CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AM 1100.3F CHG 3

12/18/02

SUBJ: OFFICE OF AEROSPACE MEDICINE ORGANIZATION

1. **PURPOSE.** This change contains revisions to Chapter 7, Civil Aeromedical Institute, Chapter 8, Aeromedical Certification Division, Chapter 9, Aeromedical Education Division, Chapter 10, Human Resources Research Division, Chapter 11, Aeromedical Research Division, and Chapter 12, Occupational Health Division.

2. **EXPLANATION OF CHANGES.** The changes reflect divisional level name changes. The changes are in line with the organizational level name change from Aviation Medicine to Aerospace Medicine. The divisional level name changes are as follows:

   a. The Civil Aeromedical Institute has been changed to the Civil Aerospace Medical Institute.

   b. The Aeromedical Certification Division has been changed to the Aerospace Medical Certification Division.

   c. The Aeromedical Education Division has been changed to the Aerospace Medical Education Division.

   d. The Human Resources Research Division has been changed to the Aerospace Human Factors Research Division.

   e. The Aeromedical Research Division has been changed to the Aerospace Medical Research Division.

3. **DISPOSITION OF TRANSMITTAL.** After filing the attached pages, this change transmittal should be retained.

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
26	10/22/96	26	11/08/02
27 thru 45	10/22/96	27 thru 46	11/08/02

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CIVIL AEROSPACE MEDICAL INSTITUTE

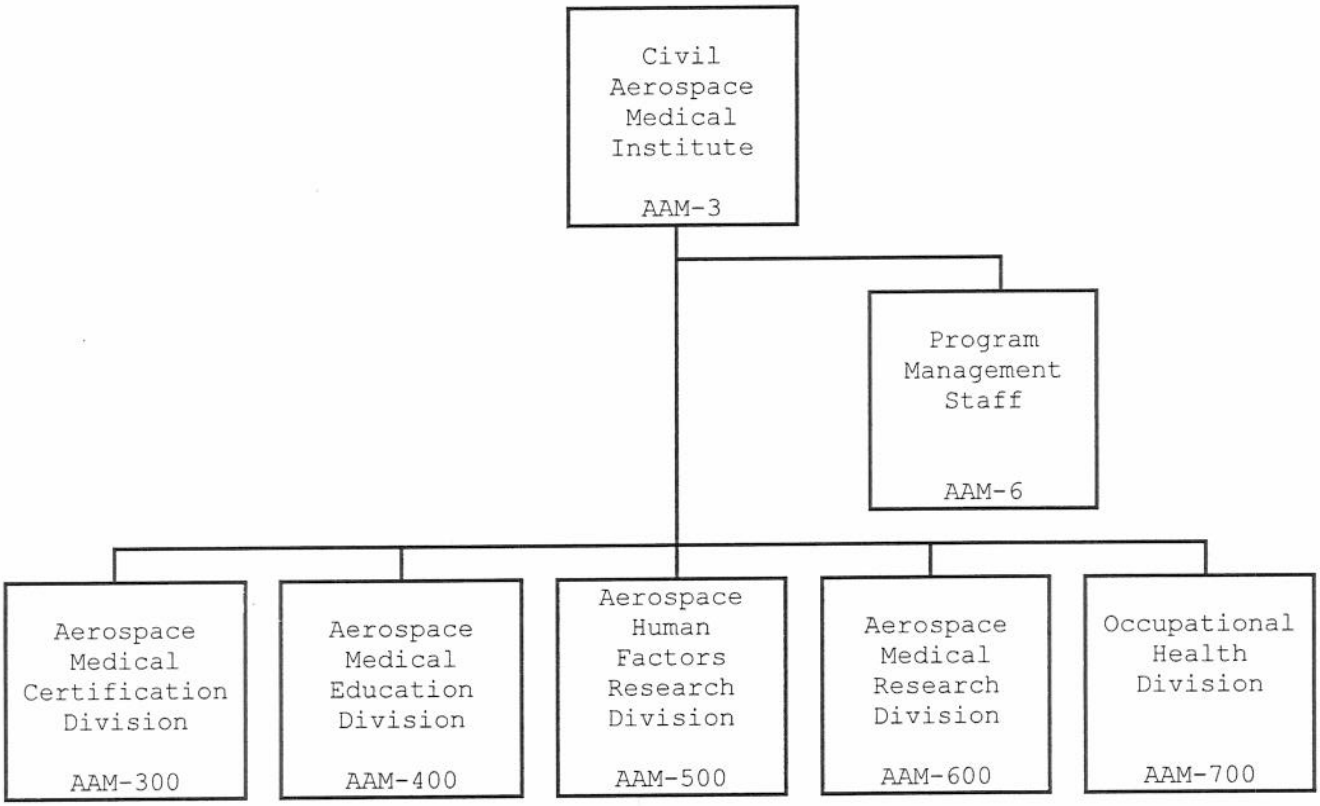

Figure 7-1

CHAPTER 7. CIVIL AEROSPACE MEDICAL INSTITUTE

56. CIVIL AEROSPACE MEDICAL INSTITUTE.

a. Structure. The functional organization of the Civil Aerospace Medical Institute (CAMI) is shown in Figure 7-1.

b. Functions. CAMI develops, maintains, and manages a system for the medical examination and certification of U.S. civil airmen; conducts medical and related human factors research projects applicable to the FAA's mission; develops, maintains, and administers aerospace medical education programs to meet the needs of the agency; administers occupational health programs for agency employees; operates a medical clinic for the Mike Monroney Aeronautical Center; and provides professional advice and technical knowledge to the Federal Air Surgeon and other agency elements. Responsibilities related to these functions include the following:

(1) Conducts aerospace medical certification, research, education, and occupational health activities.

(2) Administers a program for the selection, training, and management of physicians designated to conduct aviation medical examinations of civil airmen throughout the United States and abroad.

(3) Administers a review system for the processing, professional evaluation, and disposition of applications for medical certification.

(4) Manages a national repository of airman medical records.

(5) Develops and publishes biostatistical data from airman medical records.

(6) Evaluates and recommends to the Federal Air Surgeon appropriate revisions of the airman medical certification standards.

(7) Evaluates human performance in aviation, air traffic control and aerospace environments, both simulated and actual, by conducting and applying the results of multidisciplinary medical, psychophysiological, biochemical, human factors and psychological studies; initiates both in-house and contractual research related to improving performance and safety; and participates in select on-site investigations to analyze major problem areas.

(8) Participates in national and international research programs in support of the selection and training of aerospace personnel. This includes job-task analyses, the development, validation, and evaluation of selection tools and methods, and the development of valid job performance measures.

(9) Conducts research into the pharmacological, biochemical, and psychological aspects of human interactions of operators in civil aerospace environments.

(10) Plans and executes in-flight studies to determine the effects of the national aerospace environment, flight procedures and equipment upon the human body and human performance.

(11) Utilizes general aviation simulators to conduct research that assesses the human factors associated with pilot performance and provides recommendations regarding enhancements to procedures, displays, and controls to reduce error prone conditions and improve aerospace safety.

(12) Conducts research into the capabilities and limitations relating to the effectiveness and reliability of personnel in the National Airspace System.

(13) Investigates the effects of drugs, toxic chemicals, and certain practices peculiar to civil aerospace flights on the human body and normal functions.

(14) Maintains experimental animal facilities to perform laboratory tests in support of assigned research projects.

(15) Monitors cabin safety problems and conducts research into on-board equipment and procedures to identify potential safety and efficiency improvements.

(16) Investigates select general aviation and air carrier accidents and searches for biomedical, environmental, organizational, psychological, and human factors causes of the accidents, including evidence of disease and chemical abuse; analyzes the accident data for select aviation populations; and studies accident survival.

(17) Studies survivability factors in aircraft accidents.

(18) Serves as the agency central repository and data warehouse for information concerning the medical, human factors, and human engineering design aspects of specific aviation accidents.

(19) Disseminates medical education information through reports, booklets, films, and lectures to FAA components and the aviation public.

