is common for a waiver to have additional follow-up requirements. In addition, the front desk should review the medical record. If the air crewmember has a waiver, a copy should be kept in the HREC. Additionally, there should be a copy of the Aviation Epidemiology Data Registry (AEDR) printout attached to the last qualified FDME in the HREC. The AEDR printout will also mention if any waivers are in effect and if any additional tests or studies are required (see example at appendix A). If any additional tests or studies are required, the front desk should order them at this time to ensure the results are back in time for "PART 2”. If there are questions regarding any additional requirements, this is the time to ask the flight surgeon.

NOTE: The second checklist is similar in concept to the first checklist. It addresses the specific requirements for Special Forces physicals commonly done by the flight surgeon that must be reviewed by the USASOC Surgeon’s Office. Please note that the waiver and review authority for these physicals is NOT AAMA. Sending these physicals to Ft. Rucker will result in a significant delay in the final disposition of the soldier's physical.

4-8. The Required Forms

a. A comprehensive FDME is performed on the DD2807-1 in lieu of SF 93 and DD 2808 in lieu of SF 88. When the crewmember shows up for part one of his FDME, he should fill out all the demographic data on these forms. All entries (dental, optometry, etc.) should be placed on this form. As noted on the check sheet, all initial FDME’s must also have the SF 93 continuation/history, sheet attached. This continuation sheet is an overprint on DA Form 4700.

b. In addition to the SF 93 continuation sheet/history, we also have three other overprints on the DA Form 4700 These three continuation sheets must be attached to *all* FDME’s when first reporting a problem with seasonal allergic rhinitis (SAR), alcohol, or drugs:

(1). Seasonal Allergic Rhinitis
(2). Alcohol
(3). Drugs

c. The interim FDME is recorded on DA Form 4497R. Please notice that this form is designed to record data for an *occupational health screening*. The intent is not that of a complete physical exam, which is done every three years on the comprehensive FDME. If the flight surgeon wishes to extensively document the encounter or feels that circumstances warrant a complete, thorough physical exam, then the DD Form 2807-1 and DD Form 2808 should be employed.

NOTE: The DD Form 2807-1 and 2808, any required continuation forms, and the ECG interpretation must be reviewed and signed by the flight surgeon. Examples of the DD Form 2807-1 and 2808, DA Form 4497R and all four continuation forms are found in Appendix k.

Note: See Appendix K FDME Continuation Sheets

4-9. Summary

a. The period of validity for all FDME's is determined by only one thing FDME Regardless of class (1,2,3 or 4) or type (comprehensive or abbreviated) all initial FDME's are valid for 18 months and periodics are valid for 12 months.

b. All FDME's must be completed within the birth month window.

c. All FDME's are valid until the last day of the birth month in the following year.

d. The period of validity of a periodic FDME may be as long as 18 months in order to realign a crewmember with his birth month.

e. An extension for one calendar month (<u>but</u> <u>no</u> <u>longer</u>) beyond the birth month is possible.

f. Ensure your front office uses a checklist to process the FDME and that the flight surgeon reviewing the FDME also uses a checklist. This is the only way to guarantee completeness.

CHAPTER FIVE

Review and Disposition of Disqualification

5-1. Disqualification for Aviation Duties (Unfitness for Flying Duty)

a. Whenever a crewmember does not meet the medical standards set forth in AR 40-501, chapters 2 & 4 and the Aeromedical Policy Letters (APL's), or he is unable to safely perform his duties, he is medically disqualified. The flight surgeon notifies the unit commander of his medical recommendation to "ground" the medically disqualified crewmember on a DA Form 4186 (downslip in this case). The unit commander is the approving / disapproving authority for the local aeromedical recommendation.

b. Temporary Disqualification: Imposed by the flight surgeon/APA for a disqualifying medical condition, which is expected to last less than 12 months prior to resolution. When the condition resolves, the flight surgeon recommends return to flying duty on a DA Form 4186 (up-slip in this case). Examples are the common cold, ankle sprain, minor back injuries, and uncomplicated pregnancies.

c. Permanent Disqualification: Imposed when a medical condition is expected to last longer than 12 months or is permanently disqualifying per Chapter 4 of AR 40-501, or the Aeromedical Policy Letters (APL's). The flight surgeon performs a thorough medical evaluation of the condition and submits his/her recommended disposition to the USAAMA. This request can either be for a waiver and continued flight status, or for medical termination from aviation service and removal from flight status. Examples include diabetes mellitus, heart attack, or HIV sero-positivity, hypertension, and Seasonal Allergic Rhinitis (SAR). Some of these conditions (e.g. hypertension and SAR) when properly treated will not present a danger to aviation safety and these crewmembers can get a waiver *(see waiver discussion below)*. Other conditions such as heart attacks, strokes, or HIV infection will present a danger to aviation safety and will not qualify for a waiver.

NOTE: Entrance into aviator training programs with a disqualifying defect requires an *Exception to Policy* issued by DA or NGB, since waivers will not be granted to Classes 1/1A candidates. Current personnel regulations only provide for Exceptions to Policy for commissioned officer applicants. Exceptions to Policy are generally only recommended for exceptional commissioned officers with minor, static DQs. See AR 40-501 6-14(b).

5-2. Disqualification for Class 3 (Unfitness for Flying Duty)

a. The same basic concepts apply for Class 3 as they do for Class 2 and 4 aircrew. However, the waiver process for Class 3 aircrew is a local process and does not generally involve USAAMA. The aeromedical recommendation goes from the flight surgeon to the local commander for approval.

b. The following circumstances require the local flight surgeon to defer the aeromedical recommendation on a Class 3 crewmember to USAAMA:

(1). Alcohol/drug abuse or dependence requires PERSCOM or National Guard Bureau (NGB) waiver

(2). Central nervous system dysbarism

(3). Coronary artery disease

(4). Positive HIV testing

(5). Any other condition for which the local FS or aviation commander requests a consultation with the U.S. Army Aeromedical Consultation Service

c. Consequently, the majority of disqualifying conditions in Class 3 crewmembers does not undergo central review. There is no safety net. This makes it that much more important for the flight surgeon to pay particularly close attention to the disposition of Class 3 crewmembers.

d. Since there is no central review or central waiver authority, a Class 3 waiver is a LOCAL waiver. When the crewmember transfers to another unit, the waiver does not follow him. The local flight surgeon must make an aeromedical recommendation to the new commander reference waiver of the medical disqualification. The miscellaneous section of the APL’s contains policy letters reference Class 3 aircrew and waivers.

5-3. The Waiver Process

a. The waiver process has been developed to ensure the consistent and proper management of disqualified aviation personnel. This process has been responsible for the safe return of countless aviators to flying duties once effective treatment has been achieved. It also has been responsible for clearly identifying those individuals with medical conditions incompatible with continued safe flying or their continued good health. It allows for consistent health care management of individuals who routinely receive their health care from many different health-care providers. With proper

utilization of senior health-care consultants, it ensures the highest level of health care and provides quality assurance

b. Most waiver requests are routine waivers (those that have clear policy established) and require little more than review and endorsement, and then are forwarded with recommendations for appropriate follow-up or restrictions to the waiver authority.
Occasionally, waiver requests are forwarded for review to designated Army aeromedical consultants, the Naval Operational Medicine Institute (NOMI), Pensacola, FL, or the Aerospace Medicine Consultation Service (AMCS), Brooks AFB, TX.

c. Cases that are unusual, potentially precedents setting, involve flight or other operational limitations, and selected Class 1A Exceptions to Policy are presented to the Aeromedical Consultants Advisory Panel (ACAP). The decision of the ACAP is reviewed and approved/disapproved by Commander, USAAMC and forwarded to the appropriate waiver authority. The waiver authority will then take appropriate action, by recommending approval or disapproval.

(1). Waiver: A document from PERSCOM or the NGB, which grants continued flight status in spite of a disqualifying medical condition. Waivers are not granted for disqualified Class 1W or 1A applicants.

(2). Waiver Authority: Waivers are granted by PERSCOM; Chief, National Guard Bureau; or by the local Commanding Officer, depending upon the status of the aircrew member. USAAMA and the local flight surgeon only recommend a course of action. Generally, the waiver authority concurs with the medical recommendation. On occasion, the waiver authority may non-concur based on personnel or mission requirements.

NOTE: For Medical Recommendation for Flying Duties (DA Form 4186 -- up slips and down slips) and waivers, the flight surgeon and USAAMA both make aeromedical *recommendations*. The aeromedical recommendation is then *approved* by or *disapproved* by the appropriate authority.

d. The Process: The entire waiver process normally starts at the local flight surgeon's office at the time of the discovery of a disqualifying medical condition. Local evaluations and consultations must be obtained to support the flight surgeon’s recommendation. Once this packet is forwarded to USAAMA, it can take several different routes depending on the nature of the disqualification.

5-4. Waiver Criteria

a. Factors commonly used in the consideration of granting a waiver include feasibility of treatment and follow-up requirements in a field environment, in addition to in-flight safety and mission completion.

b. When considering a waiver, the disqualifying physical or psychological defect must pass the following screening criteria:

(1). The disqualifying defect must not pose a risk of sudden incapacitation.

(2). It must not pose any potential risk for subtle incapacitation that might not be detected by the individual but would affect alertness, special senses (vision, hearing, etc.), or information processing.

(3). It must be resolved or stable at time of the waiver (e.g., non-progressive).

(4). It must not be aggravated by military service or continued flying.

(5). It must not lead to significant loss of duty.

(6). It cannot require the use of uncommonly available tests, regular invasive procedures, or non-routine medication, especially during deployment or assignment to austere areas.

(7). If the possibility of progression or recurrence exists, the first signs or symptoms must be easily detectable and cannot constitute an undue hazard to the individual or to others.

(8). It cannot jeopardize the successful completion of a mission.

5-5. The Recommendation for Flying Duty

a. The first aeromedical disposition is made by the local flight surgeon in all cases. For Class 3 aircrew, that is also the only aeromedical review. The local commander is the approval authority. For Class 2 and 4 waivers (and Class 1A exception to policy requests), the package is forwarded to AAMA for review.

b. The local flight surgeon should make a simple declarative statement of what he believes will be the best for the individual, flying safety, and the Army. The recommendations should be concrete. The flight surgeon should

state the specific chapter and paragraph regulating the condition and any appropriate APL's. The flight surgeon must remain strictly objective and not allow his personal likes or dislikes, any outside pressure, or personal biases to influence his decision making.

c. Just because the APL's suggest a waiver may be possible does not mean that it will inevitably be granted. In considering a waiver, the waiver authorities will take into account the above criteria, the condition or combination of conditions concerned, the treatment given to the patient and other relevant factors. If necessary, they will consult medical specialists and line authorities. A consensus of opinion will be developed and forwarded for approval through Commander, USAAMC to the waiver authority (PERSCOM, National Guard Bureau, or other command authority).

NOTE: USAAMA is required to pass to the Federal Aviation Administration the names of all aviators permanently disqualified from flying duties in the US Army.

5-6. Temporary Clearance Pending Waiver

a. It can take several months to process a waiver and get written approval from the waiver authority. It is possible, in fact common, to grant crewmembers temporary clearance pending waiver.

b. It is acceptable to return disqualified aviators to full flight duty prior to receipt of waiver under certain conditions:

(1). The condition has been fully evaluated and is stable.

(2). The medical condition, the treatment or any required follow-up does not impact adversely on safety or mission accomplishment.

(3). The disqualifying condition is considered minor and/or there is well-established precedent for granting a waiver for this medical condition.

(4). When in doubt if temporary clearance is prudent, you should coordinate with USAAMA via telephone at (334) 255-7430.

c. There are several possible concerns in returning disqualified aviators to full flight duty prior to receipt of waiver, especially if done without coordination with USAAMA:

(1). Waiver requests are not always granted

(2). Waivers may be granted with certain flight restrictions (e.g. may only fly with another rated aviator in the cockpit).

(3). Waiver policy is frequently changing, in order to keep pace with current medical knowledge.

d. The following medically disqualifying conditions cannot be granted temporary clearance pending waiver under any circumstances:

(1). Alcohol or substance abuse.

(2). Myocardial Infarction or significant coronary artery disease.

(3). Arteriosclerotic Vascular Disease. Those who fail level 1 CAD screen may be granted temporary clearance pending completion of further work-up without restriction if asymptomatic. If level 2 CAD screening is abnormal but the crewmember is asymptomatic, a restricted dual status may be approved by contacting USAAMA.

(4). Cancer. Except single episode of basal cell carcinoma or carcinoma in situ of the cervix, both of which may be granted temporary clearance.

(5). CVA and other Significant CNS Disorders (includes TIA and migraine headache).

(6). Skull fracture or other significant head trauma or unexplained loss of consciousness.

(7). Seizure Disorder.

(8). Significant visual disturbances. Including visual acuity uncorrectable to 20/20 or impaired depth perception.

(9). Chronic inflammatory bowel disease (IBS)

(10). Sustained ventricular or supraventricular tachycardia.

(11). Bipolar disorder, psychosis, or other significant depressive or dissociative psychological disorders.

(12). Insulin dependent diabetes mellitus, or diabetes controlled by oral hypoglycemic agents.

(13). Asthma

(14). Medically Disqualified. If a crewmember has been medically terminated from aviation service by the appropriate waiver authority, you cannot provide temporary clearance while trying to get him re-qualified.

(15). Any condition which obviously impairs personal safety, safe flight, or mission completion.

5-7. Aeromedical Summary

a. The Package:

(1). An Aeromedical Summary (AMS) is required for any action that requires waiver, medical termination from aviation service, requalification with a waiver and request for aeromedical consultation. An abbreviated AMS may be used in certain minor actions, e.g., hearing loss, pregnancy, seasonal allergic rhinitis (SAR), hypertension controlled by diet, or waiverable medications, and any other uncomplicated condition. Templates for both AMS formats follow this section. Notice that the big difference is that the abbreviated AMS is more focused. The abbreviated AMS consolidates and abbreviates the occupational, aviation, social, family, and past medical history as well as the chief complaint and physical exam findings.

Note: See Appendix L Aeromedical Summary Template

(2). The AMS must be TYPED on either Optional Form 275 or SF 502 - Narrative Summary. Continuation sheets should be used as necessary. This will facilitate the incorporation of the AMS into Health Records. An original and three copies of the summary and supporting documents should be made. The original is forwarded to USAAMA. One copy of the AMS goes to the Health Record (HREC) until it is replaced by the actual waiver/disqualification letter; the second goes to the aircrew member; and the third copy should be placed on file in the flight surgeon's office for a minimum of 3 years. This redundancy should help minimize problems with lost mail or PCS’s of either the aircrew member or his flight surgeon.
An FDME is not always required since the AMS contains significant history and physical findings. Your recommendations should include any restrictions, follow-up, date of incapacitation, or request for consultations, which you feel, are appropriate.

(3). Appendix B contains templates for Aeromedical Summaries and Abbreviated Aeromedical Summaries.

NOTE: *Legibility is key. Altered (white out, erased, blocked out, etc.) records are not accepted.*

5-8. Date of Incapacitation:

a. The date of incapacitation is the date when a medically disqualifying diagnosis was made by either history, physical exam or diagnostic testing.

b. For example, a crewmember is found to have guaiac positive stool on a routine FDME on 1 March. He undergoes diet modification to minimize the chance of a false positive and then provides three samples and one out of three is positive. It takes a few weeks to obtain a barium enema (BE) and flexible sigmoidoscopy. The sigmoidoscopy is normal but the BE notes a suspicious area in the proximal colon. Another week passes before a colonoscopy is performed and a polyp in the proximal colon is biopsied. The pathology report on 15 April notes that it is a malignant polyp. Neither guaiac positive stool nor a suspicious BE are medically disqualifying. There could be several underlying etiologies, many of which are not medically disqualifying from aviation service. It does require a medical work-up to determine the underlying etiology. The permanently disqualifying medical condition is malignancy. It was not diagnosed until 15 April. Therefore, the date of medical incapacitation is 15 April.

c. It is very important to note the date of incapacitation. This date is central in determining when a crewmember is removed from flight status and directly impacts flight pay. Note, the date of medical incapacitation may not always correspond with dates of FFD and DNIF as reflected on DA Form 4186.

5-9. Organization of Documents:

a. In order to expedite processing of the aeromedical summary, it is important to place documents neatly labeled, tabulated and collated preferably in chronological order, earlier dates first. This will allow the reviewer to follow chronologically the development/resolution of the defect or condition. The documents should be assembled in the following order:

(1). Cover letter, if included.

(2). Aeromedical Summary.

(3). Enclosures:

(4). Any available supportive consultations;

(a). Reports of all operations; Lab reports, pathology report, tissue examinations; Actual tracings, x-rays, pictures, films, or tapes of all procedures (ECG, AGXT, Holter, ECHO, cardiac scans and catheterization).

(b). Hospital summaries and past medical documents (e.g., hospital summaries, X-rays, ECGs); reports of any proceedings (tumor board, MEB, PEB, FEB)

(5). Letters of recommendation.

(6). DA Form 759 - Individual Flight Record, ORB - Officer Record Brief.

NOTE: AMS's for civilian/contract personnel should indicate whether the individual is also in the Reserves, National Guard, or retired military so that the waiver can be forwarded to all appropriate waiver authorities. This may require the submission of two summaries concurrently. It takes time to process a waiver. At USAAMA the waiver package must pass through 9 - 11 essential workstations and at PERSCOM another 5-7 workstations. Bottlenecks are inevitable. Complicated cases or cases, which have no precedent often take additional time due to the need for specialty consultation or literature review. Remember, most routine waivers may be granted temporary clearance pending waiver (See Temporary Clearance Pending Waiver), and telephonic or electronic mail approval is often available for the uncertain cases. If you need a rush disposition, you may send the waiver packet via overnight mail or Federal Express. Please ensure the package is complete. FAX copies are generally not accepted due to their poor quality and the ease with which they may be altered.

5-10. Aeromedical Consultation Service

a. Purpose

(1). To provide worldwide telephonic, written, and in-house aeromedical consultation services to any flight surgeon or other health care providers treating aircrew members.

(2). To provide expeditious answers to questions concerning aeromedical standards, medical fitness for aviation duties, aeromedical policies and technical bulletins.

(3). To provide for the primary review and disposition of aeromedical summaries.

b. The aeromedical consultation authority is:

Commander
USAAMC, ATTN: MCXY-AER
Fort Rucker, AL 36362-5333

Commercial 334-255-7430 (DSN 558).

c. Procedures

(1). The Aeromedical Consultation Service (AMCS) makes primary use of the Aeromedical Consultant's Advisory Panel (ACAP) and other designated Aeromedical Consultants in multiple specialty fields around the world to ensure proper disposition of cases is made by the CDR, USAAMC to PERSCOM, the National Guard Bureau, or other waiver authority.