(20) Administers programs of professional seminars and training for FAA pilots, inspectors, and medical personnel in aerospace physiology, global survival, and medical aspects of aircraft accident investigation.

(21) Administers a centralized national medical education program for airmen, including medical exhibits, in support of the FAA National Aviation Safety Program and the National High-Altitude Indoctrination Program under agreements between the FAA and the United States Air Force and the United States Army.

(22) Plans, develops, and delivers professional seminars for the Aviation Medical Examiner (AME) program and other FAA programs as required.

(23) Serves the civil aerospace community as a centralized national resource for aerospace medical and scientific data.

(24) Develops, recommends, administers, and evaluates policies, standards, regulations, and procedures for all FAA occupational health activities for agency employees.

(25) Manages assigned portions of the agency Air Traffic Control Specialist (ATCS) Health Program, including the ATCS Health Information System.

(26) Provides a Health Awareness Program (HAP) for Federal employees at Mike Monroney Aeronautical Center.

(27) Provides a medical clinic in support of the Mike Monroney Aeronautical Center and its tenants.

(28) Conducts pre-employment, pre-appointment, and pilot medical examinations and provides industrial hygiene services for personnel located at the Mike Monroney Aeronautical Center.

(29) Conducts a Hearing Conservation Program for the Mike Monroney Aeronautical Center.

57. PROGRAM MANAGEMENT STAFF.

a. The staff provides budget/financial, procurement, information resource management, and administrative/management services for all elements of CAMI.

b. The staff is responsible for the following functions:

(1) Develops and coordinates local guidance and ensures implementation of AAM policies to accomplish program goals.

(2) Develops, consolidates, and coordinates information required for budget submissions and other reports. Provides guidance, analyses, and preparation of assigned fiscal requirements on issues pertaining to staffing and funds.

(3) Develops, recommends, and implements policies and procedures for CAMI in the areas of:

(a) Program planning.

(b) Budget execution and financial management of the direct and reimbursable program activities.

(c) Management information.

(d) Organization and staffing.

(e) Human resource management, training, utilization, and security.

(f) Management analysis, communications, and facility support operations.

(g) Automation and information resource management including centralized computer system management.

(h) All procurement actions for supplies, equipment, and contracted services.

(i) Monitoring of contractual services for equipment maintenance, research support, contract research studies, personal services, and reimbursable agreements for CAMI.

58.-64. RESERVED

AEROSPACE MEDICAL CERTIFICATION DIVISION

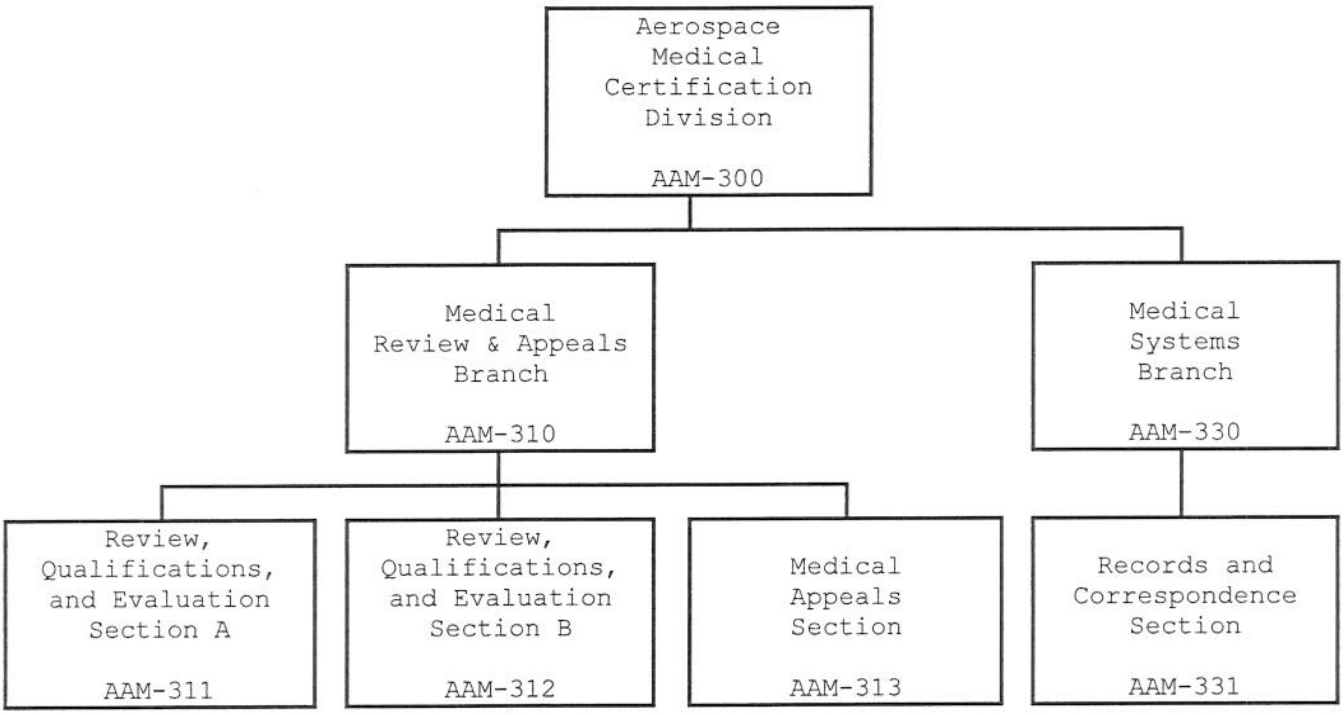

Figure 8-1

CHAPTER 8. AEROSPACE MEDICAL CERTIFICATION DIVISION

65. AEROSPACE MEDICAL CERTIFICATION DIVISION.

a. Structure. The functional organization of the Aerospace Medical Certification Division is shown in Figure 8-1.

b. Functions. This division administers the national program for airman medical certification.

c. With respect to the foregoing, this division:

(1) Develops, recommends, administers, and evaluates standards and procedures for all FAA airman medical certification activities and associated record keeping systems; provides professional and technical guidance to all elements of the agency engaged in such certification and record keeping activities.

(2) Manages a national repository of airman medical records and a system for processing medical applications and issuing or denying medical certification.

(3) Administers review systems for the professional evaluation and disposition of applications for medical certification.

(4) Makes recommendations to the Federal Air Surgeon on the disposition of referred airman medical qualification cases and operates a system for the processing and disposition of requests for special issuance.

(5) Provides evaluation data and recommendations to the Federal Air Surgeon in the development of airman certification regulations, standards, rules, orders, policies, and procedures.

(6) Evaluates the effectiveness of national, international, and field administration of medical certification and related aerospace medical activities.

(7) Provides evaluation data and recommendations to the Federal Air Surgeon in the development of minimum medical standards for airmen, for certain (non-FAA) ATCS's, and for others concerned with flight activities.

(8) Develops and furnishes biostatistical data from airman medical records.

(9) Develops and recommends rules, orders, policies, and procedures necessary to administer the medical certification program.

(10) Establishes and maintains operating standards and procedures to ensure an effective and efficient medical certification automated processing system.

(11) Monitors performance of AMEs and provides statistical data to the Aerospace Medical Education Division (AAM-400) for efficient management of the AME program.

(12) Establishes, administers, and maintains standards and procedures to ensure an effective and efficient system for the electronic transmission of FAA Form 8500-8, Application for Airman Medical Certificate or

Airman Medical and Student Pilot Certificate, medical data, and required electrocardiograms.

(13) Develops and administers the medical elements of the Driving under the Influence/Driving While Intoxicated (DUI/DWI) Program. Under the program, AAM determines whether an airman who has a DUI/DWI conviction or administrative action is eligible for medical certification.

(14) Develops and administers internal operating directives and procedures for the industry antidrug and alcohol misuse prevention programs as they pertain to holders of medical certificates issued under Part 67 of the regulations.

(15) Participates with AAM-400 in the development and delivery of training for AMEs and FAA personnel.

66. MEDICAL REVIEW AND APPEALS BRANCH. Determines the medical qualifications of airmen based on available information and initiates appropriate action. Reviews controversial cases regarding issuance or denial of certification. Determines the disposition of special issuance and appeal cases. Manages the medical elements of the DUI/DWI Program. Develops national program guidance on matters regarding airman medical certification.

a. Review, Qualifications, and Evaluation Section A. Analyzes and identifies incomplete or problematic applications for airman medical certification and initiates appropriate resolution action(s). Evaluates medical information and reports as they relate to medical applications, determines their responsiveness and relevance under established certification policies and procedures, and takes appropriate action.

b. Review, Qualifications, and Evaluation Section B. Analyzes and identifies incomplete or problematic applications for airman medical certification and initiates appropriate resolution action(s). Evaluates medical information and reports as they relate to medical applications, determines their responsiveness and relevance under established certification policies and procedures, and takes appropriate action.

c. Medical Appeals Section. Analyzes and processes new and recertification special issuance and appeal cases. Evaluates the follow up reports, and issues medical certificate when appropriate. Schedules the bimonthly Federal Air Surgeon's Cardiology Panel which reviews all first- and second-class airmen cases with certain cardiac conditions.

67. WITHDRAWN.

68. MEDICAL SYSTEMS BRANCH. Provides clerical, statistical and automation support for the division. Manages the automated system for collection and dissemination of medical data for the aerospace medical certification program and international repository of airman medical certification records. Manages the international repository of electrocardiograms (EKG) and the automated EKG system.

a. Records and Correspondence Section. Maintains medical certification records and provides search, retrieval, and duplication services in support of the airman medical certification program. Provides clerical support to the division, including composing and preparing correspondence to airmen regarding medical certification.

69.-74. RESERVED.

AEROSPACE MEDICAL EDUCATION DIVISION

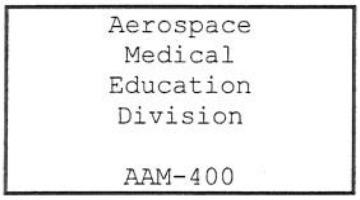

Figure 9-1

CHAPTER 9. AEROSPACE MEDICAL EDUCATION DIVISION

75. AEROSPACE MEDICAL EDUCATION DIVISION.

a. Structure. The functional organization of the Aerospace Medical Education Division is shown in Figure 9-1.

b. Functions. This division develops policies, procedures, and practices with respect to aerospace medical education, and administers aerospace medical education programs to meet the needs of the agency and the civil aerospace community.

c. The division has the following responsibilities:

(1) Plans, develops, and administers the Aviation Medical Examiner (AME) Program.

(2) Plans and develops standard criteria, and administers a centralized program for the selection, designation, training, and management of AMEs who are authorized to conduct aviation medical examinations of civil airmen throughout the United States and abroad. Ensures that the approved standard criteria for selection, designation, and training are applied equitably in all areas.

(3) Determines in coordination with the Regional Flight Surgeons, the geographical distribution of designated AMEs (including senior AMEs) to ensure adequate coverage to serve the needs of the pilot population. Takes action to correct any existing discrepancies nationally and internationally.

(4) Plans, develops and administers a uniform AME performance evaluation program that provides information as to the quality of examinations conducted and medical certification decisions made by each AME. Ensures the accuracy and timeliness of the computerized AME performance evaluation reports, which provide the Regional Flight Surgeons a meaningful statistical analysis for their consideration of the AMEs' re-designation.

(5) Administers the process to renew the designation of all active AMEs by issuing a current ID card and recording in the AME Records System the signed IDs.

(6) Selects, designates, re-designates, and terminates designation of military/federal (Department of Defense (DOD), Coast Guard, National Aeronautics and Space Administration (NASA), and other federal agencies), and international (foreign) AMEs.

(7) Coordinates with the offices of the Surgeons General of the Armed Forces, and with appropriate representatives of the Coast Guard, NASA, and other federal agencies, in the designation of flight surgeons and federal civilian physicians as AMEs to conduct aviation medical examinations and issue airman medical certificates to government personnel needing FAA medical certification.

(8) Coordinates with the State Department (through the FAA Office of International Aviation) in the designation of international AMEs to conduct aviation medical examinations and issue FAA medical certificates to US airmen in foreign countries, in accordance with Title 14 of the Code of Federal Regulations Section 67.5, Certification of Foreign Airmen.

(9) Distributes FAA medical forms, stationery, and medical publications to all AMEs. Initial supplies (upon AME designation) are provided by regional personnel and subsequent supplies are provided by AAM-400.

(10) Operates and maintains the computerized AME Records System which is the central repository of all of the information on the AMEs. Maintains master files for all AMEs. Coordinates with regional personnel the timely reporting of relevant AME information to update the AME Records System. Publishes the AME directory via the internet based on information from the AME Information System. Provides management data for evaluation of the AME program.

(11) Ensures that all continuing medical education programs comply with the essentials, guidelines, and standards of the Accreditation Council for Continuing Medical Education (ACCME) in order to maintain CAMI's ACCME accreditation.

(12) Analyzes, designs, develops, conducts, evaluates and administers nationwide AME education programs (existing and new) required to fulfill the medical training needs of all AMEs as outlined in FAA Order 8520.2D, Aviation Medical Examiner System. Ensures that AME education programs are designed to enable AMEs to make the correct medical certification decisions and to communicate their findings appropriately. Optimizes procedures and/or methodologies to evaluate AMEs' knowledge and understanding of medical certification standards and procedures and how to effectively apply them in the certification of airmen.

(13) Plans, designs, develops, conducts, evaluates, and administers professional and/or technical training for FAA personnel including pilots, inspectors, accident prevention program personnel, and medical personnel in the areas of aerospace physiology, global survival, medical and human factors aspects of aircraft accident investigation, aerospace medicine, occupational medicine, environmental medicine, cardiopulmonary resuscitation, and first aid.

(14) Plans, designs, develops, conducts, evaluates, and administers nationwide aerospace medical education programs for airmen focused on aerospace safety (including aerospace medical exhibits) in support of the FAA National Accident Prevention Program. Coordinates the development of aerospace medical training agreements (existing and new) between the FAA and the U.S. Air Force, Navy, and Army.

(15) Develops physiological and global survival training standards for FAA flight crews. Reviews existing standards periodically and, when necessary, recommends updates for publication in FAA Order 4040.9, FAA Aircraft Management Program.

(16) Plans, designs, develops, conducts, evaluates, and administers altitude chamber training for FAA flight crews (to meet regulatory requirements) and civilian airmen at CAMI and at military installations across the country. Optimizes procedures and/or methodologies to evaluate FAA flight crew's knowledge and understanding of aerospace physiology and global survival and how to effectively apply this knowledge to their day-to-day job-related activities.

(17) Operates and maintains CAMI's altitude chambers, thermal chamber, portable spatial disorientation trainers, and the emergency ditching simulators. This equipment is used in support of physiological and global survival training programs as well as research projects.

(18) Develops and maintains a database on altitude (hypobaric) chamber operations for the purpose of assessing the prevalence of adverse individual reactions to chamber flights, evaluating the long-term effects of repeated chamber flight exposures among instructors, and monitoring chamber workload or usage.

(19) Plans, develops, and conducts nationwide education/training activities (using all available delivery media and/or methods) to disseminate aerospace medical information and scientific data to FAA personnel, AMEs, airmen, aerospace industry, aviation organizations, academic institutions, and the general public in support of the agency's mission of promoting aerospace safety.

(20) Designs, develops, and distributes didactic audiovisual materials (videos, handouts, multimedia presentations, etc.) and publications used in support of all aerospace medical education programs. These educational aids are designed to support the dissemination of medical information that promotes aerospace safety.

(21) Serves as a centralized national resource of aerospace medical information and scientific data for the civil aerospace community. Manages and maintains the CAMI Aerospace Medical Library. Establishes and maintains close liaison with other government and private organizations (national and international) that represent the interests of the civil aviation pilot population in order to disseminate medical information that promotes aerospace safety.