(2). Occasionally, aircrew are required to undergo direct examination by a consultant. These consultations may be required upon the request of, and in coordination with, Chief, AMCS, and can be accomplished at USAAMC, Fort Rucker, or at other selected MEDCEN’s, or at the Air Force Aeromedical Consultation Service, Brooks AFB, TX, or at the Naval Aeromedical Institute (NAMI), Pensacola Naval Air Station, FL.

CHAPTER SIX

Temporary Restrictions Due to Exogenous Factors (AR 40-8)

6-1. Definition:

a. Exogenous Factors: An external substance or procedure likely to provoke an adverse reaction. Exogenous factors listed in AR 40-8 cause a temporary disqualification from flying status. AR 40-8 applies to all personnel on flight duty status.

b. Although the vast majority of aircrew members are not doctors, they play a part in the decision of whether or not they should fly. Most of the time aircrew members know whether they can fly safely or should be grounded before they even see the flight surgeon. Aircrew members are personally responsible to promptly report any treatment by a non-flight Surgeon/APA or report any condition that may be cause for disqualification from flying.

6-2. Exogenous Factors:

a. Medications: Generally self-medication by anyone on flight status is prohibited IAW AR 40-8. Medications are designated as Class 1, 2A, 2B, 3, and 4.

(1). Class 1 Medications:

(a). These medications are to be taken only if dispensed by or with the knowledge of the flight surgeon, or in the event that the flight surgeon is not readily available. Normally, the flight surgeon is readily available in garrison and self-medication without the knowledge of the flight surgeon is prohibited.

(b). Occasional and infrequent use of these over-the-counter (OTC) medications does not pose a risk to aviation safety or violate the intent of AR 40-8 when taken according to package instructions. These are approved for acute, minor ailments and do not require a waiver for use.

(2). Class 2A Medications:

These medications require a prescription and may be used short-term under the supervision of a flight surgeon/APA without a waiver. The underlying medical condition requiring use of the medication may be disqualifying and require a waiver. First time use requires a short period of

grounding to ensure there are no significant side effects. An example is an antibiotic like amoxicillin.

(3). Class 2B Medications:

These medications require a prescription and may be used for short term or chronic use under the supervision of flight surgeon/APA. The underlying medical condition may require a waiver. The use must be noted on the FDME for Information Only (IO). First time use requires a short period of grounding to ensure there are no significant side effects. An example is high cholesterol medication.

(4). Class 3 Medications:

These medications require a prescription and may receive favorable waiver recommendation on an individual basis for treatment or control of certain chronic conditions. The underlying disease may require a waiver. First time use requires a short period of grounding to ensure there are no significant side effects. An example is high blood pressure medication.

(5). Class 4 Medications:

Uses of these medications necessitate grounding the aircrew member and are <u>not</u> waiverable for flight duty. Examples include anti-depressants, insulin, and alcohol.

c. Dietary Supplements:

(1). Vitamins: Multi-vitamins in normal (recommended daily allowances) supplemental dosages are allowed. Mega-dose vitamin preparations as well as individual preparations (e.g. Vitamin A, C or E) are prohibited unless cleared by the local flight surgeon.

(2). Creatine: Currently, creatine and other protein supplements are not prohibited in their pure form. Use caution as most protein supplements are combination preparations and contain substances that are prohibited (see steroids, ephedra, and yohimbe below). The average daily dose of creatine is 1-2 grams per day. Manufacturer’s recommended doses are generally well tolerated in healthy individuals in the short term.

(3). Steroids: <u>All</u> steroids are prohibited.

(4). Medicinal Herbs: Medicinal herbs are not controlled or regulated by the FDA, therefore there is no assurance of quality, potency or even accurate dosing. Aviators should avoid medicinal herbs. Keep in mind that relatively few have proven benefits. Also, herbs are not pure substances but rather a complex mix of many organic substances, and consequently they possess unknown potential side effects.

d. Smoking Cessation Aids

(1). Patches/Gum: DNIF for initial 72 hours. Nicotine gum cannot be used while flying but the patches may be worn while performing aviation duties. Total abstinence from smoking is required when using nicotine gum/patches.

(2). Zyban: DNIF for duration of treatment, and for three half-lives after discontinuation of the medication.

e. Alcohol: 12 hours after last drink consumed or no residual effects remain, whichever is later, prior to reporting for aviation duties.

f. Immunization: Medical restriction will be for a minimum of 12 hours and for the duration of any systemic side effects.

g. Blood Donations: Aircrew members should not be regular blood donors. After blood donations, they are restricted from flying for 72 hours.

h. Diving: Aircrew members will not fly or perform low-pressure chamber “runs” within 24 hours following SCUBA diving or compressed air dives.

i. Altitude Chamber: Those engaged in low-pressure altitude chamber flights, regardless of altitude reached will be restricted from heavy exercise, flying, or prolonged duty for 12 hours following the chamber flight.

CHAPTER SEVEN

Aeromedical Consultant Advisory Panel

7-1. Purpose:

The Aeromedical Consultants Advisory Panel (ACAP) has been created to:

a. Review the aeromedical evaluation of selected aviation personnel. (See below)

b. Review unusual medical problems in aviation personnel.

c. Determine the effects of a medical condition upon an aircrew member's safety in flight, continuity of service, deployability, and medical supportability.

d. Make recommendations on the aeromedical disposition of disqualified aviators through the CDR, USAAMC to CDR’s of USAPERSCOM, ARNGB, and other appropriate waiver authorities.

e. Make recommendations to existing medical standards to the Surgeon General

f. Develop and review APL’s and ATB’s.

7-2. Authority:

Established by USAAMC Regulation 600-108 and AR 40-501 under the authority of the Commander, USAAMC, Fort Rucker, AL 36362-5333.

7-3. Cases Reviewed:

The ACAP will review the following cases of medically disqualified aviation personnel:

(a). Those evaluated locally by the Aeromedical Consultation Service

(b). Those with conditions for which no current aeromedical policy exists, and for whom an initial or modified waiver is requested.

(c). Those applicants for training requesting waiver or exception to policy.

(d). Those General Officers found to be medically disqualified;

(e). Those cases which are felt to be precedent setting, controversial, or which require highly individualized consideration.

7-4. Membership:

The membership of ACAP will contain all board-certified or residency-trained Aeromedical Specialists; at least 2 highly trained and experienced Army aviators; and any other experienced flight surgeon assigned to Fort Rucker selected by the Commander, USAAMC. A current example of the assignments represented by the present ACAP membership is provided below, but often varies upon availability:

Director, USAAMA - Chairman
CDR, USAAMC
Avn Med Consult to TSG
C, Community Mental Health, USAAMC
Dep Assist Commandant, NG, USAAVNC
C, Rev & Disp SVC, USAAMA
CDR, USA Aeromedical Research Laboratory
DEAN, USA School of Aerospace Medicine
C, Hyperbaric Div, USAAMC
C, Avn Sys Br, USASC
Dir, Aircrew Protection Div, USAARL
Research FS, USAARL
C, EENT, USAAMC
C, Int Med, USAAMC
Assist C, Int Med, USAAMC

CHAPTER EIGHT

Aeromedical Technical Bulletins

8-1. The Aeromedical Technical Bulletin

a. Technical bulletins recommend Army-wide standardization of aeromedical testing and administration. They provide a continuity of aeromedical care for flight surgeons and air-crewmembers worldwide.

b. Technical bulletins, though not regulations or orders, are a statement of policy by the Commander, USAAMC, and the Aeromedical Consultant Advisory Panel, recommending administrative procedures and standardizing clinical tests

c. Technical Bulletins are designed to be updated as the standards of aeromedical care and administration change. Flight surgeons are encouraged to submit changes.

8-2. ATB Description

a. ATB 1: Index 1 Mar 93

Index of all current Aeromedical technical Bulletins.

b. ATB 2: Flight Surgeon Administrative Guide

This guide provides U.S. Army flight surgeons (FSs) with guidelines for completing a flying duty medical examination (FDME) that are compatible with Aviation Epidemiology Data Register (AEDR) data entry. It details the review and disposition of aeromedically disqualified aviation training program applicants, aircrew members, and air traffic controllers, both civilian and military.

c. ATB 3: Aeromedical Summary 1 Mar 89

This guide is the aeromedical summary template.

d. ATB 4: Aeromedical Consultation Service 1 Jul 89

To provide worldwide telephonic, written, and in-house aeromedical consultation services to any flight surgeon or other health care providers treating aircrew members. To provide expeditious answers to questions concerning aeromedical standards, medical fitness for aviation duties,

aeromedical policies and technical bulletins. To provide for the primary review and disposition of aeromedical summaries.

e. ATB 5: Cycloplegic Refraction 1 Feb 89

This technical bulletin standardizes the method approved by the US Army Aeromedical Center for the aeromedical cycloplegic refraction. The local flight surgeon should insure that all supporting ophthalmology/optometry consultants are briefed on following this procedure when doing the cycloplegic examination on US Army aircrew members.

f. ATB 6: Aeromedical Graded Exercise Test 1 Mar 89

The indications for the Aeromedical Graded Exercise Test (AGXT), also called graded exercise treadmill (GXT), have been described in AR 40-501 (4 - 15 and 8 27), APL 2, and APL 28. The guidelines for performing an aeromedical GXT are outlined in ATB6 to apply a uniform standard in the performance and interpretation of this test on aircrew members.

g. ATB 7: Depth Perception Tests 1 Jul 89

Currently there are three tests for binocular depth perception (stereopsis) accepted for the Flying Duty Medical Examination (FDME) - Armed Forces Vision Testing Apparatus (VTA), Verhoeff Stereometer Test, and Randot Circles Stereotest. It is recommended that the VTA test be employed first, with either of the others used in the event of failure

h. ATB 8: NASA Physicals 1 Jul 89

. This is an administrative guide for the performance of the U.S. Army Astronaut Selection Board physical examination of U.S. Army applicants to National Aeronautics and Space Administration (NASA) astronaut training programs.

i. ATB 9: Cardiac Fluoroscopy 1 Nov 90

The cardiac fluoroscopy is a simple, noninvasive screening test used for the detection of coronary artery disease in asymptomatic aircrewmembers. The test is performed on aircrew who are stratified into a high-risk group for coronary artery disease after risk assessment by Level 1, Aeromedical Cardiovascular Disease Screening Program, see APL 28. This strategy minimizes the number of aircrew exposed to the test and enhances the predictive value of a positive test for the presence of coronary artery disease defined later by diagnostic cardiac angiography.

j. ATB 10: DA Form 4186

DA Form 4186 is a required official means by which a flight surgeon informs an aviation commander that military and civilian personnel are medically fit to perform Army aviation duties.

k. ATB 11: Aviation Medicine Clinic Equipment

The items listed as Annex 1 and 2 to this ATB are useful items in operating an aviation medicine clinic and conducting flying duty medical examinations (FDME). It is not an all-inclusive list, nor are all items listed required on hand. This list has been put together to assist you, the flight surgeon, in locating items and federal stock numbers of equipment necessary or useful in aviation medicine.

CHAPTER NINE

Safety and Accident Investigation

9-1. Safety and Accident Prevention

a. The U.S. Army Safety Center surveyed three battalion-sized aviation units that historically had excellent safety records to determine the characteristics that led to their exceptional safety records. The following comments were made about the Aviation Medicine program:

(1). Optimum use of flight surgeons. Flight surgeons were used primarily in the aviation medicine specialty. Other medical duties of the flight surgeon were minimized.

(2). Flight surgeons supported individual aviators. Flight surgeons knew most aviators well. Flight surgeons gave a high degree of attention to individual aviator medical needs.

(3). Flight Surgeons were involved in the unit safety program. Flight surgeons were frequently involved in unit safety briefings. Flight surgeons enhanced aviator knowledge of aeromedical aspects of flying.

(4). Flight surgeons support of aviation units. Flight surgeons were extensively involved in unit aeromedical needs. Flight surgeons provided timely advice to commanders regarding aviation medicine matters.

(5). Flight surgeon credibility.

(a). Flight surgeons were highly respected by the aviators surveyed.

(b). Flight surgeons were highly respected by the commanders surveyed.

b. AR 385-95 established the Army Aviation Accident Prevention Program and functions as an integral part of the Army Safety Program (AR 385-10). As part of this program, the flight surgeon assists and advises the command in all aviation medicine matters. The flight surgeon is required to perform the following duties:

(1). Maintain liaison within the command and to implement the aviation medicine program.

(2). Take part in, and observe flight operations to monitor the interactions of crewmembers in the aircraft and the flight environment.

(3). Serve as a member of flight evaluation boards and aircraft accident investigation boards.

(4). Insure that the medical portion of the pre-accident plan is current and adequate.

(5). Monitor the physical and mental well being of aviation personnel, including drug or alcohol abuse and self-medication problems.

(6). Maintain aviation medical records on flight personnel.

(7). Monitor the survival and physiological training of aviation crewmembers.

(8). Medically clear crewmembers for further flight duty after aircraft incidents/accidents.

(9). Make recommendations to improve the human factors aspects of aviation compatibility, crashworthiness, and survival features of aircraft.

(10). Take part in aviation safety meetings to educate aviation crewmembers on the aeromedical aspects of flight.

(11). Monitor the fitting, use, and serviceability of aviation life support equipment (ALSE).

(12). Assist in, and advise on, the implementation of effective hearing and eyesight conservation programs.

9-2. Accident Investigation

a. Accident investigations are a key component of the Army Safety Program. Accidents resulting in the damage or destruction of Army resources or personnel injury/death impair the combat readiness of the United States Army. The lessons learned from accidents provide the basis for prevention programs that help insure we don't repeat the mistakes of the past. These investigations can be extremely difficult, time consuming and stressful. Human error is implicated in more than 80 percent of all Army accidents. Human errors can usually be attributed to one or more of the following inadequacies: standards failure, training failure, leader failure, or individual failure. As a member of the accident investigation board, the

flight surgeon is responsible for investigating the human factors aspects of the accident.

b. The focus of an accident investigation is to identify the system elements, which permitted or caused the accident to occur. The procedure used to identify inadequate system elements and describe the human factors, material failures, environmental factors involved in accidents is called the "3W approach". This approach requires investigators to answer three questions:

(1). What happened?
Identify how the accident occurred. Identify key factors, which contributed to the accident occurrence.

(2). What caused it?
Identify the errors/failures that caused or permitted the accident to occur.

(3). What to do about it?
Identify remedial measures, which will correct the system inadequacy.

9-3. Definitions (AR 385-40)

a. Army accident: An unplanned event that does damage to person(s) or property exclusive of damage caused by action of an enemy or hostile force.

b. Army aircraft accident: An accident involving Army aircraft or Government aircraft operated by the Army when the intent to fly exists.

c. Intent to fly: Exists when an aircraft engine is started for the purpose of commencing authorized flight (scheduled flight by a rated crew). Intent to fly continues until the aircraft comes to rest (brakes set or wheel chocks in place with engines, propellers, or rotors stopped). An aircraft's engines are considered started or running the instant an attempt is made to set any one engine in motion, either by power from within or outside the aircraft.

Intent to hover a helicopter under its own power from its parked position will be considered in flight. For amphibious aircraft landing on water, intent for flight ceases when the aircraft has made a water landing, engines have been stopped, and the aircraft has either been moored or taken

in tow. Helicopters designed to be capable of landing on water and remaining afloat (e.g. CH-47) are not considered amphibious aircraft.

d. Aircraft accidents are subdivided into two types:

(1). Flight accidents: Those accidents where there is reportable damage to the aircraft itself. (Explosives, chemical agent, or missile events that cause damage to an Army aircraft with intent to fly are categorized as flight accidents).

(2). Flight-related accidents: Those accidents where there is no reportable damage to the aircraft itself; for example, injury to ground crew or passengers or other property damage. A parachutist or rappeller outside an aircraft is not considered to be a passenger for aircraft accident reporting purposes unless injured as a result of flight-crew error.

9-4. Accident Classifications (AR 385-40)

a. Class A accident: An Army accident in which the resulting total cost of reportable property damage is $1,000,000 or more; an Army aircraft or missile is destroyed, missing, abandoned, or economically unrepairable: or an injury and/or occupational illness results in a fatality or permanent total disability.

b. Class B accident: An Army accident in which the resulting total cost of reportable property damage is $200,000 or more, but less than $1,000,000; an injury and/or occupational illness results in permanent or partial disability. Or when five or more personnel are inpatient hospitalized.

c. Class C accident: An Army accident in which the resulting total cost of reportable property damage is $10,000 or more, but less than $200,000. A nonfatal injury that caused any loss of time from work beyond the day or shift on which it occurred; or a nonfatal illness or disability that causes loss of time from work (e.g. I work day) or disability at any time (lost time case).

d. Class D accident: An Army accident in which the resulting total cost of reportable property damage is $2,000 or more, but less than $10,000, or a nonfatal injury that does not meet the criteria of a Class C accident (no lost time case).

e. Class E accident: An incident (material failure/malfunction, human, or environmental cause) which interrupts/prevents a mission when intent to fly exists. Conditions are:

(1). Property damage must be less than $2,000;

(2). No lost/restricted time case;

(3). A single component/part failure which resulted from fair wear and tear (FWT) (part cost not a factor). The FWT rule is excluded when the failed part causes/contributes to damage to another component, system, or equipment (for example, battery failure results in an engine hot-start). Should additional damage or injury be incurred during continued operation, landing, or emergency procedures after the above events, the accident classification will be reported based on the total damage cost or injury severity.

f. Foreign Object Damage (FOD) incident: Reportable incidents confined to turbine engine damage as a result of internal or external FOD.

9-5. Pre-accident Plan

a. The formation of the medical portion of the pre-accident plan is the duty of the flight surgeon. The following areas should be evaluated:

(1). Detailed Accident Response Plan: Insure the flight surgeon is on the initial notification roster and reviews all responsibilities.

(2). Know your unit's aircraft: Learn the basic operation of all unit aircraft and responsibilities of various crewmembers. Have unit instructor pilots (IP) explain/demonstrate aircraft operation.

b. Coordination with:

(1). Unit Aviation Safety Officer (ASO): Review accident response plan. Coordinate with ASO to monitor flight line for potential problems.

(2). b. Local Coroner/Medical Examiner: Determine jurisdiction and establish agreements for waiver to military.

(3). Air/Ground ambulance units: Insure crews are properly trained in first aid, personnel rescue, and extraction techniques for various aircraft; have appropriate maps, radios, equipment; and are available and on-call during schedule flying hours.