(22) Supports international exchange programs, such as the International Exchange Visitor Program, that facilitate interaction between aviation medicine professionals, enable the exchange of scientific information, and promote the FAA's international leading role in civil aerospace medicine.

76. RESERVED

AEROSPACE HUMAN FACTORS RESEARCH DIVISION

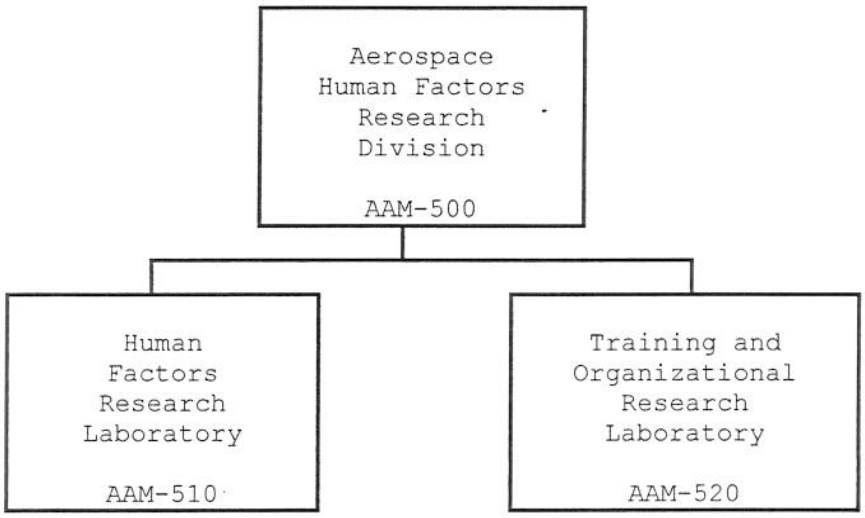

Figure 10-1

CHAPTER 10. AEROSPACE HUMAN FACTORS RESEARCH DIVISION

77. AEROSPACE HUMAN FACTORS RESEARCH DIVISION.

a. Structure. The functional organization of the Aerospace Human Factors Research Division is shown in Figure 10-1.

b. Functions. This division conducts an integrated program of field and laboratory research in organizational and human factor aspects of aviation work environments. Research includes, but is not limited to, assessments of human performance under various conditions of impairment, human error analysis and remediation, agency work force optimization, training analysis and career enhancement, assessing the impact of advanced automated systems on personnel requirements and performance, human factors evaluations of performance changes associated with advanced multifunction displays and controls in general aviation and air traffic control, and the psych-physiological effects of workload and shiftwork on job proficiency and safety in aviation related human-machine systems. This research is accomplished within two research laboratories, the Human Factors Research Laboratory and the Training and Organizational Research Laboratory.

78. HUMAN FACTORS RESEARCH LABORATORY. This laboratory plans and conducts a broad-based program of applied research on human factor issues in the design, operation, and maintenance of components of the National Aerospace System. Research includes assessing the impact of advanced technology, enhancing information transfer, evaluating effects of stressors on human performance, and quantifying the effects of equipment, procedures, and task design on pilot-controller communications, air traffic control/management systems, and general aviation aircraft cockpit design. Research is carried out in the following areas:

a. Advanced ATC Systems Research. Research on the impact of advanced technologies on ATCS performance and implications of advanced automation for information transfer and human/machine design. Develops metrics of performance and workload. Assesses alternative concepts for use of automation in information transfer. Identifies and evaluates applications of intelligent systems and innovative control/display concepts. Utilizes rapid prototyping techniques with advanced real-time ATC simulation capabilities.

b. Behavioral Stressors Research. Conducts research on stressor variables and conditions which could impact safety by impairing an individuals readiness to perform. Considers work environment issues involving ATCS and pilot job performance such as workload, shift management, age, fatigue, adverse physical conditions, stressors involving drug and alcohol usage, and color perception. Assesses the effectiveness of remedial actions, procedural or policy steps, or individual strategies and countermeasures to reduce performance decrements and enhance individual performance.

c. Performance Assessment Research. Conducts aviation human factors research on the design of hardware, software, and procedures with emphasis on general aviation applications. The focus is on objective, human performance data that will aid in identifying affordable initiatives for enhancing aircrew performance and reducing accidents and incidents. This includes the (a) design of cockpit controls and displays associated with emerging technologies; (b) development of performance-based criteria for use in certification and regulation; (c) identification of human casual factors associated with aviation accidents; and (d) effective use of training devices integrated with existing instructional systems.

79. TRAINING AND ORGANIZATIONAL RESEARCH LABORATORY. This laboratory conducts a broad, integrated program of research examining ways to enhance workforce performance. Research is focused on improved person-job fit through valid classification, and training of personnel; and improved organizational business practices through reengineering and organizational climate and culture interventions such as forming work-teams, realigning procedures with changing customer needs, structural streamlining, and personal empowerment. This program of research is carried out in the following areas:

a. Selection and Validation Research. Research is focused on the validation and evaluation of aviation workforce selection and placement systems, including job analyses, component measures and tests, and performance criteria. Explores the relationship between aviation workforce attitudes, aviation job/task requirements and demands, and individual and team performance, primarily in applied, field settings. Establishes scientific evidence of the job relatedness of aviation selection systems and their utility in achieving agency and NAS operational objectives. Results will enable the agency to identify and use cost effective hiring, training, and promotion systems and to demonstrate procedural fairness when challenged.

b. Training and Performance Research. Performs laboratory and field research focused on aviation training and on identifying and measuring job performance competencies, communication patterns, and related knowledge, skills, and abilities that impact individual and team safety, efficiency, and effectiveness. Results of research will provide job-relevant criteria to validate selection systems, and identify optimum person/team-job interfaces to guide training enhancements and job/task design.

c. Organizational Effectiveness Research. Performs primarily field research to determine the effectiveness of organizational and technological innovations intended to optimize workforce and organizational performance. Determines the relationship of workforce psychological characteristics (e.g., attitudes, temperament, behavioral preferences) and the work environment (e.g., organizational climate, culture, structure, and business practices). Results of research provides guidance to senior agency management on the relative merits of various innovations intended to enhance safety, efficiency, and effectiveness, workforce health, quality of employee worklife, agency customer satisfaction, and agency mission accomplishment.

AEROSPACE MEDICAL RESEARCH DIVISION

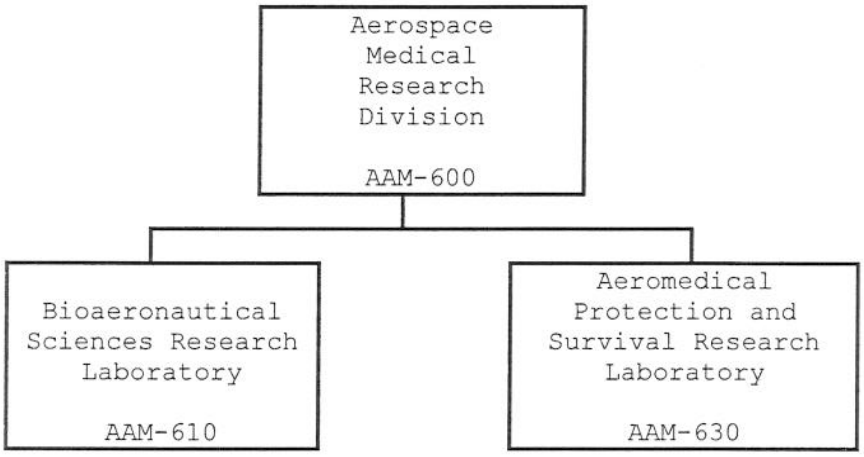

Figure 11-1

CHAPTER 11. AEROSPACE MEDICAL RESEARCH DIVISION

80. AEROSPACE MEDICAL RESEARCH DIVISION.

a. Structure. The functional organization of the Aerospace Medical Research Division is shown in Figure 11-1.

b. Functions. The Aerospace Medical Research Division evaluates human performance in aerospace environments, both simulated and actual, by applying multidisciplinary medical, physiological, pharmacological, and biochemical studies; conducts protection and survival research; initiates both in-house and contractual research related to improving performance; and participates in select onsite visits to investigate and analyze major problem areas.

c. The division has the following responsibilities:

(1) Plans and executes studies to determine the effects of the civil aerospace environment, flight procedures, and equipment upon the human body, and conducts research into the clinical and biomedical capabilities and limitations relating to the effectiveness and reliability of personnel in the National Airspace System.