(4). Emergency Room Personnel: Provide standardized protocol for the evaluation of aircrew members in the ER. To prevent unnecessary discomfort for crewmembers, ER personnel may collect toxicology and provide initial evaluation while waiting for the flight surgeon to arrive.

(5). Radiology Department: Full body X-rays of all fatalities is required.

(6). Pathology Department: Armed Forces Institute of Pathology (AFIP) will usually provide a forensic pathologist to do the autopsy.

(7). Crash Rescue/Fire Department: Insure crews are familiar with extraction techniques for all types of aircraft, possible hazards (i.e. ejection seats, explosive canopy, aircraft battery location etc.) and toxic hazards associated with burning composite materials.

(8). Practice Drills: Periodically test the accident response plan to insure adequacy of the plan.

9-6. Aircraft Accident Board

a. In accordance with AR 385-40 a flight surgeon is required to be a member of an aircraft accident investigation board for:

(1). All Class A and B aircraft accidents.

(2). For Class C accidents when injuries are sustained or psychological, physiological, or pathological factors are present.

GLOSSARY
ABBREVIATIONS AND ACRONYMS

AA Aeromedical Adaptability
AA Alcoholics Anonymous
ACAP Aeromedical Consultants Advisory Panel
ACL Anterior Cruciate Ligament
AMCS Aeromedical Consultation Service
AD Active Duty
ADAPCP Alcohol/Drug Abuse Prevention and Control Program
AEDR Aeromedical Epidemiological Data Repository
AFIP Armed Forces Institute of Pathology
AFMIC Armed Forces Medical Intelligence Center
AGXT Aeromedical Graded Exercise Tolerance Test (See ATB 6)
AIDP Acute Inflammatory Demyelinating Polyneuropathy
AJCC American Joint Commission on Cancer
AML Acute Myelogenous Leukemia
AMS Aeromedical Summary
ANA Antinuclear Antibody
APA Aeromedical Physician Assistant
APC Atrial Premature Contractions
APL Aeromedical Policy Letters
AR Army Regulation
ARDS Acute Respiratory Distress Syndrome
ARNG Army National Guard
ARNGB Army National Guard Bureau
ASD Atrial Septal Defect
ATB Aeromedical Technical Bulletin
ATC Air Traffic Controller
ATLS Advanced Trauma Life Support
AVM Arteriovenous Malformations

BPPV Benign Paroxysmal Positional Vertigo

CAD Coronary Artery Disease
CADRISK Coronary Artery Disease Risk
CBC Complete Blood Count
CDC Centers for Disease Control
CEA Carcinoembryonic Antigen
CIDP Chronic Inflammatory Demyelinating Polyneuropathy
CIN Cervical Intraepithelial Neoplasm
CIS Cervical Intraepithelial Syndrome
CIS Carcinoma in Situ
CIV Civilian

CLL	Chronic Lymphocytic Leukemia
CML	Chronic Myelogenous Leukemia
CNS	Central Nervous System
CVA	Cerebral Vascular Accident
CT	Computerized Tomography
DAC	Department of the Army Civilian
DCS	Decompression Sickness
DJD	Degenerative Joint Disease
DMO	Diving Medical Officer
DNIF	Duty Not Involving Flying
DQ	Disqualified
DVT	Deep Vein Thrombosis
EAATS	Eastern Area Aviation Training Site
ECG	Standard 12-lead Electrocardiogram
ECHO	Echocardiogram
EDC	Expected Date of Confinement
EP	Exception to Policy - Class 1 only
EPS	Electrophysiological Studies
ESWL	Extracorporeal Shock Wave Lithotripsy
FAA	Federal Aviation Administration
FDME	Flying Duty Medical Examination
FEB	Flight Evaluation Board
FFD	Full Flying Duties
FS	Flight Surgeon
GXT	Graded Exercise Test
HBP	High Blood Pressure
HCG	Human Corionic Gonadatropin
HCT	Hematocrit
HIV	Human Immunodeficiency Virus
HLA	Histocompatibility Locus/Antigen
HNP	Herniated Nucleus Pulposis
HPV	Human Papilloma Virus
HRAP	Health Risk Appraisal Program
IAW	In Accordance With
ICD	International Classification of Diseases
IDDM	Insulin Dependent Diabetes Mellitus
IO	Information Only
IOL	Intraocular Lens
IP	Instructor Pilot

JSMRO Joint Services Medical Regulating Office

LDL Low Density Lipoprotein
LEEP Loop Electrosurgical Excision Procedure
LOC Loss of Consciousness
LGL Lown-Ganong-Levine Syndrome
LVOT Left Ventricular Outflow Tract

MACOM Major Command
MAT Multifocal Atrial Tachycardia
MCAD Minimal Coronary Artery Disease
MCL Most Comfortable Listening Level
MEB Medical Evaluation Board
MMPI Multiphasic Personality Inventory
MR Mitral Regurgitation
MRI Multi-Resonance
MTC Medullary Thyroid Carcinoma

NAMI Naval Aerospace Medical Institute
NC Non-contributory
NHIS National Health Interview Survey
NOE Nap of the Earth
NOS Not Otherwise Specified
NPC Near Point Convergence
NSGCT Non-seminomatous Germ Cell Tumors
NVG Night Vision Goggles

OCD Obsessive Compulsive Disorder
ORB Officer Record Brief

PCS Permanent Change of Station
PEB Physical Evaluation Board
PFT Pulmonary Function Test
PID Pelvic Inflammatory Disease
PKD Polycystic Kidney Disease
PR
PRK Photorefractive Keratotomy
PSA Prostate Specific Antigen
PTE Post-Traumatic Epilepsy
PTS Post-Traumatic Syndrome
PTSD Post-Traumatic Stress Disorder
PV Polycythemia Vera

PVC Premature Ventricular Contraction

RAF Royal Air Force
RBC Red Blood Count
RF Radio Frequency
RFS Regional Flight Surgeon
RK Radio-Keratotomy

SAR Seasonal Allergic Rhinitis
SCAD Significant Coronary Artery Disease
SFTS Synthetic Flight Training Simulator
SIP Standard Instructor Pilot
SSEP Somatosensory Evoked Potentials
SSI Service Skill Identifier
SVT Supraventricular Tachycardia

TDY Temporary Duty
TIA Transient Ischemic Attack
TSG The Surgeon General
TSH Thyroid Stimulating Hormone

UA Urinalysis
USAAMA U.S. Army Aeromedical Activity
USAAMC U.S. Army Aeromedical Center
USAARL U.S. Army Aeromedical Research Laboratory
USAF U.S. Air Force
USAHCSSA U.S. Army Health Care Systems Support Activity
USAR U.S. Army Reserve
USN U.S. Navy
VASI Vertical Approach Slope Indicator
VFR Visual Flight Rules
VSD Visual Septal Defect
VT Ventricular Tachycardia
VTA Vision Testing Apparatus

WAATS Western Area Aviation Training Site
WBC White Blood Count
WPW Wolff-Parkinson-White

Aviation Medicine Clinic Reference Library:

AR 10-64/OPNAVINST 6700.2/AFR 160-29/MCO 5420.18A
Joint Field Operating Agencies of the Office of the Surgeon General of the Army.

AR 11-2
Internal Management Control.
AR 25-400-2
The Modern Army Record Keeping System (MARKS
AR 30-1
The Army Food Service Program.
AR 40-7
Use of Investigational Drugs and Devices in Humans and the Use of Schedule I Controlled Drug Substances.
AR 40-25/NAVMEDCOMINST 10110.1/AFR 160-95
Nutritional Allowances, Standards and Education.
AR 40-38
Clinical Investigation Program.
AR 40-48
Non-physician Health Care Providers.
AR 40-61
Medical Logistics Policies and Procedures.
AR 40-66
Medical Record Administration and Health Care Documentation.
AR 40-68
Quality Assurance Administration.
AR 40-400
Patient Administration.
AR 40-501
Standards of Medical Fitness.
AR 40-905/SECNAVINST 6401.A/AFI 48-135
Veterinary Health Services.
AR 95-1
Flight Regulations.
AR 190-13
Hazardous Biological Substances in Army Research, Development, Test, and Evaluation Facilities.
AR 190-40
Serious Incident Report.
AR 190-51
Security of Unclassified Army Property (Sensitive and Non-sensitive).
AR 340-21
The Army Privacy Program.
AR 600-9
The Army Body Composition Program (formerly The Army Weight Control Program).
AR 600-85
Alcohol and Drug Abuse Prevention and Control Program.
AR 600-105
Aviation Service of Rated Army Officers.

AR 600-8-1
Army Casualty Operations/Assistance/Insurance.
AR 611-101
Commissioned Officer Classification System.
AR 611-201
Enlisted Career Management Fields and Military Occupational Specialties.
AR 710-2
Supply Policy Below the Wholesale Level.
AR 735-17
Accounting for Library Materials.
FM 8-505
Army Medical Field Feeding Operations
SB 10-495-1/NAVSUP PUB 436/AFM 146-9/MCO P10110.26
Standard 'B' Hospital Rations for the Armed Forces.
TB MED 250
Recording Dental Examinations, Diagnoses, and Treatments.
TB MED 530
Occupational and Environmental Health Food Service Sanitation.

Unnumbered publication
The Joint Commission on Accreditation of Healthcare Organizations
Accreditation Manual for Hospitals. (This publication may be obtained from JCAHO, 875 N. Michigan Ave., Chicago, IL 60611.)
P.L. 94-553
Copyright Law. Section II

Related Publications
A related publication is a source of additional information.
AR 1-100
Gifts and Donations
AR 30-18
Army Troop Issue Subsistence Activity Operating Procedures
AR 30-19
Army Commissary Store Operating Policies
AR 40-1
Composition, Mission, and Functions of the Army Medical Department
AR 40-8
Temporary Flying Restrictions Due to Exogenous Factors
AR 40-35
Preventive Dentistry
AR 40-330
Rate Codes, Expense and Performance Reporting Systems, Centralized Billing, and Medical Services Accounts

AR 70-65
Management of Controlled Substances, Ethyl Alcohol, and Hazardous Biological Substances in Army Research, Development, Test, and Evaluation Facilities
AR 215-1
Administration of Army Morale, Welfare, and Recreation Activities and Non-Appropriated Fund Instrumentalities
AR 600-20
Army Command Policy
AR 635-40
Physical Evaluation for Retention, Retirement or Separation
ASD(HA) Memorandum dated 31 May 1990
Subject, Schedule II Controlled Substances Waiver for Electronic Approval and letter, Drug Enforcement Administration, dated 26 Mar 1990. (Copies of the memorandum and letter may be obtained from Commander, USAMEDCOM (MCHO-CL-R), 2050 Worth Road, Fort Sam Houston, TX 78234-6010.)
CMH Pub 83-3
NATO Handbook of Emergency War Surgery
DFAS-IN Manual 37-100-FY
The Army Management Structure
DOD 1338.10-M
Manual for the Department of Defense Food Service Program
DOD 7000.14-R, Volume 12
DOD Financial Management Regulation, Volume 12: Special Accounts, Funds and Programs
DOD Directive 6000.12
Health Services Operations and Readiness
DOD Instruction 1010.1
Military Personnel Drug Abuse Testing Program
DOD Instruction 6480.4
Armed Services Blood Program Operational Procedures
FM 8-70/NAVMED P-5120/AFMAN 41-111
Standard for Blood Banks and Transfusion Services
QSTAG 471
Documentation relevant to the use of supplementary labels for dispensed medicines within a wartime theater of operations in which members of two or more participating armies are deployed. (Copies of this publication may be obtained from the DOD Single Stock Point, 5801 Tabor Avenue, Philadelphia, PA 19120-5099.)
SB 8-75 series
Army Medical Department Supply Information
TM 8-227-3/NAVMED P-5101/AFMAN 41-119
The Technical Manual of the American Association of Blood Banks
TM 8-500, volume I
The ADA Manual of Clinical Dietetics

U.S. Department of Transportation, Emergency Medical Technician-Basic: National Standard Curriculum'. Current edition. (Curriculum may be ordered from Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 or by call

Ethical Principles of Psychologists

Washington, DC: American Psychological Association, 1992. (Copies of American Psychological Association publications may be ordered from: American Psychological Association, Book Order Department, Dept KK, P.O. Box 92984, Washington, DC 20090-2984.

Specialty guidelines for the delivery of services by clinical, counseling, industrial/organizational, and school psychologists'. Washington, DC: American Psychological Association, 1981. (See address above.)

Standards for Educational and Psychological Testing

Washington, DC: American Psychological Association, 1995. (See address above.)

RCS MED-402

U.S. Army Medical Command Library Annual Report FY__.

Section III

Prescribed Forms

DA Form 3862

Controlled Substances Stock Record.

DA Form 3875

Bulk Drug Order.

DA Form 3949

Controlled Substances Record.

DA Form 3949-1

Controlled Substances Inventory.

DA Form 3982

Medical and Dental Appointment

DA Form 7397-R

U.S. Army Medical Command Library Annual Report FY__.

DD Form 1289

DOD Prescription.

DD Form 2081

New Drug Request

DD Form 273

Organ and Tissue Donor Card.

DA Form 11-2-R

Management Control Evaluation Certification Statement

DA Form 1296

Stock Accounting Record

DA Form 2927

Hospital Food Service-Telephone Diet Order

DA Form 3032
Signature Headcount Sheet
DA Form 3078
Personal Clothing Request
DA Form 3158
Statement of MSA Dining Facility Cash Receipts and Meals Served
DA Form 3161
Request for Issue or Turn-In
DA Form 3801
Guest Log for Meals
DA Form 4106
Quality Assurance/Risk Management Document
DA Form 4186
Medical Recommendation for Flying Duty
DA Form 4256
Doctors Orders
DA Form 4700
Medical Record-Supplemental Medical Data
DA Form 5570
Health Questionnaire for Dental Treatment
DD Form 2A (ACT)
Active Duty Military ID Card
DD Form 150
Special Measurements Blank for Special Measurement/Orthopedic Boots and Shoes
DD Form 1348
DOD Single Line Item Requisition System Document (Manual)
DD Form 1348M
DOD Single Line Item Requisition System Document (Mechanical)
DD Form 1556
Request, Authorization, Agreement, Certification of Training and Reimbursement
DD Form 2555
Armed Services Blood Program Blood Bank Operational Report
DOFC Form 10
Fitting Report-Special Footwear. (Copies of this form can be obtained from the Defense Orthopedic Footwear Clinic, 666 Summer St., Boston, MA 02210.)
SF 88
Report of Medical Examination
SF 93
Medical Record-Report of Medical History
SF 509
Medical Record-Progress Notes
SF 513
Medical Record-Consultation Sheet

SF 523B
Medical Record-Authorization for Tissue Donation
SF 558
Medical Record-Emergency Care and Treatment
SF 600
Health Record-Chronological Record of Medical Care
SF 603
Health Record-Dental
SF 603A
Health Record-Dental-Continuation

Appendix A

Pre-ARMS Checklist Aviation Medicine☹

A-COMMAND FACTORS			
-	1	1. Are the authorized number of flight surgeons assigned (authorized and required) IAW AR 616-110, para 11, a & b) If not, is the shortage listed on the USR? (AR 220-1)	AMA
-	2	2. In units without an authorized or assigned flight surgeon, does the local Medical Treatment Facility (MTF) Commander, and/or the Command Surgeon (MACOM or USARC or State Surgeon) provide personnel and equipment for the Army Aviation Medicine Program at the local level? (AR 385-95, para 1-6,g, AR 40-501, para 6-4,c, AR 616-110, para 12b & HSC Reg 40-5, para 3-2)	
-	3	3. Does the flight surgeon have a current reference library, including current Aeromedical Policy Letters and Aeromedical Technical Bulletins? (HSC Pam 4 -7-25, Appendix A)	AMA
-	4	4. Does the commander suspend pay for nonrated crewmembers with overdue Flying Duty Medical Examinations (FDME's)? (AR 600-105, AR 600-106)	AMA
-	5	5. Are all crewmembers	AMA

		administratively restricted (grounded) from flying duties when the FDME expires? (AR 40-501, para 6, AR 600-105 & AR 600-106)	
-	6	6. Was an FEB convened for aviators that failed to maintain medical qualification? (AR 600-105, para 6-1c(2))	AMA
-	7	7. Are DAC pilots, contract pilots, and civilian ATC personnel maintaining valid Army FDMEs? (AR 40-501, para 4-2, 4-33, & 6-4)	AMA
B-FLIGHT RECORDS			
	1	1. Are the FS and/or APA that perform crewmember duties on flight status with valid and appropriately issued orders? (AR 616-110, para 13 & AR 600-105, para 3-9)	AMB
	2	2. Do individual flight records contain a properly completed medical clearance for flying or medical restriction from flying (DA Form 4186)? (AR 40-501, para 6-11, a,b,d)	AMB
-	3	3. A) When DA Form 4186 is issued to return a crewmember to flying duty by an APA or non-flight surgeon, is it only accomplished when a flight surgeon is not readily available? B) Does the DA Form 4186 properly annotate the flight surgeon giving the verbal or telephonic approval? (AR 40-501,	AMB

		para 6-11, j and AR 40-8, para 2, c.)	
	4	4. Do individual flight records contain medical waivers as applicable? (AR 95-1, para 2-8, b)	AMB
-	5	5. Are extensions granted to flying duty medical exams (FDME) (flight physicals) prior to the expiration of current FDME's? Do the extensions exceed the 30 day maximum? (AR 40-501, para 6-11, l)	AMB
RAII -	6	6. Are crewmembers performing aviation duties with expired FDME's? (AR 95-1, para 2-1, b; AR 40-501 para 6-8, b; AR 600-105; AR 600-106.)	AMB
	7	7. Are non-operational aviators completing annual flight physicals? (AR 600-105, para 3-1, c, AR 95-1, AR 40-501)	AMB
C-HEALTH RECORDS			
	1	1. Are health records of aviation personnel maintained by appropriate personnel and separated from other medical records? (AR 4 -66, HSC Pam 4 - 7-25, para 6,e)	AMC
	2	2. Do individual medical records contain a properly completed medical clearance for flying or medical restriction from flying (DA Form 4186)? (AR 40-66, para 5-19 & Fig 5-1/2)	AMC

-	3	3. Are current extensions for flying duty medical exams (FDME) (flight physicals) filed in individual medical records IAW AR 40-501, para 6-11, I?	AMC
	4	4. Do individual medical records contain appropriate medical waivers as applicable? (AR 40-66, Fig 5-1/2)	AMC
-	5	5. Are aviator health records (HRECs) incorporated into the Hospital/MTF or state HREC quality assurance program? (HSC Pam 4 -7-25, para 5,h)	AMC
-	6	6. Does the FS's office retain a copy of the FDME and all enclosures for a minimum of two years? (AR 40-501, para 6-10, c & d)	AMC
-	7	7. Do non-operational aviators' medical records contain a current flight physical? (AR 95-1, para 2-1b, AR 600-105 para 3-1c)	AMC
D- AVIATION MEDICINE RELATED PROGRAMS			
-	1	1. Were the aeromedical effects subjects listed in FM 1-3 1 taught in the aircrew continuous training program in the previous 36 months? (AR 95-1, AR 385-95, para 1-6g & FM 1-301, Appendix A)	AMD
-	2	2. Did the unit conduct a mission analysis to determine special aeromedical training requirements IAW Appendix A, FM 1-301, AR 95-1, and AR 385-95	AMD
-	3	3. Does the flight surgeon assist the ALSE OFF/NCO with medical	AMD

		issues regarding ALSE equipment? Does the FS periodically visit/inspect the ALSE shop? (AR 95-1, para 8-1g, AR 385-95 para 1-6g)	
-	4	4. Does the flight surgeon assist and advise the commander in hearing and eyesight conservation programs? (AR 385-95, para 1-6,g,)	AMD
-	5	5. Is the flight surgeon a member of the aviation standardization council? (AR 95-1 para 4-37 and 4-38)	AMD
-	6	6. A) Is the flight surgeon a member of the Command Safety Council? (AR 385-95 para 3-4b) B) Does the flight surgeon take part in safety meetings? (AR 385-95, para 1-**6g**)	
E-SURVEYS EMERGENCIES AND INVESTIGATIONS			
-	1	1. Does the unit conduct required accident prevention surveys of the aviation medicine program? (AR 385-95 para 3-2, FORSCOM Reg 385-1)	AME
-	2	2. Are copies of previous inspections and surveys maintained for at least two years? (FC Reg 385-1, NGB Pam 385-95, AR 25-4 -2)	AME
-	3	3. Does the medical portion of the pre-accident plan provide the flight surgeon an opportunity to fulfill his aircraft accident investigation	AME

		responsibilities? (AR 385-95, para 1-6,f,(5) & DA Pam 385-95, para 2-1d)	
-	4	4. Does the medical portion of the installation's pre-accident plan address the notification procedures and transportation of medical photographers, medical examiners, pathologists, and physicians for professional support from the local flying area in the event of an off post mishap? (AR 40 -21, para 3,b)	AME
-	5	5. A) Does a flight surgeon review the medical portion of the pre-accident plan quarterly and ensure its adequacy? (AR 385-95, para 1-6g) B) Does the operations officer document the adequacy of the pre-accident plan? (AR 385-95 para 1-6c)	AME
	6	6. Is a flight surgeon available 24 hours a day? (during duty and non-duty periods) (HSC Pam 4 -7-25, para 4,b)	AME
-	**7**	7. Does the Army airfield's Emergency Plan meet the following requirements?	
-	**7.1**	7.1. Does the Army airfield have a published emergency plan? (FM 1-300)	AME
-	**7.2**	7.2. Does the airfield commander, with the operations officer, conduct a full-scale rehearsal of the plan at least once every five (5) years?	AME

		(FM 1-300)	
-	**7.3**	7.3. Does the emergency plan provide medical care capability for the largest aircraft that the airfield can be expected to serve? I.e. 747 (400 PAX), C-5A, etc.	AME
-	**7.4**	7.4. Does the emergency plan include addresses and telephone numbers for all hospitals, medical facilities, ambulance services, rescue squads, etc. that agree to provide services? (FM 1-300)	AME
-	**7.5**	7.5. Does the emergency plan contain instructions for responding to aircraft accidents, bomb incidents, structural fires, natural disasters, radiological incidents, sabotage or hijack situations, water rescue, etc.? (FM 1-300)	AME
F-AIR AMBULANCE UNITS			
-	1	1. Is the unit performing mission support requirements within the scope of the MTOE/TDA manning and equipment authorization? (AR 40 -535, para 1,b)	AMF
-	2	2. Are aeromedical evacuation crewmembers school trained – AOC & MOS qualified? (AR 611-101, para 1-23,e,(2); para 3-5,a; and HSC Pam 40-7-18, para 8, e)	AMF
-	3	3. Are crewmember tasks the commander determines essential to METL accomplishment, but not listed in the ATM, designated as additional tasks and listed	AMF

		separately? (Series 3000 tasks) (TC 1-210, para 3-1,c)	
-	4	4. Does a flight surgeon review care delivered by air ambulance personnel? (AR 40-3, HSC Pam 40-7-18, para 6, c, (1))	AMF
-	5	5. Does the unit have a biohazard and blood borne pathogen exposure prevention plan? (OSHA 1910 .1030)	AMF
	6	6. Does the unit's MAST program meet the following requirements?	
-	**6.1**	6.1. Is a current MAST letter of operational agreement on file? AR 500-4	AMF
-	**6.2**	6.2. Is a current MAST Operational Plan on file? AR 500-4	AMF
-	**6.3**	6.3. Are joint public information and education programs conducted for communities and organizations involved with the MAST program? AR 500-4	AMF
-	**6.4**	6.4. Are semiannual medical audits of MAST missions conducted by military physician designated by the installation commander or a civilian physician designated by local or state officials? AR 500-4	AMF
-	**6.5**	6.5 . Are safety surveys conducted for frequently used hospital landing sites? AR 500-4	AMF
-	**6.6**	6.6. Is the MAST program included in the unit SOP? AR 500-4	AMF
G-OBSERVATIONS			
-	1	1. Does the unit have sufficient	AMG

		medical supplies to deploy and conduct its wartime mission?	
-	2	2. Are air ambulance companies conducting CSAR/SAR training?	AMG
-	3	3. Do air ambulance units have PLS on-hand?	AMG
-	4	4. Do air ambulance units have Air- Worthiness Releases (AWR) on hand for Patient Movement Items (PMI) that the unit uses?	AMG
-	5	5. Are non-medical aircraft performing medical evacuation missions for other than life, limb, or eyesight emergency evacuation?	AMG
-	6	6. Is there a method to track flight physicals from initiation through submission to Ft Rucker/ Regional Flight Surgeon and return to clinic/unit and then properly posted into the medical records?	AMG

APPENDIX B

Aviation Medicine Clinic Standard Operating Procedures (SOP)

This is an outline of a general (SOP) for an aviation medicine clinic. Your clinic's SOP can be as specific as necessary to outline the framework of your clinic's operations. Remember, there should be enough detail in your (SOP) that an incoming person will understand how business is conducted and what procedures need to be followed after reading though the SOP.

The numbered headings below are a sample format for an aviation medicine clinic (SOP):

1. Subject:
Aviation Medicine Clinic Standard Operating Procedures (SOP)

2. Purpose:
The purpose for Aviation Medicine Clinic Standard Operating Procedures (SOP) is to establish the specific policies, responsibilities, and procedures for staffing and operation of the Aviation Medicine Clinic.

3. General:
The general characteristic of an Aviation Medicine Clinic is that it is a multi-functional general medicine clinic, specializing in Aviation Medicine. The clinic serves the active duty personnel, both flight status and non-flight status, Department of the Army and contract civilians, and the Army Aviation Reserve and National Guard population in the region. .

4. Responsibilities:
The responsibilities of the Aviation Medicine Clinic Officer in Charge (OIC), Non-Commissioned Officer in Charge (NCOIC), and staff are outlined in this section. These responsibilities can be the same as the duty description outline on support forms, NCOER’s, and civilian job descriptions.

5. Operations: This section outlines the operational aspects of the Aviation Medicine Clinic's SOP. It will cover the hours of operation, to include what hours the clinic will be open to see various categories of patients. It defines what constitutes a medical emergency, how the clinic will conduct sick call, schedule various types of appointments, and will delineate lunch time staffing requirements

6. Administrative: This section would cover such aspects as front desk duties, NCOIC periodic counseling for individual performance, clinic uniforms, code of conduct, leave policy, school selection/attendance criteria, and other administrative topics as directed by the OIC and NCOIC.

7. Medical: This section would be made up of annexes that outline all standard medical procedures and protocols for the Aviation Medicine Clinic. (See chapter 3)

APPENDIX C

Circle the appropriate copy designator.

Copy 1 (Individual's Health Record)
Copy 2 (Aviation Unit Commander)
Copy 3 (Eval & Review, USAAMA)
Copy 4 (Aircrew Member's File Copy)

MEDICAL RECOMMENDATION FOR FLYING DUTY

For use of this form, see AR 40-501; the proponent agency is the Office of The Surgeon General

TO:

FROM:

1. NAME (Last, First, MI)
2. SSN
3. GRADE
4. DATE OF BIRTH
5. ORGANIZATION
6. TYPE FLYING DUTY PERFORMED

SECTION A - QUALIFYING ACTION RECOMMENDED BY MEDICAL AUTHORITY

7. MEDICAL CLEARANCE IS RECOMMENDED FOR THE FOLLOWING REASON(S): *(Check one or more)*

- a. ☐ TERMINATION OF TEMPORARY MEDICAL SUSPENSION
- b. ☐ MEDICAL EXAMINATION
- c. ☐ REPORTING TO NEW DUTY STATION
- d. ☐ AFTER AIRCRAFT MISHAP
- e. ☐ TERMINATION OF MEDICAL DISQUALIFICATION
- f. ☐ PENDING ISSUE OF WAIVER FOR MEDICAL DISQUALIFICATION
- g. ☐ ISSUE OF WAIVER FOR MEDICAL DISQUALIFICATION
- h. ☐ OTHER *(Explain under remarks)*

8. REQUIRED TO WEAR GLASSES WHILE FLYING OR OTHER DUTIES REQUIRING CORRECTED VISUAL ACUITY. (CONTACT LENSES ARE PROHIBITED UNLESS SPECIFICALLY AUTHORIZED.) ☐ YES ☐ NO
9. EFFECTIVE DATE
10. DATE CLEARANCE EXPIRES

SECTION B - DISQUALIFYING ACTION RECOMMENDED BY MEDICAL AUTHORITY

11. THE FOLLOWING ACTION IS RECOMMENDED:

- a. ☐ TEMPORARY MEDICAL SUSPENSION
- b. ☐ TEMPORARY MEDICAL SUSPENSION FOLLOWING A/C MISHAP
- c. ☐ PERMANENT MEDICAL DISQUALIFICATION
- d. ☐ PERMANENT MEDICAL DISQUALIFICATION FOLLOWING A/C MISHAP
- e. ☐ OTHER *(Explain under remarks)*

12. ESTIMATED DURATION OF INCAPACITY TO FLY
13. EFFECTIVE DATE

14. REMARKS

15. WHILE IN A DUTY NOT INVOLVING FLYING STATUS

SIMULATOR DUTIES ALLOWED ☐ YES ☐ NO

GROUND RUNUP DUTIES ALLOWED ☐ YES ☐ NO

16. DIAGNOSIS CODE

17. TYPED NAME AND GRADE OF FLIGHT SURGEON
18. FLIGHT SURGEON SIGNATURE
19. DATE

SECTION C - CERTIFICATION BY AIRCREW MEMBER

20. I CERTIFY THAT I HAVE BEEN NOTIFIED OF THE RECOMMENDATION(S) ABOVE AND UNDERSTAND THAT I ☐ MAY OR ☐ MAY NOT PERFORM AVIATION DUTIES AS OF THIS DATE
21. SIGNATURE
22. DATE

SECTION D - ACTION TAKEN BY COMMANDER

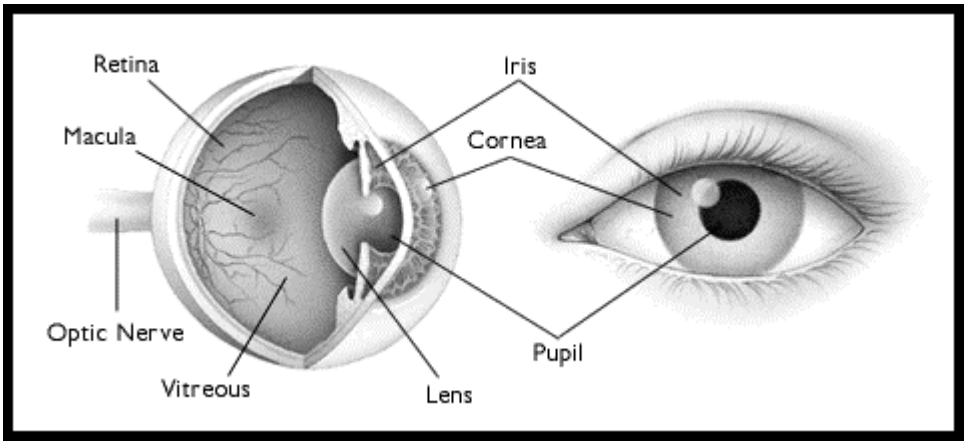
23. THE MEDICAL RECOMMENDATION IS ☐ APPROVED ☐ DISAPPROVED

24. TYPED NAME AND TITLE OF COMMANDER
25. COMMANDER'S SIGNATURE
26. DATE

APPENDIX D

1.1 Anatomy and physiology of the eye:

Anatomy of the Eye



1.2 Parts of the Eye

a. Cornea: The clear front window of the eye. The cornea transmits and focuses light into the eye.

b. Iris: The colored (pigmented) part of the eye. The round, contractile membrane is located between the cornea and the lens (and is perforated by the pupil). The iris helps regulate the amount of light that enters the eye.

c. Pupil: The dark center in the middle of the iris. The pupil determines how much light is let into the eye. It changes sizes to accommodate for the amount of light that is available.

d. Lens: The transparent structure inside the eye that focuses light rays onto the retina.

e. Retina: The nerve layer that lines the back of the eye. The retina senses light and creates impulses that are sent through the optic nerve to the brain.

f. Macula: A small area in the retina that contains special light-sensitive cells. The macula allows us to see fine details clearly.

g. Optic Nerve: The nerve that connects the eye to the brain. The optic nerve carries the impulses formed by the retina to the brain, which interprets them as images.

h. Vitreous: The clear, jelly-like substance that fills the middle of the eye.

APPENDIX D

1.3. The Measurement of Visual Function

a. The visual sense is important in all areas of flying. The aviator must be able to identify distant objects, movement, shapes, and color in addition to reading instruments, visual displays, charts and maps. The visual demands of the aviator require testing of both near and distant visual acuity, color vision, depth perception, field of vision, ocular motility, night vision, accommodation, and refractive error.

b. Visual Acuity: Visual acuity is the most important measurement of visual function.

c. Testing methods.

(1). Snellen/Jaeger charts

(2). Distant acuity measured at 20 feet or six meters.

(3). Near acuity measured at 13 to 14 inches or 35 to 36 cm

(4). Armed Forces Vision Tester (AFVT) or Optec 2300 (NSN 6540-01-375-9031)

d. Testing Tips:

(1). Use constant illumination and check visual acuity in each eye first without correction and then with correction. Test worst eye first.
If below normal visual acuity is demonstrated, use a pinhole of 1.5 to 2mm in diameter to test visual acuity. Visual acuity improvement more than likely indicates subnormal vision due to refractive error. If visual acuity does not improve, there is most likely opacity in the cornea or lens or a defect in the retina or optic nerve. Move the pinhole sideways and note target movement. Target movement with movement of pinhole indicates myopia, target movement against movement of pinhole indicates hyperopia. Move the pinhole toward the target and note the size change. Target shrinking indicates myopia, and target enlarging indicates hyperopia.

(2). Check to rule out use of contact lenses.

(3). Do not allow squinting. This provides a physiological pinhole that will improve visual acuity.

(4). Avoid patients overhearing each other during visual exam and do not permit memorization by changing exam technique (read from left to right then from right to left).

(5). Armed Forces Vision Tester (AFVT) may increase eso-deviation due to machine convergence.

(6). Rotate/change the order of Snellen/Jaeger charts to vary answers and prevent memorization of charts.

1.4. Color Vision Testing Methods:

a. Pseudo Isochromatic Plates (PIP):

(1). Place card set on stand beneath MacBeth Easel Lamp. Be sure to use a MacBeth light bulb! (or a “sunlight” light bulb for indoor gardens) Do not use ordinary fluorescent or tungsten light bulb!

(2). Explain the test to the patient using the demo plate.

(3). Instruct the patient to identify the numbers of the remaining 14 or 17 plates shown one at a time. Response time allowed should be limited to about 2 Seconds.

(4). Five or more errors on the 14 plates set and four or more errors on the 17 plate set is DQ.

(5). Record as “Pass” or “Fail”, # missed /# in set.(e.g. Pass 2/14) If patient fails, proceed to Farnsworth Lantern Test.

Note: The results are recorded in block 66 DD Form 2908

b. Farnsworth Lantern Test:

(1). Position patient 8 feet from the machine in a dark room.

(2). Instruct the patient to identify the nine different possible combinations (once around the dial, i.e., red over green, etc.).

(3). Examinee passes only if he/she calls all nine separate combinations correctly. Record score as “Pass 0/9”.

(4). If patient identifies any combinations incorrectly, repeat the same procedure twice (eighteen additional combinations).

(5). To pass the retest, the examinee must correctly identify at least 16 of 18 combinations. (Three or more errors out of the next 18 is DQ.).Record the retest score as “Pass 2/18” or “Fail 3/18”.

Note: The results are recorded in block 66 DD Form 2908

(6). Defective color vision is disqualifying for all classes of flying duty. Color vision will be tested on all initial FDME’s. If defective color vision is discovered on a class 2 (aviator) FDME the local flight surgeon will arrange for a complete ophthalmology evaluation, accomplish an In-flight evaluation per APL 18-81, and contact the Aeromedical Consultation Service at Fort Rucker.

(7). Requests for waivers for defective color vision must include a complete FDME, ophthalmology evaluation, results of the In-flight testing and a complete Aeromedical Summary.

1.5. Binocular Depth Perception -- Testing Methods

a. Currently there are three tests for binocular depth perception (stereopsis) accepted for the Flying Duty Medical Examination (FDME) - Armed Forces Vision Testing Apparatus (VTA), Verhoeff Stereometer Test, and Randot Circles Stereotest. It is recommended that the Randot Circles test be employed first, with either of the others used in the event of failure.