(2) Investigates selected general aviation and air carrier accidents and searches for biomedical and clinical causes of the accidents, including evidence of disease and chemical abuse; analyzes the accident data for selected aviation populations; and studies accident survival. Maintains a central repository for reports and data concerning the medical and human factors aspects of specific accidents that are investigated.

81. BIOAERONAUTICAL SCIENCES RESEARCH LABORATORY. Studies medical findings in aircraft accidents and defines relationships between those findings and the safe operation of aircraft.

a. The laboratory has the following responsibilities:

(1) One technical team develops bioaeronautical computer models for the simulations of cabin evacuations, cabin airflow, and accident reconstruction. This work will allow researchers to predict passenger and crew evacuation profiles for accidents, proposed aircraft, and existing aircraft. This will reduce the cost and injuries incurred from the use of human subject evacuation tests. Investigates conditions that influence the accuracy, validity, and interpretation of bioaeronautical computer models and procedures and findings. Such investigations address issues such as the effect of size, obstacles, smoke, rates of movement, force, and other factors related to bioaeronautical issues.

(2) A second technical team detects and measures drugs, alcohol, toxic gases, and toxic industrial chemicals in victims of fatal aircraft accidents as a contribution to the analysis of accident causation, and adapts or develops improved methods for making such measurements. Deoxyribonucleic acid/ ribonucleic acid (DNA/RNA) analyses are undertaken both to specifically identify tissue sources and to document biochemical processes such as postmortem alcohol generation.

(3) A third technical team conducts research into problems that affect the civil aerospace industry and that depend primarily on biochemical factors. Performs analytic procedures at a reference laboratory level and contributes to the quality assurance programs required by CAMI.

(4) A fourth technical team performs research on the effects of radiation (both ionizing and non-ionizing) on living systems with particular attention to the characteristics of radiosensitive tissue, identifies radiation hazards within the aviation environment, and studies methods of protection from such hazards.

82. AEROMEDICAL PROTECTION AND SURVIVAL LABORATORY. Conducts studies and research pertaining to the human aspects of protection and survival from exposure to hazardous conditions relative to civil aerospace operations. Research includes, but is not limited to, methods of attenuating or preventing crash injuries, devising concepts and evaluating survival equipment used under adverse environmental and emergency conditions, and establishing human physical limitations of civil aviation operations. Conceives, plans, and accomplishes imagery support for aerospace medical research projects in the division using multidisciplinary techniques and acquired skills in imagery technology.

a. The laboratory has the following responsibilities:

(1) One technical team evaluates the injury potential of new materials and structures by utilizing advanced computational and impact test techniques under simulated crash environments and supports other FAA elements in conducting dynamic tests. Develops new methods, techniques, and equipment for evaluating injury potential.

(2) A second technical team monitors aircraft cabin safety problems and conducts research studies and tests pertaining to the emergency evacuation of aircraft and water survival. Studies emergency situations to determine adequacy of survival equipment and procedures based on human requirements.

(3) A third technical team conducts research into environmental factors including biological/chemical threat environments that detrimentally influence human functioning, physiology and safety in aerospace environments. Studies emergency situations to determine adequacy of aircraft protective breathing devices. Develops improved test methodology and procedures to identify environmental hazards and quantify preventive measures.

(4) A fourth technical team conducts medical and laboratory studies of aircraft accident victims, including onsite participation in selected cases, to analyze medical, engineering, and human factors findings gained from such cases, and conducts appropriate research into the relationships of such findings to the safe operation of aircraft. Develops methods for the better understanding of such factors in aircraft accidents. Studies performance decrements resulting from disease processes to determine their effects on aerospace safety.

(5) A fifth technical team conducts research into the visual aspects of aerospace safety to identify opthalmic deficiencies and corrective methods that may impact aerospace safety. Develops information to support airman certification, identify aircraft/airport environment vision hazards and supports related education/corrective programs.

OCCUPATIONAL HEALTH DIVISION

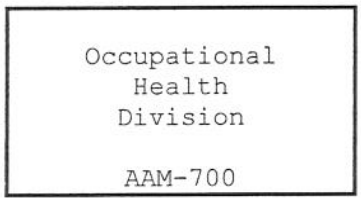

Figure 12-1

CHAPTER 12. OCCUPATIONAL HEALTH DIVISION

83. OCCUPATIONAL HEALTH DIVISION.

a. Structure. The functional organization of the Occupational Health Division is shown in Figure 12-1.

b. Functions. This division administers agency occupational health programs for agency employees pursuant to PL 91-596, the Occupational Safety and Health Act; Executive Order 12196, Occupational Safety and Health Programs for Federal Employees; and provides professional advice and technical knowledge to the Federal Air Surgeon and other agency elements. The division manages a professional, technical, and clerical staff with programs in occupational medicine, clinical services, and industrial hygiene.

c. The division has the following responsibilities:

(1) Occupational Medicine Program.

(a) Provides professional and technical guidance and evaluation for all elements of the agency concerning occupational medicine. Acts as consultant to the Federal Air Surgeon (FAS), Regional Flight Surgeons (RFS), and Flight Surgeons (FS).

(b) Manages assigned portions of the FAA ATCS Health Program. Acts for the Federal Air Surgeon by reviewing employee appeals of medical disqualifications made by RFS. Develops and maintains a current group of medical specialists to act as a consultant panel to assist in medical decisions of appeal cases, as needed.

(c) Manages the agency electronic medical records system which contains all data from periodic physical examinations of ATCS's. Ensures that the system operates in such a manner that accurate data can be extracted that meets the needs of AAM.

(d) Develops and recommends minimum medical standards for agency ATCSs, and other employees, as required by the Office of Personnel Management (OPM) or the FAA. Recommends to the Federal Air Surgeon those FAA positions which should have medical standards. Reviews and prepares FAA orders which contain medical standards for all positions requiring such standards.

(e) Provides technical guidance, reviews results of supplemental medical evaluations performed by medical specialists outside the agency on agency employees covered by medical standards when requested by the RFS, and makes recommendations to the Federal Air Surgeon on the disposition of these specially referred problem cases.

(f) Assists in the development of plans to validate and properly control Office of Workers' Compensation Plan (OWCP) chargeback payments to the Department of Labor for on-the-job medical disability cases. This includes the prevention of on-the-job disabilities through the application of sound occupational medicine preventive measures, and the review and evaluation of medical factors in cases applying for OWCP disability retirement, or, when appropriate, cases already granted OWCP disability retirement.

(g) Provides the CAMI Emergency Readiness Officer.

(h) Maintains liaison with the medical elements of major air transport entities.

(i) Serves as the FAA Institutional Review Board that approves protocols for protecting human research subjects. In addition to approving protocols for CAMI, this division provides oversight for the FAA Technical Center that operates a local IRB that approves research with minimal risk to human subjects. The division also provides other related research support and serves as the technical expert on the protection of human subjects.

(2) Clinical Services Program.

(a) Provides primary care level of medical services and assists with referrals and consultations for domestic and international students attending the FAA academy.

(b) Provides limited medical services, primarily for minor care of illnesses and injuries, to improve efficiency and reduce time lost from work for Mike Monroney Aeronautical Center employees and its tenants.

(c) Provides consultation, advice, and emergency treatment for on-the-job illness or injury of agency personnel located at the Mike Monroney Aeronautical Center.

(d) Plans and administers medical services to support the Mike Monroney Aeronautical Center emergency operations program.

(e) Conducts a medical monitoring program for Mike Monroney Aeronautical Center employees who are potentially exposed to recognized health hazards.