Note: Titmus fly, Randot Forms, Randot Animals and other tests are **not** acceptable

b. Armed Forces Vision Testing Apparatus (AFVTA):

(1). Of the entire VTA battery of tests, stereopsis testing is the most difficult to give and interpret. Examinees with normal stereopsis may have to learn to see the apparent depth employed in this test. Passing scores can be reliably accepted as evidence of stereopsis; however, even complete failure is not always indicative of impaired stereopsis, unless supported by other tests. For these reasons, appropriate administration of the test is crucial.

(2). Prior to administration, the VTA apparatus must be set up properly. The device should be placed on a sturdy table with ample legroom, and the examinee provided a straight back chair allowing comfortable viewing. The examinee should place his/her forehead against the headrest, allowing clear view through the center of the eyepiece. The lens housing must be in the up position, viewing the distant drum and the eye occluder handle in the center position, allowing for binocular vision. The prism levers should be in the converge position, each pointing toward the center. Drum position 5 or 5A of the far drum must be used for this test. Examinees should be allowed to wear corrective spectacles when used for flying or ATC duties.

(3). The first step is to demonstrate the test using the accompanying plastic plate containing four black circles. One circle appears nearer than the other four. Once the examinee understands the demonstration, he/she should be allowed to look into the instrument with attention to group A. This group is used for further demonstration. The examinee should be given ample time to examine this group, sometimes greater than one minute for the perception of depth to develop. The examinee is then asked to identify by number, counting from left to right, each circle in the subsequent groups which the examinee must be able to correctly identify the nearest circle in groups B thru group D to obtain a passing score. Level D is 25 seconds of arc of stereopsis. Record on the FDME in block 65 as "VTA B-D PASS" (Group A is not counted). The use of no corrective lenses or corrective lenses should be noted in the adjoining block. If this test is failed, the examinee should undergo either of the two other tests below.

c. Verhoeff Stereometer Test:

(1). The next test of stereopsis is the Verhoeff Stereometer Test. This test consists of a 2 x 4 x 8 inch box with a small-lighted aperture in the front through which three black posts may be viewed.

One post is always seen to be forward or back of the other two. Four combinations of posts may be presented by moving a lever on the back of the stereometer. The device is then turned upside down to allow a total of 8 different combinations.

(2). It is important to set this test up correctly to prevent erroneous results. The room must be either dark or diffusely lighted. The subject should be seated in a chair with a chin rest to prevent any head motion. Allowing shadows on the aperture or head motion will invalidate the test by providing monocular clues to depth perception. The Verhoeff Stereometer should be placed one meter from the subject on a stand at eye level. Placing the device closer than eighty centimeters to the subject increases the angle of stereopsis sufficiently that nearly anyone can pass the test. The tester should be sure that there is adequate illumination of the aperture (i.e. fresh batteries).

(3). The examinee should then be allowed to view each of the eight combinations of posts. Between viewing each combination the aperture should be covered with the hand to prevent the examinee from seeing the posts change. The examinee should be asked which post is nearer or farther away than the other two (e.g. "left forward" or "middle back").

(4). The examinee must correctly identify all eight combinations to pass this test. The score should be recorded in block 65 of the SF 88 by identifying the test, the number missed over the number attempted, and pass or fail (e.g. Verhoeff 0/8 pass or Verhoeff 3/8 fail). The use of corrective lenses or not should be recorded in the adjoining block. If the examinee fails or the Verhoeff Stereometer is not available, the Randot Circles Stereotest should be performed.

d. The Randot Circles Stereotest

(1). If the Verhoeff Stereometer Test is failed or unavailable, the Randot Circles Stereotest is acceptable for the FDME. The Randot test comes in several types (Forms, Animals, and Circles), but the Circles are the only allowable test for the FDME. The Randot Circles Stereotest requires the examinee to extract a figure from the background without the help of monocular clues via a computer generated random dot pattern. The other types of tests, the Forms and the Animals, add monocular contour required by children to provide disparity and thus are not valid for testing stereopsis in aircrew members.

(2). This test is accomplished by holding the test card upright before the subject to maintain the proper axis of polarization. The examinee should not be allowed to tilt his head to the side. The card should be held approximately sixteen inches from the examinee though small variations should have little effect on the score. Examinees should be allowed to wear corrective lenses when applicable and those with bifocals should position themselves properly for near point viewing. Adequate light must be provided; however, reflection should be avoided. A dark area or curtain behind the examinee is recommended. The examinee will then be asked to view each of ten levels of targets containing three circles each. One circle has crossed disparity so that when viewed binocularly, should appear to stand forward of the other circles. Each proceeding target requires an increasing degree of

stereopsis. The subject should be asked to identify which circle appears to float forward or appears different from the others. Once the examinee misses a target, the tester should return to the preceding target and test again to establish the level of stereopsis. At this point the test is completed and the level of stereopsis should be recorded.

(3). The aeromedical standard for this test is 40 seconds of arc or better at sixteen inches. Below is the scoring table for the Randot Circles Stereotest.

Level #	1	2	3	4	5	6	7	8	9	10
Arc (in sec)	400	200	140	100	70	50	40	30	25	20

(4). The examinee must therefore identify to and including the seventh target correctly in order to pass this test. The results of this test should be recorded in block 67 of the DD Form 2808, by the test, the level attained, and pass or fail (e.g. Randot 1 thru 10- Pass or Randot 1 thru 4- Fail). Alternately, the seconds of arc can be recorded (e.g. Randot 30 sec Pass, or 50 sec Fail). The use of corrective lenses or not should be noted in the adjoining block.

(5). Accurate stereopsis testing is an important part of the Flying Duty Medical Examination. Failure of the above depth perception tests represents impaired stereopsis and requires an ophthalmology consultation to determine the underlying cause of the impaired stereopsis (see APL 8-89, Extraocular Motility Disorders) and submission of an aeromedical summary to Cdr, USAAMC. Those performing these tests must be intimately familiar with their proper administration to prevent error.

(6). Any further questions concerning binocular depth perception testing should be referred to the U.S. Army Aeromedical Activity, ATTN: MCXY-AER, Fort Rucker, AL, 36362-5333, AV 558-7430 or COMM (334)-255-7430; or Chief, Ophthalmology, US Army Aeromedical Center, Fort Rucker, AL, 36362-5333; AV 558-7186 or COMM (334)-255-7430.

1.6 Visual Test Result Recording

Unless documented above, the results of the testing are recorded on the DD Form 2808 as described below.

(1). Block 61: Distant Visual Acuity:

Record the uncorrected distant visual acuity for each eye using the English Snellen Linear System (20/20). If the uncorrected visual acuity of either eye is worse than 20/20, enter the corrected distant visual acuity for each eye. Record the correct manifest refraction in block 62.

(2). Block 62: Manifest Refraction

Record the manifest refraction as required. Enter the cycloplegic refraction in block 60 as shown on the sample DD 2808.

(3). Block 63: **Near Vision**

Record the uncorrected near visual acuity for each eye(20/20). If the uncorrected near visual acuity of either eye is worse than 20/20 enter the correct near visual acuity for each eye (20/40 corr 20/20).

(4). Block 64: **Heterophoria**: Refer to the section on AFVTA apparatus)

Cover Test (CT): Record the results of the cover/uncover test and crosscover test (alternate cover) test. Perform the test in the neutral position at 16″ Then at a distance in the primary directions of gaze (neutral, left, right, up, and down).

Near Point Convergence (NPC): Enter the NPC in millimeters

(5). Block 66: **Color Vision**: As stated above.

(6). Block 67: **Depth Perception**: As stated above.

(7). Block 68: **Field of Vision**: Required on all initial FDME's Recorded as NTC or abnormal. If abnormal record the results in Block 77.

(8). Block 69. **Night Vision**: Enter NIBH (not indicated by history) if no history of night vision deficiency. If abnormal enter ABN and attached an ophthalmology consult.

(9). Block 70: **Intraocular Pressure:** Measurement of pressures are required on all initial FDME and on FDME's beginning at age 40. Measurements are recorded in millimeter of mercury (mmHg). Acceptable test are Noncontact Tonometry(NCT) or Applanation Tonometry). Normal range is less than 24 in each eye and less than 4mmHg difference between eyes.

APPENDIX E

1.1. Anatomy and Physiology of the Ear

a. The part of your ear that you can see is only one small part of the intricate and complex mechanism, which allows you to hear. The ear is actually divided into three parts:

(1). The outer ear

(2). The middle ear

(3). The inner ear

b. The Outer Ear

The outer ear consists of the pinna, the ear canal, and the eardrum. Its main function is to collect sound waves (speech, music and other environmental sounds) and funnel them down the narrow passage (the ear canal) to the eardrum (the membrane lying at the end of the passage). The eardrum will be set into vibration by these sound waves, and the bones lying in the next section of the ear, the middle ear, will pick up this vibration.

c. The Middle Ear

The middle ear is a cavity lying behind the eardrum. It is filled with air, which is received via the Eustachian tube (which is linked to the back of the nose and throat). It also contains the three smallest bones in the body, the Malleus, the Incus, and the Stapes. When the eardrum vibrates it will cause these bones to vibrate. The third bone, the Stapes, lies over a membrane leading to the inner ear. When it is set into motion, it will cause movement of the fluid lying in the next part of the ear, the inner ear.

d. The Inner Ear

The inner ear, also known as the cochlea, consists of a series of snail shaped coiled channels and chambers, which are filled with fluid. It also contains thousands of tiny hair cells (nerve fibers). When the fluid in the channels is set into motion, it will cause these hair cells to brush against a membrane, which lies above them. In this way the sound waves are changed into an electrical code which can then be passed through the hearing nerve to the brain, where it is interpreted as sound.

1.2. Obtaining/conducting a hearing test

a. Audiometric testing is performed by a licensed or certified audiologist, otolaryngologist, or by a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation (or who has satisfactorily demonstrated competence in administering audiometric examinations). It is imperative that audiology personnel are also adequately trained in properly using, maintaining and checking calibration and proper functioning of the audiometers being used. A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist or other trained physician. It is highly

recommended (and required in some areas) that hearing booth operators attend the Occupational Health HEARS training course.

b. Ear Plugs: each clinic should have a supply of all 5 sizes of Single-Flange plugs and all 3 sizes of Triple-Flange earplugs. Prior to each test, technicians must ensure soldiers have the correct size earplugs and can demonstrate their ability to properly insert pre-formed earplugs.

Note: *Soldiers have the choice of what type of earplugs to use. If they choose the hand-formed (E-A-R™) earplugs, they must still demonstrate their ability to properly insert these earplugs.*

1.3. Operating a Hearing Booth: (Audiometer care and calibration)

a. Daily Requirements: CU-CEFICS

(1). [C]lean

Clean earphone cushions, headband and bone conduction oscillator with alcohol prep pad. Do not let alcohol get into the diaphragm of the earphone.

(2). [U]ntangle

Ensure earphone, response switch and bone conduction oscillator cords are untangled and hanging on their respective hooks.

(3). [C]onnections

Ensure all earphones, bone conduction and response switch jacks are securely connected into the back of the audiometer and both sides of the audiometer are correctly configured.

(3). [E]arphones

Check headband tension. The earphones should be touching or almost touching. If not, the tension can be increased by *gently* bending the headband. The earphone cushions should be soft and free of cracks. If not, replace them. Ensure the diaphragms of the earphones are not punctured or obstructed by the cushions. Visually check the earphone cords for cracks or breaks. Replace the cords if necessary.

Note: Turn the Audiometer On.

(4). [F]requency

On CHANNEL 1, set the audiometer so that a 60 dB HTL, 250Hz tone is continuously on in the RIGHT earphone. Slowly cycle through the frequencies from 250Hz to 8K Hz. There should be an increase in the pitch and a non-waivering tone for each change in frequency.

(5). [I]ntensity

On CHANNEL 1, set the audiometer so that a 0dB HTL, 1K Hz tone is continuously on in the LEFT earphone. Slowly increase the intensity from 0 dB to 60 dB. There should be a steady increase in loudness of the tone with NO static present for each change in intensity. Repeat the same procedure above for CHANNEL 2, sending the continuous tone to the RIGHT earphone instead.

(6). [C]rosstalk

On CHANNEL 1, set the audiometer so that a 60 dB HTL, 1K Hz tone is continuously on in the LEFT earphone. Unplug the LEFT earphone jack inside the booth. There should be NO tone heard from the RIGHT earphone. Replug the LEFT earphone. On CHANNEL 2, set the audiometer so that a 60 dB HTL, 1K Hz tone is continuously on in the RIGHT earphone. Unplug the RIGHT earphone jack inside the booth. There should be NO tone heard from the LEFT earphone. Replug the RIGHT earphone.

(7). [S]tatic

On CHANNEL 1, set the audiometer so that a 60 dB HTL, 1K Hz tone is sent to the LEFT earphone. Start where the cord connects to the left earphone. Hold the cord lightly between the thumb and forefinger, and slide your fingers down the cord to the jack, jiggling it lightly. There should be NO crackling, static or breaks in the tone. Press and release the CHANNEL 1 interrupter bar several times. There should be NO crackling or humming when the tone comes on and goes off. Repeat the same procedures above for CHANNEL 2, sending the tone to the RIGHT earphone instead.

NOTE: *If the signal at the earphones is distorted in any way, or there is humming, clicking, scratching or any other type of abnormal sound present, THE AUDIOMETER MUST NOT BE USED UNTIL CORRECTIVE ACTION IS TAKEN*.

1.3. Weekly Requirements: Biological Calibration

a. All Clinical audiometers must be biologically calibrated at least weekly. At a minimum there should be one DD Form 2217 (Biological Audiometer Calibration Check) for each audiometer.

b. A new DD Form 2217 must be re-established every time an audiometer is electro-acoustically calibrated (annually or otherwise). If human ears are used, use a primary and alternate listener for each audiometer (thus, two DD Form 2217s, one for each listener).

c. If possible use an electro-acoustic ear (e.g., Clancey II, Oscar, etc.) as a listener when conducting a biological calibration check. An audiometer “fails” if the listener’s weekly thresholds are greater than ±5 dB when compared against their baseline.

1.4. Annual Requirements

a. All clinical audiometers must be electro-acoustically calibrated at least annually. Verification of annual calibration can be easily

obtained by looking for a label affixed to the chassis of the audiometer (DD Form 2163, Medical Equipment Verification/Certification); on the label there should be notation indicating “Date Completed” and “Date Due.”

b. It is important to remember that for medical-legal reasons, DO NOT use the audiometer beyond the “Date Due,” even though the audiometer may still maintain its calibration. It is important to remember the need to immediately re-establish a new DD Form 2217 for each audiometer after electro-acoustic calibration.

c. When having equipment calibrated, ensure that serial numbers on the earphones and bone conduction oscillator match those of the parent audiometer.

1.5. Pure Tone Testing

a. Air Conduction: AKA, Pure tone, Airline.

b. Reported: Numeric and/or graphic display:

O = Right ear (red) X = Left ear (blue)

c. Patient Instructions: It is important to obtain a good history, otoscopic exam and explain test instructions prior to placing earphones on the patient.

(1). “Have you had your hearing checked before?”

(2). “Do you have a better ear?’

(3). “You will be listening for some beeping tones.”

(4). “Each time you hear a beeping tone, press the button once (or raise your hand/finger) as soon as you hear the tone.”

(5). “No matter how faint the tone, if you think you hear it, press the button (or raise your hand/finger).”

(6). “When the tone goes away, release the button (lower your hand/finger).”

(7). “Do you have any questions?”

d. Procedures:

(1). Place headphones on patient (RED on RIGHT).

(2). Ensure that the stimulus mode is set to PULSED in order to help tinnitus patients better distinguish audiometric tones. In severe tinnitus cases FM (Frequency Modulated or “warbled’) tone can also be used.

(3). Begin at 0 dB HTL and slowly increase intensity until first response is obtained (ALTERNATE METHOD: Begin at 30 dB HTL or at an audible level for the patient).

(4). Descend in 10 dB steps until there is no response.

(5). Ascend in 5 dB steps until there is a response.

(6). Drop 10 dB and begin ascending procedures again until a response is obtained.

(7). Do this until a 50% correct response rate is reached (2 out of 4 responses) on the ascent.

(8). Test frequencies in the following order:

1K –2K –3K –4K –6K –8K –1K* -500 –250 Hz
(*1K rechecked for validity)

1.6. Interpretation:

a. A/C thresholds give degree of hearing loss.

Classification of hearing loss:

0-10	dB HTL	Normal	WITHIN
15-20	dB HTL	Low normal or slight	NORMAL LIMITS
25-40	dB HTL	Mild	
45-65	dB HTL	Moderate	
70-90	dB HTL	Severe	
95+	dB HTL	Profound	

1.7. Recording Results on DD Form 2808:

a. Block 71a/71b. Audiometer: Using pure-tone testing procedures prescribed in TB Med 501, record the best hearing acuity for each ear in decibel units at the frequencies of 500 Hz, 1000 Hz, 2000 Hz, 3000 Hz, 4000 Hz, and 6000 Hz.

APPENDIX F

1.1. MEASURING Blood Pressure/PULSE for Initial, Comprehensive and Interim FDME

a. Blood pressure: Is measured in the sitting position with the arm at the level of the heart. It is important to allow the patient to relax for a minute before measuring BP to ensure you obtain the most accurate reading. Note: If the procedure must be repeated, wait at least 1 minute before repeating. Record the systolic reading over the diastolic reading, for example $\frac{120}{80}$.

b. Record the readings in even numbers. Record the sitting BP reading in block 58a. of DD Form 2808, Report of Medical Examination for all initial and comprehensive FDME. Record the sitting BP reading in block 15 of the DA Form 4497-R for the interim FDME.

c. Sitting blood pressure is required on all FDME’s.

d. Blocks 58 b/c are **not** required, unless indicated by abnormal history, or examination.

(1). Normal blood pressure ranges:

Systolic - 90 - 139 mmHg
Diastolic - 60 - 89 mmHg

e. Obtain sitting A.M. and P.M. blood pressures for 3 days if the blood pressure is abnormal. Record the findings in block 42. If the average blood pressure still exceeds standards, mark the FDME disqualified, refer to Aeromedical policy letter 3 for guidance in the evaluation and control of the examinee's hypertension, and submit an aeromedical summary with the FDME requesting a waiver when control of the hypertension is achieved. Recommend termination of aviation service if the hypertension cannot be controlled by waiverable medications within 365 days, or the hypertension has other significant complications such as hypertrophic cardiomyopathy or other end organ damage.

1.2. MEASURING PULSE:

a. Is measured in the sitting position. It is important to allow the patient to relax for a minute before measuring pulse rate to ensure you obtain the most accurate reading.

Note: *It is important to count the pulse rate for a full minute to obtain a accurate reading*.

b. Record the readings in even numbers. Record the sitting pulse reading in block 57 of DD Form 2808, Report of Medical Examination for all initial and comprehensive FDME. Record the sitting BP reading in block 16 of the DA Form 4497-R for the interim FDME.

(1). Normal ranges: 50 - 100
(2). Sitting pulse is required on all FDME’s.

APPENDIX G

READING ALOUD TEST

1.1 BACKGROUND:

a. Administer the reading aloud test (RAT) to aviation training and air traffic control applicants as a standardized assessment of an individual's ability to communicate clearly in the English language, in a manner compatible with safe and effective aviation operations. Current communication systems are known to degrade speech intelligibility. The radio environment separates the speaker and the listener from the benefits of watching lips and body language cues. Those with marginal English skills have problems communicating effectively in the operational aviation environment, and since English is the international aviation language, it is imperative that aviation and ATC personnel are able to communicate concisely.

b. Failure of the screening RAT by applicants with English as their native language may indicate undiagnosed or concealed learning disabilities. Administration of the RAT occasionally reveals immature, indecisive, careless, or excessively introverted personalities, which may indicate a high risk for aviation training failure.

c. When administered to aviation personnel, to include ATC personnel, the RAT will be used to determine the individual's ability to clearly enunciate, in the English language, in a manner compatible with safe and effective aviation operations.

d. The RAT appears to be a nonsense story, but was designed as a phonetic exercise. Assessment by the flight surgeon is subjective. Applicants should read the RAT clearly, deliberately, without hesitation, error, or stuttering. The test is scored in Block 72a as "RAT-PASS" or "RAT-FAIL."

e. The examining physician will consult with a local instructor pilot or ATC supervisor in questionable cases.

1.2. PROCEDURE:

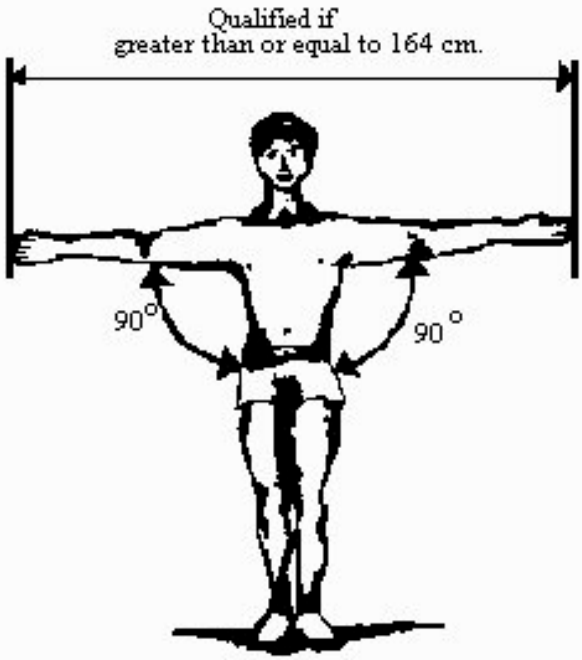
a. Have the examinee stand erect, face the examiner across the room and read aloud, as if he / she were confronting a class of students.

b. If he / she pauses, even momentarily, on any phrase or word, the examiner immediately and sharply says, "What's that?" and requires the examinee to start again with the first sentence of the test. The true stammerer usually will halt again at the same word or phonetic combination and will often reveal serious stammering. Have the applicant read aloud as follows:

"You wished to know all about my grandfather. Well, he is nearly 93 years old; he dresses himself in an ancient black frock coat, usually minus several buttons; yet he still thinks as swiftly as ever. A long flowing beard clings to his chin giving those who observe him a pronounced feeling of the utmost respect. When he speaks, his voice is just a bit cracked and quivers a trifle. Twice each day he plays

skillfully and with zest upon our small organ. Except in winter when the ooze of snow or ice is present, he slowly takes a short walk each day. We have often urged him to walk more and smoke less, but he always answers, "Banana oil!" Grandfather likes to be modern in his language."

Appendix H
ANTHROPOMETRIC



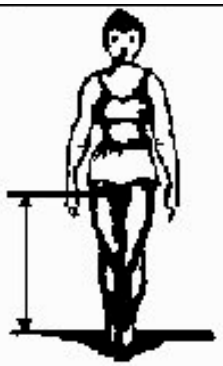
TOTAL ARM REACH - The subject must stand erect against a wall, arms outstretched at a 90 angle and parallel with the wall. The elbows be locked. The fingertips of one hand must be in contact with the adjacent wall in corner of that room. The horizontal distance between fingertips is recorded in centimeters in Block 73 of the SF 88.

SITTING HEIGHT - The subject must sit on a hard flat surface, facing outward, feet flat on the floor, with buttocks, shoulders, and back of head against the wall. Using a right angle ruler on the head the distance between the sitting surface and the top of the head is recorded in centimeters and recorded in Block 73 of the SF 88.

Qualified if less than or equal to 102cm.

95 cm for aeroscouts

Qualified if greater than or equal to 75 cm.



CROTCH HEIGHT - The subject must stand completely erect against a wall, heals together, weight evenly distributed, and knees locked. The measurement is taken parallel with the wall from the floor to a point where light contact is made with the perineum in the midline. Results should be recorded in centimeters in Block 73 of the SF 88.

Appendix I

Electrocardiogram

1.1. Electrocardiogram

a. The purpose of an electrocardiogram is to obtain a record of the electrical activity of the heart. Electrocardiograms are required on all initial FDME's and beginning at age 34 on all comprehensive physicals or when clinically indicated.

b. The record the interpretation of any normal, normal variant or abnormality in block 73 on DD 2808. Use APL 2 as a reference for preferred terminology in stating the aeromedical interpretation. A physician's signature is required on all EKG tracings.

c. Patient should be fasting for 12 hours prior to resting EKG. The procedure for obtaining a 12 lead reading is as follows:

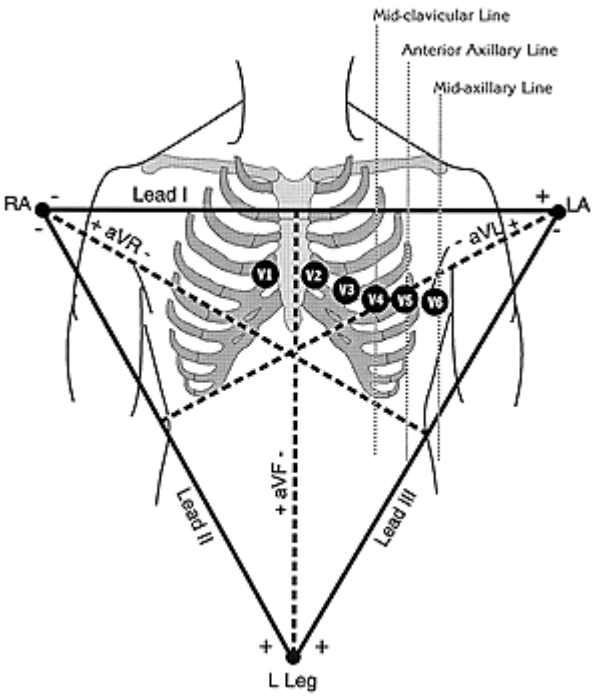
(1). Explain procedure to the patient and answer any questions regarding the procedure

(2). Have the patient disrobe exposing the chest, ensuring patient privacy at all times.

(3). Place the patient in a supine position with arms at sides.

(4). Enter required patient data into the EKG recorder.
a. Name
b. SSN
c. Age
d. Gender
e. Race
f. Height and Weight

(5). Proper EKG 12-lead placement



(1) RA - Right shoulder
(2) LA - Left shoulder
(3) RL - Right leg
(4) LL - Left leg
(5) V-1 – Right fourth intercostal space
(6) V-2 – Left fourth intercostal space
(7) V-3 – On the rib between V-2 and V-4
(8) V-4 – On the fifth intercostal space midclavicular line
(9) V-5 – Left anterior axillary line, fifth intercostal space
(10) V-6 – Left mid-axillary, fifth intercostal space

APPENDIX J

Report OF Medical History

This appendix outlines the aeromedical standard of care for DD Form 2807-1 data entry by item number. DA Form 4700, Medical History Continuation forms provide additional details required by AAMA on general medical history, allergic rhinitis history, and historical use of alcohol and drugs. Use of the history continuation sheets reduces the return rate for incomplete history.

Note: Items listed are a recommendation to ease conversion from SF 93 to the DD 2908. Official guidance from AAMA is forth coming

1. **Name**: Enter the last name, first name, and middle name (If the individuals first name consist of an initial only, indicate by adding (IO) after the name. Place “Jr” or similar designations after the middle initial. If there is no middle name or initial, put a dash after the first name.).

2. **Social Security Number**: Self-explanatory

3. **Today’s Date**: Record the FDME date as YYYYMMDD (20010415)

4a. **Home Address**: Enter the individuals current home mailing address. If the individual is in transit due to PCS or deployment, enter best-known forwarding address and attach a copy of the movement orders.
4b. **Home Telephone**: Record telephone number.

5. **Examining Location and Address**: Enter the name, address, commercial, DSN, and fax numbers of the examining facility. Include the examination facility five-digit AEDR code.

6a. **Service**: Indicate applicable service.
6b. **Component**: Indicate applicable service
6c. **Purpose of Examination**: Indicate Class of FDME on space provided under block marked other

7a. **Position**: Enter title, grade, and component (note: if civilian aviator use DAC-Department of the Army civilian or Civ contractor-for civilian contract pilot.)
7b. **Usual Occupation**: Enter occupation of examinee

8.**Currnet Medications**: Enter all medications to include OTC meds. If no medications are taken enter “None”.

9 **Allergies**: Enter all allergies if not indicated enter “None.”

10-28 **Review of Systems:** The examinee responds to all questions. When the examinee does not understand a question, the examiner may explain, but not indicate what response should be entered. The examinee describes any questions answered yes in block 29. The examiner numbers all abnormal responses and refers to the numbers when making comments in block 30.

30a. Summary: The examinee indicates his or her state of health by entering the statement “ I am in_____health.

The aircrew member traditionally reads and reaffirms their general responsibilities and exogenous factors guidelines under AR 40-8, Exogenous Factors. Enter the following paragraph and have the examinee sign acknowledging compliance:

“ I understand that I must be cleared by a flight surgeon after hospitalization or sick in quarters (AR 600-105) and must inform him after any treatment or activities which may require restriction (AR 40-8) I have read AR 40-8 and I have informed the examining physician of any changes sine my last examination.”

The examiner shall comment on all positive answers in questions 10-29.

30b. Type or Printed Name of Examiner: The examiner name is entered.

30c. Signature: Examiners signature is entered here.

REPORT OF MEDICAL HISTORY

(This information is for official and medically confidential use only and will not be released to unauthorized persons.)

Form Approved
OMB No. 0704-0412
Expires Aug 31, 2003

The public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0412), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS. RETURN COMPLETED FORM AS INDICATED ON PAGE 2.

PRIVACY ACT STATEMENT

AUTHORITY: 10 USC 504, 505, 531, 532, 978, 1201, 1202, and 4346, and E.O. 9397.
PRINCIPAL PURPOSE(S): To obtain medical data for determination of medical fitness for enlistment, induction, appointment and retention for applicants and members of the Armed Forces. The information will also be used for medical boards and separation of Service members from the Armed Forces.
ROUTINE USES: None.
DISCLOSURE: Voluntary; however, failure by an applicant to provide the information may result in delay or possible rejection of the individual's application to enter the Armed Forces. For an Armed Forces member, failure to provide the information may result in the individual being placed in a non-deployable status.

WARNING: The information you have given constitutes an official statement. Federal law provides severe penalties (up to 5 years confinement or a $10,000 fine or both), to anyone making a false statement. If you are selected for enlistment, commission, or entrance into a commissioning program based on a false statement, you can be tried by military courts-martial or meet an administrative board for discharge and could receive a less than honorable discharge that would affect your future.

1. LAST NAME, FIRST NAME, MIDDLE NAME (SUFFIX)

2. SOCIAL SECURITY NUMBER

3. TODAY'S DATE (YYYYMMDD)

4.a. HOME ADDRESS (Street, Apartment No., City, State, and ZIP Code)

5. EXAMINING LOCATION AND ADDRESS (Include ZIP Code)

b. HOME TELEPHONE (Include Area Code)

X ALL APPLICABLE BOXES:

6.a. SERVICE: ☐ Army ☐ Coast Guard ☐ Navy ☐ Marine Corps ☐ Air Force

b. COMPONENT: ☐ Active Duty ☐ Reserve ☐ National Guard

c. PURPOSE OF EXAMINATION: ☐ Enlistment ☐ Commission ☐ Retention ☐ Separation ☐ Medical Board ☐ Other (Specify) ☐ Retirement ☐ U.S. Service Academy ☐ ROTC Scholarship Program

7.a. POSITION (Title, Grade, Component)

b. USUAL OCCUPATION

8. CURRENT MEDICATIONS (Prescription and Over-the-counter)

9. ALLERGIES (Including insect bites/stings, foods, medicine or other substances)

Mark each item "YES" or "NO". Every item marked "YES" must be fully explained in Item 20 on Page 2.

HAVE YOU EVER HAD OR DO YOU NOW HAVE:	YES	NO
10.a. Tuberculosis	○	○
b. Lived with someone who had tuberculosis	○	○
c. Coughed up blood	○	○
d. Asthma or any breathing problems related to exercise, weather, pollens, etc.	○	○
e. Shortness of breath	○	○
f. Bronchitis	○	○
g. Wheezing or problems with wheezing	○	○
h. Been prescribed or used an inhaler	○	○
i. A chronic cough or cough at night	○	○
j. Sinusitis	○	○
k. Hay fever	○	○
l. Chronic or frequent colds	○	○
11.a. Severe tooth or gum trouble	○	○
b. Thyroid trouble or goiter	○	○
c. Eye disorder or trouble	○	○
d. Ear, nose, or throat trouble	○	○
e. Loss of vision in either eye	○	○
f. Worn contact lenses or glasses	○	○
g. A hearing loss or wear a hearing aid	○	○
h. Surgery to correct vision (RK, PRK, LASIK, etc.)	○	○
12.a. Painful shoulder, elbow or wrist (e.g. pain, dislocation, etc.)	○	○
b. Arthritis, rheumatism, or bursitis	○	○
c. Recurrent back pain or any back problem	○	○
d. Numbness or tingling	○	○
e. Loss of finger or toe	○	○

12. (Continued)	YES	NO
f. Foot trouble (e.g., pain, corns, bunions, etc.)	○	○
g. Impaired use of arms, legs, hands, or feet	○	○
h. Swollen or painful joints	○	○
i. Knee trouble (e.g., locking, giving way, pain or dislocation, etc.)	○	○
j. Any knee or foot surgery, including arthroscopy, or the use of a knee brace, splint or pad	○	○
k. Any need to use corrective devices such as prosthetic devices, knee braces, back support DC, PTI or OREGOS, etc.	○	○
l. Bone, joint, or other deformity	○	○
m. Pain(s), accident(s), injury or pain in any bone	○	○
n. Broken bone(s) (fractured or dislocated)	○	○
13.a. Frequent indigestion or heartburn	○	○
b. Stomach, liver, intestinal trouble, or ulcer	○	○
c. Gall bladder trouble or gallstones	○	○
d. Jaundice or hepatitis (liver disease)	○	○
e. Rupture/hernia	○	○
f. Rectal disease, hemorrhoids or blood from the rectum	○	○
g. Skin disease (e.g. acne, eczema, psoriasis, etc.)	○	○
h. Frequent or painful urination	○	○
i. High or low blood sugar	○	○
j. Kidney stone or blood in urine	○	○
k. Sugar or protein in urine	○	○
l. Sexually transmitted disease (syphilis, gonorrhea, chlamydia, genital warts, herpes, etc.)	○	○
14.a. Adverse reaction to serum, food, insect stings or medicine	○	○
b. Recent unexplained gain or loss of weight	○	○
c. Currently in good health (If no, explain in Item 20 on Page 2.)	○	○
d. Tumor, growth, cyst, or cancer	○	○

LAST NAME, FIRST NAME, MIDDLE NAME (SUFFIX)	SOCIAL SECURITY NUMBER

Mark each item "YES" or "NO". Every item marked "YES" must be fully explained in Item 29 below.

HAVE YOU EVER HAD OR DO YOU NOW HAVE:	YES	NO
15.a. Dizziness or fainting spells	○	○
b. Frequent or severe headache	○	○
c. A head injury, memory loss or amnesia	○	○
d. Paralysis	○	○
e. Seizures, convulsions, epilepsy or fits	○	○
f. Car, train, sea, or air sickness	○	○
g. A period of unconsciousness or concussion	○	○
h. Meningitis, encephalitis, or other neurological problems	○	○
16.a. Rheumatic fever	○	○
b. Prolonged bleeding *(as after an injury or tooth extraction, etc.)*	○	○
c. Pain or pressure in the chest	○	○
d. Palpitation, pounding heart or abnormal heartbeat	○	○
e. Heart trouble or murmur	○	○
f. High or low blood pressure	○	○
17.a. Nervous trouble of any sort *(anxiety or panic attacks)*	○	○
b. Habitual stammering or stuttering	○	○
c. Loss of memory or amnesia, or neurological symptoms	○	○
d. Frequent trouble sleeping	○	○
e. Received counseling of any type	○	○
f. Depression or excessive worry	○	○
g. Been evaluated or treated for a mental condition	○	○
h. Attempted suicide	○	○
i. Used illegal drugs or abused prescription drugs	○	○
18. FEMALES ONLY. Have you ever had or do you now have:		
a. Treatment for a gynecological (female) disorder	○	○
b. A change of menstrual pattern	○	○
c. Any abnormal PAP smears	○	○
d. First day of last menstrual period *(YYYYMMDD)*		
e. Date of last PAP smear *(YYYYMMDD)*		

	YES	NO
19. Have you been refused employment or been unable to hold a job or stay in school because of:		
a. Sensitivity to chemicals, dust, sunlight, etc.	○	○
b. Inability to perform certain motions	○	○
c. Inability to stand, sit, kneel, lie down, etc.	○	○
d. Other medical reasons *(If yes, give reasons.)*	○	○
20. Have you ever been treated in an Emergency Room? *(If yes, for what?)*	○	○
21. Have you ever been a patient in any type of hospital? *(If yes, specify when, where, why, and name of doctor and complete address of hospital.)*	○	○
22. Have you ever had, or have you been advised to have any operations or surgery? *(If yes, describe and give age at which occurred.)*	○	○
23. Have you ever had any illness or injury other than those already noted? *(If yes, specify when, where, and give details.)*	○	○
24. Have you consulted or been treated by clinics, physicians, healers, or other practitioners within the past 5 years for other than minor illnesses? *(If yes, give complete address of doctor, hospital, clinic, and details.)*	○	○
25. Have you ever been rejected for military service for any reason? *(If yes, give date and reason for rejection.)*	○	○
26. Have you ever been discharged from military service for any reason? *(If yes, give date, reason, and type of discharge: whether honorable, other than honorable, for unfitness or unsuitability.)*	○	○
27. Have you ever received, is there pending, or have you ever applied for pension or compensation for any disability or injury? *(If yes, specify what kind, granted by whom, and what amount, when, why.)*	○	○
28. Have you ever been denied life insurance?	○	○

29. EXPLANATION OF "YES" ANSWERS! *(Describe answer(s), give date(s) of problem, name of doctor(s) and/or hospital(s), treatment given and current medical status.)*

NOTE: HAND TO THE DOCTOR OR NURSE, OR IF MAILED MARK ENVELOPE "TO BE OPENED BY MEDICAL PERSONNEL ONLY."