(f) Develops, conducts, and coordinates, with the Aerospace Medical Research Division (AAM-600), projects involving clinical factors in aerospace safety.

(g) Performs the clinical functions associated with all FAA Employee Substance Abuse Programs at the Mike Monroney Aeronautical Center.

(h) Physician in charge serves as Medical Review Officer (MRO) for the Mike Monroney Aeronautical Center.

(i) Provides a Health Awareness Program (HAP) available to all Federal employees at the Mike Monroney Aeronautical Center.

(j) Physician in charge of the clinic serves as clinic team coordinator.

(3) Industrial Hygiene Program.

(a) Provides consultation in industrial hygiene for the Federal Air Surgeon, Regional Flight Surgeons, Flight Surgeons, and other agency officials.

(b) Provides industrial hygiene services to the Mike Monroney Aeronautical Center as outlined in the Mike Monroney Aeronautical Center/CAMI Tenancy Agreement.

(c) Provides the coordinator for the CAMI Safety Education Program.

CIVIL AEROSPACE MEDICAL INSTITUTE

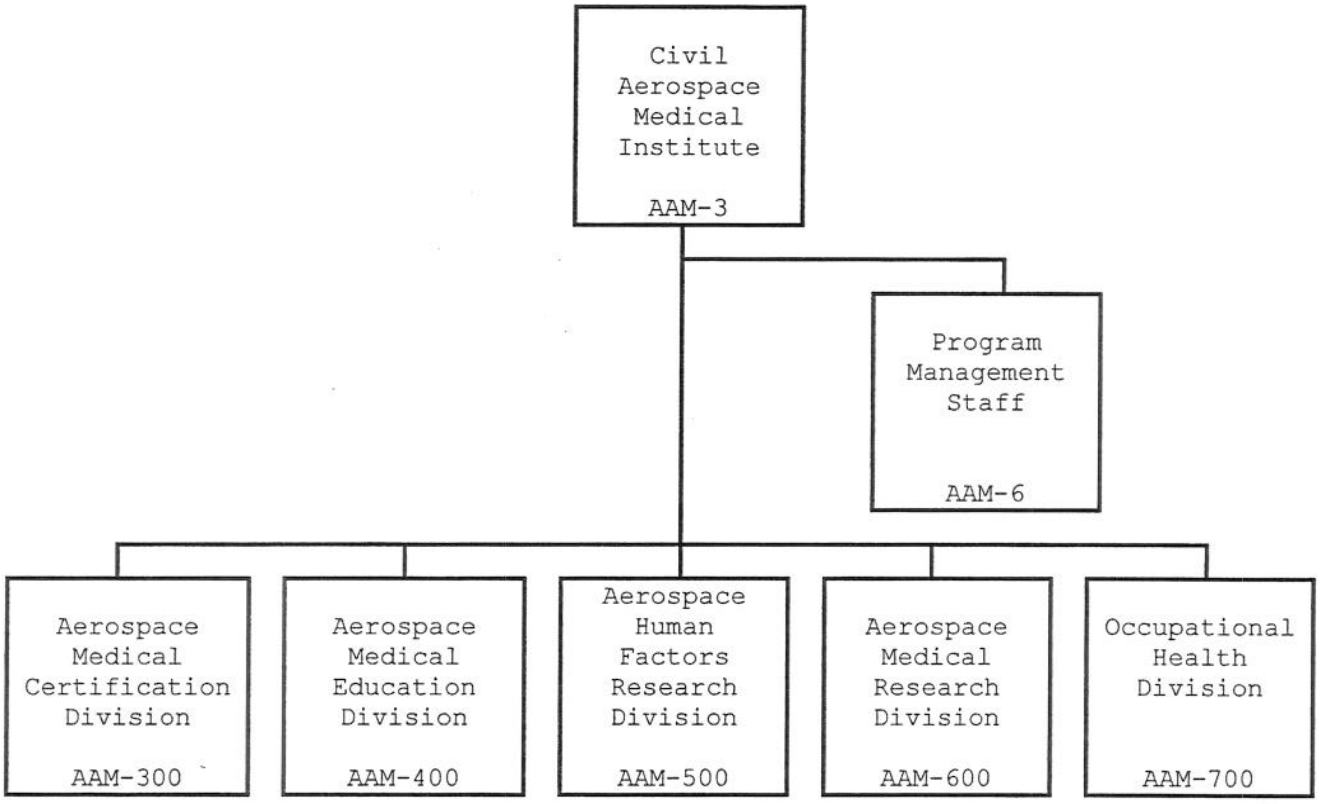

Figure 7-1

CHAPTER 7. CIVIL AEROSPACE MEDICAL INSTITUTE

56. CIVIL AEROSPACE MEDICAL INSTITUTE.

a. Structure. The functional organization of the Civil Aerospace Medical Institute (CAMI) is shown in Figure 7-1.

b. Functions. CAMI develops, maintains, and manages a system for the medical examination and certification of U.S. civil airmen; conducts medical and related human factors research projects applicable to the FAA's mission; develops, maintains, and administers aerospace medical education programs to meet the needs of the agency; administers occupational health programs for agency employees; operates a medical clinic for the Mike Monroney Aeronautical Center; and provides professional advice and technical knowledge to the Federal Air Surgeon and other agency elements. Responsibilities related to these functions include the following:

(1) Conducts aerospace medical certification, research, education, and occupational health activities.

(2) Administers a program for the selection, training, and management of physicians designated to conduct aviation medical examinations of civil airmen throughout the United States and abroad.

(3) Administers a review system for the processing, professional evaluation, and disposition of applications for medical certification.

(4) Manages a national repository of airman medical records.

(5) Develops and publishes biostatistical data from airman medical records.

(6) Evaluates and recommends to the Federal Air Surgeon appropriate revisions of the airman medical certification standards.

(7) Evaluates human performance in aviation, air traffic control and aerospace environments, both simulated and actual, by conducting and applying the results of multidisciplinary medical, psychophysiological, biochemical, human factors and psychological studies; initiates both in-house and contractual research related to improving performance and safety; and participates in select on-site investigations to analyze major problem areas.

(8) Participates in national and international research programs in support of the selection and training of aerospace personnel. This includes job-task analyses, the development, validation, and evaluation of selection tools and methods, and the development of valid job performance measures.

(9) Conducts research into the pharmacological, biochemical, and psychological aspects of human interactions of operators in civil aerospace environments.

(10) Plans and executes in-flight studies to determine the effects of the national aerospace environment, flight procedures and equipment upon the human body and human performance.

(11) Utilizes general aviation simulators to conduct research that assesses the human factors associated with pilot performance and provides recommendations regarding enhancements to procedures, displays, and controls to reduce error prone conditions and improve aerospace safety.

(12) Conducts research into the capabilities and limitations relating to the effectiveness and reliability of personnel in the National Airspace System.

(13) Investigates the effects of drugs, toxic chemicals, and certain practices peculiar to civil aerospace flights on the human body and normal functions.

(14) Maintains experimental animal facilities to perform laboratory tests in support of assigned research projects.

(15) Monitors cabin safety problems and conducts research into on-board equipment and procedures to identify potential safety and efficiency improvements.

(16) Investigates select general aviation and air carrier accidents and searches for biomedical, environmental, organizational, psychological, and human factors causes of the accidents, including evidence of disease and chemical abuse; analyzes the accident data for select aviation populations; and studies accident survival.

(17) Studies survivability factors in aircraft accidents.

(18) Serves as the agency central repository and data warehouse for information concerning the medical, human factors, and human engineering design aspects of specific aviation accidents.

(19) Disseminates medical education information through reports, booklets, films, and lectures to FAA components and the aviation public.

(20) Administers programs of professional seminars and training for FAA pilots, inspectors, and medical personnel in aerospace physiology, global survival, and medical aspects of aircraft accident investigation.

(21) Administers a centralized national medical education program for airmen, including medical exhibits, in support of the FAA National Aviation Safety Program and the National High-Altitude Indoctrination Program under agreements between the FAA and the United States Air Force and the United States Army.