LAST NAME, FIRST NAME, MIDDLE NAME (SUFFIX)	SOCIAL SECURITY NUMBER

30. EXAMINER'S SUMMARY AND ELABORATION OF ALL PERTINENT DATA *(Physician shall comment on all positive answers in questions 10 - 29. Physician may develop by interview any additional medical history deemed important, and record any significant findings here.)*

a. COMMENTS

I am in _____ health.

I understand I must be cleared by a flight surgeon after hospitalization or sick in quarters (AR 600-105) and must inform him after any treatment or activities which may require restriction (AR 40-8). I have read AR 40-8 and I have informed the examining physician of any changes in my health since my last examination.

SIGNATURE:_____

b. TYPED OR PRINTED NAME OF EXAMINER *(Last, First, Middle Initial)*	c. SIGNATURE	d. DATE SIGNED *(YYYYMMDD)*

Appendix K

Report of Medical Examination

This appendix outlines the aeromedical standard of care for DD Form 2808 data entry by item number. All of the pertinent administrative and lab data should be entered prior to the examiner conducting the physical. Items listed are a recommendation to ease conversion from SF 88 to the DD 2908. Official guidance from AAMA is forth coming.

1. **Date of Examination**: Record the FDME date as YYYYMMDD (20010415).

2. **Social Security Number**: Enter the examinee social security number.

3. **Name**: Enter the last name, first name, and middle name (If the individuals first name consist of an initial only, indicate by adding (IO) after the name. Place “Jr” or similar designations after the middle initial. If there is no middle name or initial, put a dash after the first name.)

4.**Home Address**: Enter the individuals current home mailing address. If the individual is in transit due to PCS or deployment, enter best-known forwarding address and attach a copy of the movement orders.

5. **Home Telephone**: Record telephone number.

6. **Grade**: Enter the grade: (0-1/03).

7. **Date** of Birth: Record date as YYYYMMDD (20010415).

8. **Age**: Record age of examinee

9. **Sex**: Indicate gender of examinee.

10. **Race**: Indicate ethnic group of examinee, enter Hispanic as when necessary.

11a/b. **Total Years of Government** Service: Enter total years of government service.

12. **Agency**: Enter DAC if Department of he Army civilian or Civ-contract if contract civilian aviator.

13. **Unit and UIC** /code: Enter organizational unit and UIC code (ex USASAM

14a. **Rating or Specialty**: Enter individuals current military job or specialty by title
14b. **Total Flying Time**: Enter career-flying hours.
14c. **Last Six Months**: Enter total flying time acquired in last six months.

15a. **Service**: Indicate applicable service.
15b. **Component**: Indicate applicable service
15c. **Purpose of Examination**: Indicate Class of FDME on space provided under block marked other.

16. **Examining Location and Address**: Enter the name, address, commercial, DSN, and fax numbers of the examining facility. Include the examination facility five-digit AEDR code.

17-44. **Clinical Evaluation**: The examiner records each abnormal examination finding in bloc 42. The record must be concise, legible, and complete, permitting appraisal of its aeromedical significance.

The following guidelines apply for documenting items 22,30, and 41

Item 32: **Valsalva** (bilaterally) recorded in block 72a.
Item 30 **Digital Rectal**: Documented in block 42 as follows
(Digital Rectal: Normal / Abnormal / Omitted)
(Stool Guaic: Normal / Abnormal / Omitted)
Item 41: **Pap smear** Recorded in block 52a.

Laboratory Findings: Should be entered by clinic staff prior to the actual examination. Any abnormal findings can then be identified and retesting ordered upon consultation with the flight surgeon

45. Urinalysis:
45a. Albumin: Record test results as Positive or Negative
b: Sugar: Record test results as Positive or Negative

46. Urine HCG: Positive / Negative

47. H/H: Enter the value as % for hematocrit.

Additional laboratory test:

Test	Results
49. **HIV**	Record Date collected

52a **Pap smear** Pap smears, pelvic and breast exams are required on all FDME's. Record test results as Normal / Abnormal

52b. **RPR** Serology is required on all initial FDME. Not required on comprehensive or interim FDME's. Record results as Positive / Negative

52c. **Sickledex** Sickle cell screening required on all initial FDME. If positive, annotate results of a hemoglobin electrophoresis in block 77. Record test results as Positive / Negative

53. **Height**: Record the standing height without shoes to the nearest whole inch. Standing height is required on all initial and comprehensive FDME's.

54. **Weight**: Record the examinees weight in summer PT uniform without shoes to the nearest whole pound. If the weight exceeds the screening table weight for height and age record the percent body fat (Max BF %).

56. **Temperature**: Not required on FDME

57-72b. Has been covered in Appendices listed above.

73. The following additional laboratory test and measurements should be documented in this block:

(a). 45. **Urine Microscopic or Dipstick**: Evaluation for WBC and RBC. Record results as WBC: WNL or Abnormal
RBC: WNL or abnormal

(b). 52 **Lipid Profile**
Total Cholesterol: _____
HDL: _____
Triglycerides: _____
Cardiac risk Index: _____

(c). 52. **Fasting Blood Sugar**: _____

Other Aeromedical Test documented in block 73.

(a). **ECG**: As noted in Appendix I. Record results as WNL or Abnormal and enter G code: _____

(b). **Chest X-Ray**: Enter place, date and findings. A chest x-ray is required on all initial FDME and when clinically indicated. (Example: LACH, Ft. Rucker, 03 Mar 01, Normal Film# 01-2316)

(c). **Anthropometrics**: Linear anthropometrics is required on all initial FDME. Record the findings to the nearest centimeter as noted in Appendix H. (example: TAR: _____cm, SH: _____cm, LL: _____cm

(d). **Aeronautical Adaptability**: The flight surgeon's assessment of the examinee aeronautical adaptability. Record results as AA Sat or Unsat.

(e). **Smoking History**: Document the smoking history in pack years.

(f). **Waivers**: List any previous waivers or suspensions and provide results of any test required to maintain waiver

74a. **Qualification**: Document whether examinee is qualified to continue aviation service.

74b. **Physical Profile**: For military aircrew enter their current permanent profile status as prescribed by the PULHES system in AR 40-501.

75. **Signature**: Examinee signs if a disqualifying condition is noted.

77. **Summary of Defects and Diagnosis**: Record all defect and disqualifications by item number.

78. **Recommendations**: Enter recommendations for disposition (i.e. Recommend waiver, Recommend continuation of waiver.

81-84. **Signature**: Enter typed or printed names of examiners, rank, corps, FS/APA designation. Each examiner must sign the FDME. FDME conducted by non-FS must be counter signed by Flight surgeon or APA.

REPORT OF MEDICAL EXAMINATION

1. DATE OF EXAMINATION (YYYYMMDD)

2. SOCIAL SECURITY NUMBER

PRIVACY ACT STATEMENT

AUTHORITY: 10 USC 504, 505, 507, 532, 978, 1201, 1202, and 4346; and E.O. 9397.
PRINCIPAL PURPOSE(S): To obtain medical data for determination of medical fitness for enlistment, induction, appointment and retention for applicants and members of the Armed Forces. The information will also be used for medical boards and separation of Service members from the Armed Forces.
ROUTINE USE(S): None.
DISCLOSURE: Voluntary; however, failure by an applicant to provide the information may result in delay or possible rejection of the individual's application to enter the Armed Forces. For an Armed Forces member, failure to provide the information may result in the individual being placed in a non-deployable status.

3. LAST NAME - FIRST NAME - MIDDLE NAME (SUFFIX)

4. HOME ADDRESS (Street, Apartment Number, City, State and ZIP Code)

5. HOME TELEPHONE NUMBER (Include Area Code)

6. GRADE

7. DATE OF BIRTH (YYYYMMDD)

8. AGE

9. SEX: ☐ Female ☐ Male

10. RACE: ☐ American Indian/Alaskan Native ☐ Asian/Pacific Islander ☐ Black ☐ White

11. TOTAL YEARS GOVERNMENT SERVICE: a. MILITARY b. CIVILIAN

12. AGENCY (Non-Service Members Only)

13. ORGANIZATION UNIT AND UIC/CODE

14.a. RATING OR SPECIALTY (Aviators Only)

b. TOTAL FLYING TIME

c. LAST SIX MONTHS

15.a. SERVICE: ☐ Army ☐ Coast Guard ☐ Navy ☐ Marine Corps ☐ Air Force

b. COMPONENT: ☐ Active Duty ☐ Reserve ☐ National Guard

c. PURPOSE OF EXAMINATION: ☐ Enlistment ☐ Commission ☐ Retention ☐ Separation ☐ Medical Board ☐ Other ☐ Retirement ☐ U.S. Service Academy ☐ ROTC Scholarship Program

16. NAME OF EXAMINING LOCATION, AND ADDRESS (Include ZIP Code)

CLINICAL EVALUATION (Check each item in appropriate column. Enter "NE" if not evaluated.)

	Normal	Abnorm	NE
17. Head, face, neck, and scalp			
18. Nose			
19. Sinuses			
20. Mouth and throat			
21. Ears - General (Int. and ext. canals/Auditory acuity under item 72)			
22. Drum (Perforation)			
23. Eyes - General (Visual acuity and refraction under items 62 - 71)			
24. Ophthalmoscopic			
25. Pupils (Equality and reaction)			
26. Ocular motility (Associated parallel movements, nystagmus)			
27. Heart (Thrust, size, rhythm, sounds)			
28. Lungs and chest (Include breasts)			
29. Vascular system (Varicosities, etc.)			
30. Anus and rectum (Hemorrhoids, Fistulae) (Prostate if indicated)			
31. Abdomen and viscera (Include hernia)			
32. External genitalia (Genitourinary)			
33. Upper extremities			
34. Lower extremities (Except feet)			
35. Feet			
36. Spine, other musculoskeletal			
37. Identifying body marks, scars, tattoos			
38. Skin, lymphatics			
39. Neurologic			
40. Psychiatric (Specify any personality deviation)			
41. Pelvic (Females only)			

42. NOTES: (Describe every abnormality in detail. Enter pertinent item number before each comment. Continue in item 73 and use additional sheets if necessary.)

22. Valsalva (Bilaterally) SEE BLOCK 72a

30. Digital Rectal NORMAL / ABNORMAL / OMITTED

Stool Guaiac NORMAL / ABNORMAL / OMITTED

41. Pap Smear SEE BLOCK 52a

43. DENTAL DEFECTS AND DISEASE (Please explain. Use dental form if completed by dentist.)

☐ Acceptable

☐ Not Acceptable Class _____

(Dental examination not done by dental officer)

44. FEET (Circle category)

Normal Arch	Mild	Asymptomatic
Pes Cavus	Moderate	
Pes Planus	Severe	Symptomatic

A5

LAST NAME - FIRST NAME - MIDDLE NAME (SUFFIX)	SOCIAL SECURITY NUMBER

LABORATORY FINDINGS

45. URINALYSIS	a. Albumin Pos / Neg b. Sugar Pos / Neg	46. URINE HCG	47. H/H HCT	48. BLOOD TYPE

TESTS	RESULTS	HIV SPECIMEN ID LABEL	DRUG TEST SPECIMEN ID LABEL
49. HIV	Date collected:		
50. DRUGS			
51. ALCOHOL			
52. OTHER			
a. PAP SMEAR	NORMAL / ABNORMAL		
b. RPR	POS / NEG		
c. Sickledex	POS / NEG		

MEASUREMENTS AND OTHER FINDINGS

53. HEIGHT	54. WEIGHT lbs.	55. MIN WGT - MAX WGT	MAX BF %	56. TEMPERATURE	57. PULSE

58. BLOOD PRESSURE			59. RED/GREEN *(Army Only)*	60. OTHER VISION TEST
a. 1ST	b. 2ND	c. 3RD		Cycloplegic Refraction
SYS.	SYS.	SYS.		OD By S. CX by
DIAS.	DIAS.	DIAS.		OS By S. CX by

61. DISTANT VISION		62. REFRACTION BY AUTOREFRACTION OR MANIFEST	63. NEAR VISION
Right 20/	Corr. to 20/	By S. CX by	Right 20/ Corr. to 20/ by
Left 20/	Corr. to 20/	By S. CX by	Left 20/ Corr. to 20/ by

64. HETEROPHORIA *(Specify distance)*

ES° EX° R.H. L.H. Prism div. Prism Conv CT NPR PD

65. ACCOMMODATION		66. COLOR VISION *(Test used and result)*	67. DEPTH PERCEPTION *(Test used and score)* AFVT	
Right	Left	PIP 14	Uncorrected	Corrected

68. FIELD OF VISION	69. NIGHT VISION *(Test used and score)*	70. INTRAOCULAR TENSION	
FTC / Abnormal	NIBH / Abnormal	O.D.	O.S.

71a. AUDIOMETER	Unit Serial Number						71b. Unit Serial Number							72a. READING ALOUD TEST
Date Calibrated *(YYYYMMDD)*							Date Calibrated *(YYYYMMDD)*							SAT UNSAT
HZ	500	1000	2000	3000	4000	6000	HZ	500	1000	2000	3000	4000	6000	72b. VALSALVA
Right							Right							SAT UNSAT
Left							Left							

73. NOTES *(Continued)* AND SIGNIFICANT OR INTERVAL HISTORY *(Use additional sheets if necessary.)*

45. Urine Microscopic or Dipstick for WBC and RBC -- WNL / Abnormal

52. Total Cholesterol Fasting Blood Sugar

HDL

Triglycerides

Cardiac Risk Index

OTHER AEROMEDICAL:

ECG -- WNL / Abnormal G Code:

Chest XRay -- WNL / Abnormal Date:

Anthropometrics: TAR_____cm, SH_____cm, CH_____cm

Aeronautical Adaptability -- SAT / UNSAT

LAST NAME - FIRST NAME - MIDDLE NAME (SUFFIX)	SOCIAL SECURITY NUMBER

74.a. EXAMINEE/APPLICANT *(Check one)*	75. I have been advised of my disqualifying condition.	
☐ IS QUALIFIED FOR SERVICE ☐ IS NOT QUALIFIED FOR SERVICE	a. SIGNATURE OF EXAMINEE	b. DATE *(YYYYMMDD)*

b. PHYSICAL PROFILE

P	U	L	H	E	S	X	PROFILER INITIALS	DATE *(YYYYMMDD)*

76. SIGNIFICANT OR DISQUALIFYING DEFECTS

ITEM NO.	MEDICAL CONDITION/DIAGNOSIS	ICD CODE	PROFILE SERIAL	RBJ DATE *(YYYYMMDD)*	QUALIFIED	DISQUALIFIED	EXAMINER INITIALS	WAIVER RECEIVED	
								SERVICE	DATE *(YYYYMMDD)*

77. SUMMARY OF DEFECTS AND DIAGNOSES *(List diagnoses with item numbers) (Use additional sheets if necessary.)*

78. RECOMMENDATIONS - FURTHER SPECIALIST EXAMINATIONS INDICATED *(Specify) (Use additional sheets if necessary.)*

79. MEPS WORKLOAD *(For MEPS use only)*

WKID	ST	DATE *(YYYYMMDD)*	INITIAL	WKID	ST	DATE *(YYYYMMDD)*	INITIAL

80. MEDICAL INSPECTION DATE	HT	WT	%BF	MAX WT	HCG	QUAL	DISQ	PHYSICIAN'S SIGNATURE

81.a. TYPED OR PRINTED NAME OF PHYSICIAN OR EXAMINER	b. SIGNATURE
82.a. TYPED OR PRINTED NAME OF PHYSICIAN OR EXAMINER	b. SIGNATURE
83.a. TYPED OR PRINTED NAME OF DENTIST OR PHYSICIAN *(Indicate which)*	b. SIGNATURE
84.a. TYPED OR PRINTED NAME OF REVIEWING OFFICER/APPROVING AUTHORITY	b. SIGNATURE

85. This examination has been administratively reviewed for completeness and accuracy.

a. SIGNATURE	b. GRADE	c. DATE *(YYYYMMDD)*

86. WAIVER GRANTED *(If yes, date and by whom)*	87. NUMBER OF ATTACHED SHEETS
☐ YES ☐ NO	

Home Phone ( )	DOB:	Age for	*HIV Req.?	Date:
Work Phone ( )		this exam:	YES / NO	

Class 1/1A and Initial Class 2, 2F, 3 and 4	**Comprehensive FDME** (19, 22, 25, 28, 31, 34, 37, 40, 43, 46, 49, then yearly)	**Interim FDME**
Vital signs_____ BP, Pulse, Ht, Wt, Body Fat % Anthros (Class 1/1A and 2/2F only) **Vision**_____ VAs, Phorias by AFVTA, Cover-uncover test (tropias), Cross-cover (phorias), NPC, IOPs, Color vision, Stereopsis, Visual fields, Night vision Hx Refraction Cycloplegic (Class 1/1A only) Manifest / Eyeglass Rx (All classes) **Audio**_____ **ECG**_____ **Dental**_____ **Pap & Pelvic**_____ (cytology rpt req.)	**Vital signs**_____ BP, Pulse, Ht, Wt **Vision**_____ VAs, Phorias by AFVTA, Stereopsis, Night vision Hx Manifest Refraction / Eyeglass Rx **Audio**_____ **ECG**_____ **Dental**_____ **Pap & Pelvic**_____	**Vital signs**_____ BP, Pulse, Ht, Wt **Vision**_____ VAs, Stereopsis Manifest Refraction / Eyeglass Rx **Audio**_____ **ECG not required unless clinically indicated or required by waiver** **Dental**_____ **Pap & Pelvic**_____
Labs UA w/ microscopic, HCT, HIV, RPR, FBS, Sickledex, Chol, HDL, Trig CXR	**Labs** *HIV, UA w/ microscopic, HCT, Chol, HDL, Trig	**Labs** *HIV, Chol, HCT
Notes: SF 93 Cont. (History Continuation) RAT and AA (ARMA) Valsalva Refractive Surgery and contact lens wear are strictly forbidden	**Notes:** *HIV req. every other year. Recommend aligning with birth year -- e.g. if born in an even year do HIV on even years. Must explain contact lens wear	**Notes:** "Health Screening" / Directed Physical Exam See HIV note located at left Must explain contact lens wear