(22) Plans, develops, and delivers professional seminars for the Aviation Medical Examiner (AME) program and other FAA programs as required.

(23) Serves the civil aerospace community as a centralized national resource for aerospace medical and scientific data.

(24) Develops, recommends, administers, and evaluates policies, standards, regulations, and procedures for all FAA occupational health activities for agency employees.

(25) Manages assigned portions of the agency Air Traffic Control Specialist (ATCS) Health Program, including the ATCS Health Information System.

(26) Provides a Health Awareness Program (HAP) for Federal employees at Mike Monroney Aeronautical Center.

(27) Provides a medical clinic in support of the Mike Monroney Aeronautical Center and its tenants.

(28) Conducts pre-employment, pre-appointment, and pilot medical examinations and provides industrial hygiene services for personnel located at the Mike Monroney Aeronautical Center.

(29) Conducts a Hearing Conservation Program for the Mike Monroney Aeronautical Center.

57. PROGRAM MANAGEMENT STAFF.

a. The staff provides budget/financial, procurement, information resource management, and administrative/management services for all elements of CAMI.

b. The staff is responsible for the following functions:

(1) Develops and coordinates local guidance and ensures implementation of AAM policies to accomplish program goals.

(2) Develops, consolidates, and coordinates information required for budget submissions and other reports. Provides guidance, analyses, and preparation of assigned fiscal requirements on issues pertaining to staffing and funds.

(3) Develops, recommends, and implements policies and procedures for CAMI in the areas of:

(a) Program planning.

(b) Budget execution and financial management of the direct and reimbursable program activities.

(c) Management information.

(d) Organization and staffing.

(e) Human resource management, training, utilization, and security.

(f) Management analysis, communications, and facility support operations.

(g) Automation and information resource management including centralized computer system management.

(h) All procurement actions for supplies, equipment, and contracted services.

(i) Monitoring of contractural services for equipment maintenance, research support, contract research studies, personal services, and reimbursable agreements for CAMI.

58.-64. RESERVED

AEROSPACE MEDICAL CERTIFICATION DIVISION

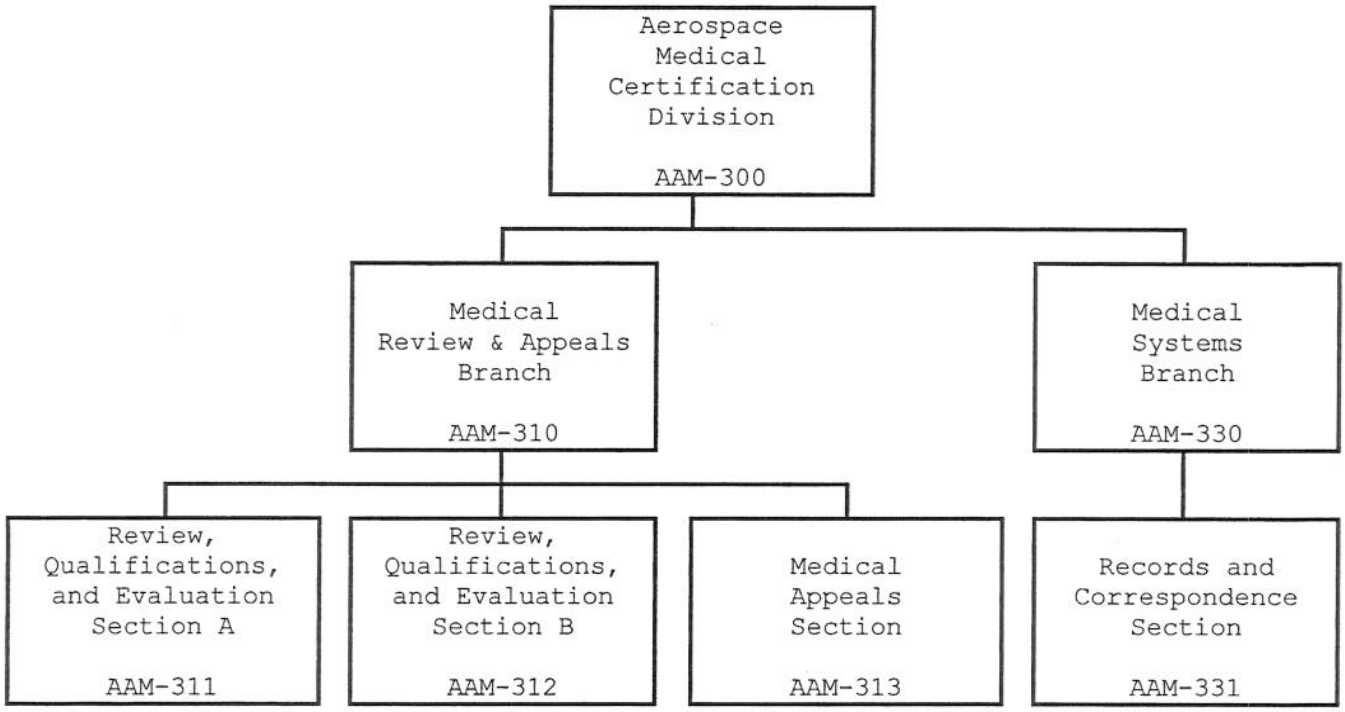

Figure 8-1

CHAPTER 8. AEROSPACE MEDICAL CERTIFICATION DIVISION

65. AEROSPACE MEDICAL CERTIFICATION DIVISION.

a. Structure. The functional organization of the Aerospace Medical Certification Division is shown in Figure 8-1.

b. Functions. This division administers the national program for airman medical certification.

c. With respect to the foregoing, this division:

(1) Develops, recommends, administers, and evaluates standards and procedures for all FAA airman medical certification activities and associated record keeping systems; provides professional and technical guidance to all elements of the agency engaged in such certification and record keeping activities.

(2) Manages a national repository of airman medical records and a system for processing medical applications and issuing or denying medical certification.

(3) Administers review systems for the professional evaluation and disposition of applications for medical certification.

(4) Makes recommendations to the Federal Air Surgeon on the disposition of referred airman medical qualification cases and operates a system for the processing and disposition of requests for special issuance.

(5) Provides evaluation data and recommendations to the Federal Air Surgeon in the development of airman certification regulations, standards, rules, orders, policies, and procedures.

(6) Evaluates the effectiveness of national, international, and field administration of medical certification and related aerospace medical activities.

(7) Provides evaluation data and recommendations to the Federal Air Surgeon in the development of minimum medical standards for airmen, for certain (non-FAA) ATCS's, and for others concerned with flight activities.

(8) Develops and furnishes biostatistical data from airman medical records.

(9) Develops and recommends rules, orders, policies, and procedures necessary to administer the medical certification program.

(10) Establishes and maintains operating standards and procedures to ensure an effective and efficient medical certification automated processing system.

(11) Monitors performance of AMEs and provides statistical data to the Aerospace Medical Education Division (AAM-400) for efficient management of the AME program.

(12) Establishes, administers, and maintains standards and procedures to ensure an effective and efficient system for the electronic transmission of FAA Form 8500-8, Application for Airman Medical Certificate or

Airman Medical and Student Pilot Certificate, medical data, and required electrocardiograms.

(13) Develops and administers the medical elements of the Driving under the Influence/Driving While Intoxicated (DUI/DWI) Program. Under the program, AAM determines whether an airman who has a DUI/DWI conviction or administrative action is eligible for medical certification.

(14) Develops and administers internal operating directives and procedures for the industry antidrug and alcohol misuse prevention programs as they pertain to holders of medical certificates issued under Part 67 of the regulations.

(15) Participates with AAM-400 in the development and delivery of training for AMEs and FAA personnel.