Over 40 (for all FDMEs), add the following items:	**Over 50, add:**
Fasting Blood Sugar Cardiac Risk Index (must use CADRisk Computer Program, version 4 or later) Rectal and Stool guaiac Mammogram: 40,42, 44,46,48,50, then yearly IOPs	PSA **Retirement, add:** CXR DD Form 2697 **NOTE:** Must be a comprehensive exam

Additional tests, studies and consults:

Last name First MI Rank SSN: Unit:	**Provider's Stamp** Date:	**Status**

Home Phone ( )	DOB:	Age for	Date:
Work Phone ( )		this exam:	

SF Initial	HALO	Diver	SERE
Vital signs_____ BP, Pulse, Ht, Wt **Vision**_____ VAs, Phorias, Stereopsis, Night vision Hx, Color vision **Audio**_____ **ECG**_____ **Valsalva**_____	**Vital signs**_____ BP, Pulse, Ht, Wt **Vision**_____ VAs, Phorias, Stereopsis, Night vision Hx, Color vision **Audio**_____ **ECG**_____ **Valsalva**_____	**Vital signs**_____ BP, Pulse, Ht, Wt **Vision**_____ VAs, Phorias, Stereopsis, Night vision Hx, Color vision **Audio**_____ **ECG**_____ **Valsalva**_____	**Vital signs**_____ BP, Pulse, Ht, Wt **Vision**_____ VAs, Phorias, Stereopsis, Night vision Hx, Color vision **Audio**_____ **ECG**_____ **Valsalva**_____
❑ Eyeglass Rx ❑ Dental ❑ CXR ❑ Pap & Pelvic	❑ Eyeglass Rx ❑ Dental ❑ CXR ❑ Pap & Pelvic	❑ Eyeglass Rx ❑ Dental ❑ CXR ❑ Pap & Pelvic	❑ Eyeglass Rx ❑ Dental ❑ Pap & Pelvic
Labs ❑ UA w/ microscopic ❑ HCT ❑ HIV ❑ Total Lipid Profile ❑ RPR ❑ Sickledex	**Labs** ❑ UA w/ microscopic ❑ HCT and WBC ❑ HIV ❑ Total Lipid Profile ❑ RPR ❑ Sickledex	**Labs** ❑ UA w/ microscopic ❑ HCT and WBC ❑ HIV ❑ Total Lipid Profile ❑ RPR ❑ Sickledex ❑ G6PD	**Labs** ❑ UA w/ microscopic ❑ HCT ❑ HIV ❑ Total Lipid Profile ❑ RPR ❑ Sickledex

REVIEW AND WAIVER AUTHORITY:	**NOTES:**
USASOC Surgeon's Office Chief, Medical Training Division ATTN: AOMDT-MT Ft. Bragg, NC 28307-5000	For SF Initial, HALO, and Diver, the review and waiver authority requires the lab printout to be included in the packet.

Additional tests, studies and consults:

	Provider's Stamp	**Status**
Last name First MI Rank SSN: Unit:	Date:	

MEDICAL RECORD - SUPPLEMENTAL MEDICAL DATA

For use of the form, see AR 40-400; the proponent agency is the Army Surgeon General

Report title: Aeromedical continuation of SF 93, History TSG approved 1 April 1995

CAUTION: **Concealment of medical history** during flying duty medical examinations results in the mandatory **permanent medical disqualification** for Unsatisfactory Aeronautical Adaptability.

1. Have you ever been disqualified by a flying duty medical examination (FDME)?	Yes ___	No ___
2. Since your last FDME or in the last 18 months, were you sick, injured, hospitalized, consulted a doctor, or used medication?	Yes ___	No ___
3. Have you ever used or experimented with illegal drugs, such as, but not limited to cocaine, marijuana, PCP, heroin, downers, speed, peyote, LSD, or any other substance considered illegal or dangerous by the US government?	Yes ___	No ___
4. Have you ever been evaluated for or had any mental health illness, such as depression, stress, anxiety, panic attacks, nervous breakdown, or fear of flying?	Yes ___	No ___
5. Have you ever used alcohol resulting in legal problems (such as driving under the influence), absence from school or work, medical problems (such as stomach ulcers, liver disease, blackouts, memory loss), or marital problems? Have you been treated for alcohol abuse or dependence?	Yes ___	No ___
6. Have you ever had surgery to correct cross eyes (strabismus), or poor eyesight to include surgical or laser procedures to change the shape of the cornea (clear eye part) to improve vision, such as radial keratotomy, PRK or LASIK?	Yes ___	No ___
7 Have you ever worn contact lens, including hard contact lenses to change the shape of the cornea (clear part of the eye) in order to improve vision?	Yes ___	No ___
8. Have you ever had a seizure or convulsion, vertigo or spinning dizziness, fainted or lost consciousness, or head injury with concussion and/or skull fracture?	Yes ___	No ___
9. Have you ever had a migraine, cluster headache, or other severe headache?	Yes ___	No ___
10. Have you ever been in special education classes, or had learning disabilities or difficulties, such as dyslexia?	Yes ___	No ___
11. Have you ever had asthma or wheezing, hayfever (allergic nasal problems), or sinus problems that required the use of medications, doctor visits, use of nasal steroid sprays, or allergy shot series?	Yes ___	No ___

(*Continue history on reverse, if required*)

Flight surgeon name stamp:	Flight surgeon signature:	Date:

Patient name and social security number:	Patient signature:	Date:

DA FORM 4700 1 APRIL 1995

MEDICAL RECORD – SUPPLEMENTAL MEDICAL DATA
For use of the form, see AR 40-400; the proponent agency is the Army Surgeon General

Report title: Aeromedical continuation of SF 93, History (Side 2)

(*Continue history here, if required*)

DA FORM 4700 1 April 1995

MEDICAL RECORD – SUPPLEMENTAL MEDICAL DATA
For use of the form, see AR 40-400; the proponent agency is the Army Surgeon General

Report title: Aeromedical continuation of SF 93, Allergic rhinitis TSG approved 1 April 1995

CAUTION: **Concealment of medical history** during flying duty medical examinations results in the mandatory **permanent medical disqualification** for Unsatisfactory Aeronautical Adaptability.

1. Have you ever had hayfever or sinus problems? If yes, complete the form.	Yes ___	No ___
2. State the age that you first had symptoms.	Age =	
2a. State the age that your symptoms last occurred.	Age =	
3. How many total weeks per year would your symptoms persist?	Weeks =	
3a. Circle the months your symptoms occurred. JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC		
4. Check items that aggravate your symptoms. Grass ____ Weeds ____ Trees ____ Molds ____ House dust ____ Mites ____ Cats ____ Dogs ____ Feathers ____ Wool ____ Smoke ___		
5. Have doctors and/or nurses treated your symptoms?	Yes ___	No ___
6. Did you ever have allergy skin or allergy blood tests?	Yes ___	No ___
6a. Test results were?		
7. Check medications you have used. Decongestants ____ Antihistamines ____ Nasal steroids ____ Steroid shots ____ Inhaled cromolyn (Spinhaler) ___ Allergy shots ___		
7a. How many weeks per year would you use medication?	Weeks =	
7b. How many years did you take allergy shots?	Years =	
8. Check other problems you have had. Nasal polyps ___ Sinusitis ___ Sinus surgery ___		
Flight surgeon: record current test results- Patient have symptoms during your testing? Yes ___ No ___ Nasal smear for eosinophils- Blood eosinophil count- Serum IGE level- Sinus X-ray series-		

(*Continue history on reverse, if required*)

Flight surgeon name stamp:	Flight surgeon signature:	Date:
Patient name and social security number:	Patient signature:	Date:

MEDICAL RECORD – SUPPLEMENTAL MEDICAL DATA

For use of the form, see AR 40-400; the proponent agency is the Army Surgeon General

Report title: Aeromedical continuation of SF 93, Allergic rhinitis (Side 2)

(*Continue history here, if required*)

MEDICAL RECORD – SUPPLEMENTAL MEDICAL DATA

For use of the form, see AR 40-400; the proponent agency is the Army Surgeon General

Report title: Aeromedical continuation of SF 93, Alcohol TSG approved 1 April 1995

CAUTION: **Concealment of medical history** during flying duty medical examinations results in the mandatory **permanent medical disqualification** for Unsatisfactory Aeronautical Adaptability.

1. Have you ever felt you should cut down on your drinking alcohol?	Yes ___	No ___
2. Have people ever annoyed you by criticizing your drinking?	Yes ___	No ___
3. Have you ever felt bad or guilty about your drinking?	Yes ___	No ___
4. Have you ever had problems at, or missed school/work due to drinking?	Yes ___	No ___
5. Have you ever had to drink alcohol in the morning to steady your nerves or treat a hangover?	Yes ___	No ___
6 Have you ever been arrested for problems due to alcohol misuse, such as driving under the influence, disorderly conduct, or family fighting?	Yes ___	No ___
6a. If so, when?		
7. Have you ever attended Alcoholics Anonymous, Al-Anon, Al-Ateen, or similar organizations because of your own drinking?	Yes ___	No ___
8. Have you ever been in an outpatient or inpatient alcohol abuse or alcohol dependence treatment program?	Yes ___	No ___
8a. If so, when and where?	Yes ___	No ___
9. How old were you when you had your first drink?	Age =	

10. Describe you current drinking habit. Check all of those that apply to your habit.

What do you drink? Beer ___ Wine ___ Liquor ___

When do you drink? Daily ___ Weekly ___ Weekends/Days off only ___ Monthly ___ Rarely ___

With whom do you drink? Alone ___ With family ___ With friends ___ With bar patrons___

State how much you drink in one sitting.

Compared to past years, do you? Drink the same ___ Drink less ___ Drink more ___

Flight surgeon comments:

Flight surgeon name stamp:	Flight surgeon signature:	Date:

Patient name and social security number:	Patient signature:	Date:

DA FORM 4700 1 April 1995

MEDICAL RECORD – SUPPLEMENTAL MEDICAL DATA

For use of the form, see AR 40-400; the proponent agency is the Army Surgeon General

Report title: Aeromedical continuation of SF 93, Alcohol (Side 2)

(*Continue history here, if required*)

MEDICAL RECORD – SUPPLEMENTAL MEDICAL DATA

For use of the form, see AR 40-400; the proponent agency is the Army Surgeon General

Report title: Aeromedical continuation of SF 93, Drugs TSG approved 1 April 1995

CAUTION: **Concealment of medical history** during flying duty medical examinations results in the mandatory **permanent medical disqualification** for Unsatisfactory Aeronautical Adaptability.

1. Have you ever used illegal drugs, such as but not limited to, marijuana, cocaine, LSD, barbiturates, amphetamines, PCP, etc? If yes, complete the form.	Yes ___	No ___
2. What drugs did you use? Describe frequency and total amount of drugs used (ex. weekly for 1 year). Marijuana: _____ Cocaine: _____ Speed: _____ LSD: _____ Others (name them): _____		
3. Have people ever annoyed you by criticizing your drug use?	Yes ___	No ___
4. Have you ever felt bad or guilty about using illegal drugs?	Yes ___	No ___
5. Have you ever had problems at, or missed school/work due to drug use?	Yes ___	No ___
6. Have you ever been arrested for problems due to drug misuse, such as driving under the influence of drugs, disorderly conduct, or family fighting?	Yes ___	No ___
6a. If so, when?		
7. Have you ever attended drug abstinence support organizations because of your own drug use?	Yes ___	No ___
8. Have you ever been in an outpatient or inpatient drug abuse or drug dependence treatment program?	Yes ___	No ___
8a. If so, when and where?	Yes ___	No ___
9. How old were you when you first used drugs?	Age =	
10. How old were you when you last used drugs?	Age =	
Flight surgeon comments:		

(*Continue history on reverse, if required*)

Flight surgeon name stamp:	Flight surgeon signature:	Date:
Patient name and social security number:	Patient signature:	Date:

DA FORM 4700 1 April 1995

MEDICAL RECORD – SUPPLEMENTAL MEDICAL DATA

For use of the form, see AR 40-400; the proponent agency is the Army Surgeon General

Report title: Aeromedical continuation of SF 93, Drugs (Side 2)

(*Continue history here, if required*)

Appendix O
Obtaining Legal Toxicology Speciemens

1.1. Specimens: Toxicology samples will be collected for all Class A, B, and C accidents. Specimens should be collected at the local medical facility immediately following the accident. All toxicological examinations will be performed at the Armed Forces Institute of Pathology (AFIP). Do not perform tests locally.

1.2. AFIP requests that the following specimens be collected:

SERUM:	5-10 ml (No preservatives, RED TOP)
BLOOD:	14-20 ml (N&F, GREY TOP) 14-20 ml (EDTA, PURPLE TOP)
URINE:	70 ml is optimal (No preservatives)

NOTE: *Carbon Monoxide analysis requires blood to be collected in a PURPLE TOP tube*.

1.3 Guidance: As a practical guide, collect from each of the involved aircrew:

2 red tops
2 purple tops
2 gray tops
70-100 ml urine

Note: ***Prepare skin with betadine or soap and water. Do not use alcohol***.

1.4. Chain of Custody: The above specimens should be collected by chain-of-custody conditions IAW AR 600-85. From the moment they leave the crewmembers body to the time of their delivery at AFIP, they should be secured. DD Form 1323. Toxicological Exam - Request and Report, will be completed and sent with specimens.

AFIP routinely screens for:

Amphetamines	Antihistamines
Barbiturates	Antidepressants
Cocaine	Phencyclidine
Ethanol	Cannabinoids
Carbon Monoxide	Benzodiazepines
Nicotine	Phenothiazines
Salicylates	Narcotic Analgesics
Acetaminophen	NSAID's
Sympathomimetic Amine	Diuretics
Neuroleptics	Morphine

a. Even with the large number of tests completed, substances are still missed because of their short half-life, limited tissue distribution, etc. If them is a specific drug that you would like tested for, specify that on the DD Form 1323, and call AFIP to discuss your request.

b. Label the tubes with the name and social security number of the individual. Wrap tubes in sufficient absorbent material to contain any leakage and place them in individual polyethylene bags. A larger, heat sealed polyethylene bag is then used to keep all the specimens from one individual together. The blood and urine are then packed, unfrozen, in a shipping container of sturdy cardboard, plastic or metal construction and

mailed FIRST CLASS to AFIP. Registered mail and/or "Return Receipt Requested" is not recommended and could delay shipment.

The following information should be placed on the outside wrapper of all shipments:

The Director
Armed Forces Institute of Pathology
ATTN: AFEP-RRR
Washington, D.C. 20306-6000

If Chain-of-Custody is used, annotate "Evidence Enclosed" above label.
A copy of all toxicology results is sent directly to the Safety Center to be placed in the accident report. A second copy is usually sent to the facility where the specimens were collected.

Appendix P
Accident Investigation Kit

1.1. The investigation kit is not standardized, but it should be compact, lightweight, and have all items accessible. The contents of this kit are designed to aid in gathering physical data concerning the accident and to record this information photographically, verbally, or in written form. Aviation Medicine Clinic NCOIC should ensure a comprehensive and complete crash investigation kit is available to the flight surgeon at all times. Hand receipt issues should be addressed, especially during times of "underlap" of assigned flight surgeon. If camera is 35mm, ensure fresh film and batteries. Digital camera may be preferable to 35mm, but it is imperative that film images may be downloaded (and secured!) easily. Mishap investigation team will also have photo-taking capability, but remember they may not arrive for 1-2 days. It is the flight surgeon's responsibility to adequately capture images of the crash scene and patient injuries, as appropriate.

1.2. References and Forms The following should be included in the kit for quick reference and to facilitate the collection of important information:

1. AR 40-21
2. AR 385-40
3. DA PAM 385-40, Accident Investigation
4. Army Aviation Medicine Handbook
5. DA Forms 2397-8, -9, -I0

1.3.Recording and Plotting Devices

a. Accident worksheets (for each crewmember)
b. Clipboard with notepad and graph paper
c. Pencils (lead and grease) and sharpener
d. Pens, magic markets
e. Scissors
f. Rulers
g. Index cards
h. Compass
i. Tape measure (50/100 ft.) preferably with inches and centimeters
j. Polaroid camera with film
k. 35mm camera with accessories (including flash) and batteries
l. Film - color prints
m. Tape recorder with cassettes and extra batteries
n. Adhesive tape
o. Engineering tape or red ribbon for marking
p. Stakes and tags

1.4 Search and Signaling Devices

a. Flashlight with spare batteries
b. Whistle
c. Small mirror
d. Magnifying glass

1.5. Items for Blood/Fluid Collection

If possible, collect all toxicology specimens at a medical facility. All specimens must be sent to AFIP.

a. Needles, disposable
b. Syringes, disposable
c. Vacutainers
d. Tourniquet
e. Betadine swabs (avoid alcohol)
f. Labels
g. 3 red top tubes (per person)
h. 2 lavender top tubes (per Person)
i. 2 gray top tubes (per person) *Remember not to use alcohol pad!!*
j. 1 urine cup (per person)
k. Toxicological exam forms (DD 1323)

1.6 Items for Tissue Collection

Recover all tissue specimens from accident site. Obtain body tissue samples at medical facility.

a. Surgical gloves and masks
b. Plastic bags, self sealing (various sizes)
c. Surgical scissors
d. Forceps
e. Scalpel and blades
f. Plastic bottles
g. Tongue depressors
h. Pathological material forms (SF 543)

1.7 Other Useful Items

a. Rubber bands
b. Snakebite kit
c. Head covering
d. Poncho
e. Food (MRE’s)
f. Goggles
g. Toilet paper
h. Pocket calculator
i. Chem lights
j. Extra batteries
k. Laptop Computer

1.8 Personal Items

a. Insect repellent
b. Knife with flint
c. Canteen
d. Soap
e. Paper towels
f. Handy wipes
g. Leather gloves
h. Cotton gloves
i. Ear plugs
j. Sunscreen
k. Sunglasses

l. Chapstick
m. Small first aid kit
n. Surgical masks