66. MEDICAL REVIEW AND APPEALS BRANCH. Determines the medical qualifications of airmen based on available information and initiates appropriate action. Reviews controversial cases regarding issuance or denial of certification. Determines the disposition of special issuance and appeal cases. Manages the medical elements of the DUI/DWI Program. Develops national program guidance on matters regarding airman medical certification.

a. Review, Qualifications, and Evaluation Section A. Analyzes and identifies incomplete or problematic applications for airman medical certification and initiates appropriate resolution action(s). Evaluates medical information and reports as they relate to medical applications, determines their responsiveness and relevance under established certification policies and procedures, and takes appropriate action.

b. Review, Qualifications, and Evaluation Section B. Analyzes and identifies incomplete or problematic applications for airman medical certification and initiates appropriate resolution action(s). Evaluates medical information and reports as they relate to medical applications, determines their responsiveness and relevance under established certification policies and procedures, and takes appropriate action.

c. Medical Appeals Section. Analyzes and processes new and recertification special issuance and appeal cases. Evaluates the follow up reports, and issues medical certificate when appropriate. Schedules the bimonthly Federal Air Surgeon's Cardiology Panel which reviews all first- and second-class airmen cases with certain cardiac conditions.

67. WITHDRAWN.

68. MEDICAL SYSTEMS BRANCH. Provides clerical, statistical and automation support for the division. Manages the automated system for collection and dissemination of medical data for the aerospace medical certification program and international repository of airman medical certification records. Manages the international repository of electrocardiograms (EKG) and the automated EKG system.

a. Records and Correspondence Section. Maintains medical certification records and provides search, retrieval, and duplication services in support of the airman medical certification program. Provides clerical support to the division, including composing and preparing correspondence to airmen regarding medical certification.

69.-74. RESERVED.

AEROSPACE MEDICAL EDUCATION DIVISION

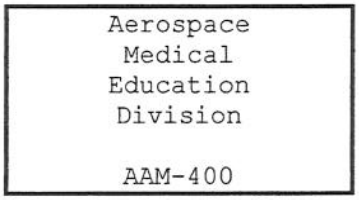

Figure 9-1

CHAPTER 9. AEROSPACE MEDICAL EDUCATION DIVISION

75. AEROSPACE MEDICAL EDUCATION DIVISION.

a. Structure. The functional organization of the Aerospace Medical Education Division is shown in Figure 9-1.

b. Functions. This division develops policies, procedures, and practices with respect to aerospace medical education, and administers aerospace medical education programs to meet the needs of the agency and the civil aerospace community.

c. The division has the following responsibilities:

(1) Plans, develops, and administers the Aviation Medical Examiner (AME) Program.

(2) Plans and develops standard criteria, and administers a centralized program for the selection, designation, training, and management of AMEs who are authorized to conduct aviation medical examinations of civil airmen throughout the United States and abroad. Ensures that the approved standard criteria for selection, designation, and training are applied equitably in all areas.

(3) Determines in coordination with the Regional Flight Surgeons, the geographical distribution of designated AMEs (including senior AMEs) to ensure adequate coverage to serve the needs of the pilot population. Takes action to correct any existing discrepancies nationally and internationally.

(4) Plans, develops and administers a uniform AME performance evaluation program that provides information as to the quality of examinations conducted and medical certification decisions made by each AME. Ensures the accuracy and timeliness of the computerized AME performance evaluation reports, which provide the Regional Flight Surgeons a meaningful statistical analysis for their consideration of the AMEs' re-designation.

(5) Administers the process to renew the designation of all active AMEs by issuing a current ID card and recording in the AME Records System the signed IDs.

(6) Selects, designates, re-designates, and terminates designation of military/federal (Department of Defense (DOD), Coast Guard, National Aeronautics and Space Administration (NASA), and other federal agencies), and international (foreign) AMEs.

(7) Coordinates with the offices of the Surgeons General of the Armed Forces, and with appropriate representatives of the Coast Guard, NASA, and other federal agencies, in the designation of flight surgeons and federal civilian physicians as AMEs to conduct aviation medical examinations and issue airman medical certificates to government personnel needing FAA medical certification.

(8) Coordinates with the State Department (through the FAA Office of International Aviation) in the designation of international AMEs to conduct aviation medical examinations and issue FAA medical certificates to US airmen in foreign countries, in accordance with Title 14 of the Code of Federal Regulations Section 67.5, Certification of Foreign Airmen.

(9) Distributes FAA medical forms, stationery, and medical publications to all AMEs. Initial supplies (upon AME designation) are provided by regional personnel and subsequent supplies are provided by AAM-400.

(10) Operates and maintains the computerized AME Records System which is the central repository of all of the information on the AMEs. Maintains master files for all AMEs. Coordinates with regional personnel the timely reporting of relevant AME information to update the AME Records System. Publishes the AME directory via the internet based on information from the AME Information System. Provides management data for evaluation of the AME program.

(11) Ensures that all continuing medical education programs comply with the essentials, guidelines, and standards of the Accreditation Council for Continuing Medical Education (ACCME) in order to maintain CAMI's ACCME accreditation.

(12) Analyzes, designs, develops, conducts, evaluates and administers nationwide AME education programs (existing and new) required to fulfill the medical training needs of all AMEs as outlined in FAA Order 8520.2D, Aviation Medical Examiner System. Ensures that AME education programs are designed to enable AMEs to make the correct medical certification decisions and to communicate their findings appropriately. Optimizes procedures and/or methodologies to evaluate AMEs' knowledge and understanding of medical certification standards and procedures and how to effectively apply them in the certification of airmen.

(13) Plans, designs, develops, conducts, evaluates, and administers professional and/or technical training for FAA personnel including pilots, inspectors, accident prevention program personnel, and medical personnel in the areas of aerospace physiology, global survival, medical and human factors aspects of aircraft accident investigation, aerospace medicine, occupational medicine, environmental medicine, cardiopulmonary resuscitation, and first aid.

(14) Plans, designs, develops, conducts, evaluates, and administers nationwide aerospace medical education programs for airmen focused on aerospace safety (including aerospace medical exhibits) in support of the FAA National Accident Prevention Program. Coordinates the development of aerospace medical training agreements (existing and new) between the FAA and the U.S. Air Force, Navy, and Army.

(15) Develops physiological and global survival training standards for FAA flight crews. Reviews existing standards periodically and, when necessary, recommends updates for publication in FAA Order 4040.9, FAA Aircraft Management Program.

(16) Plans, designs, develops, conducts, evaluates, and administers altitude chamber training for FAA flight crews (to meet regulatory requirements) and civilian airmen at CAMI and at military installations across the country. Optimizes procedures and/or methodologies to evaluate FAA flight crew's knowledge and understanding of aerospace physiology and global survival and how to effectively apply this knowledge to their day-to-day job-related activities.

(17) Operates and maintains CAMI's altitude chambers, thermal chamber, portable spatial disorientation trainers, and the emergency ditching simulators. This equipment is used in support of physiological and global survival training programs as well as research projects.

(18) Develops and maintains a database on altitude (hypobaric) chamber operations for the purpose of assessing the prevalence of adverse individual reactions to chamber flights, evaluating the long-term effects of repeated chamber flight exposures among instructors, and monitoring chamber workload or usage.

(19) Plans, develops, and conducts nationwide education/training activities (using all available delivery media and/or methods) to disseminate aerospace medical information and scientific data to FAA personnel, AMEs, airmen, aerospace industry, aviation organizations, academic institutions, and the general public in support of the agency's mission of promoting aerospace safety.

(20) Designs, develops, and distributes didactic audiovisual materials (videos, handouts, multimedia presentations, etc.) and publications used in support of all aerospace medical education programs. These educational aids are designed to support the dissemination of medical information that promotes aerospace safety.

(21) Serves as a centralized national resource of aerospace medical information and scientific data for the civil aerospace community. Manages and maintains the CAMI Aerospace Medical Library. Establishes and maintains close liaison with other government and private organizations (national and international) that represent the interests of the civil aviation pilot population in order to disseminate medical information that promotes aerospace safety.

(22) Supports international exchange programs, such as the International Exchange Visitor Program, that facilitate interaction between aviation medicine professionals, enable the exchange of scientific information, and promote the FAA's international leading role in civil aerospace medicine.

76. RESERVED

AEROSPACE HUMAN FACTORS RESEARCH DIVISION

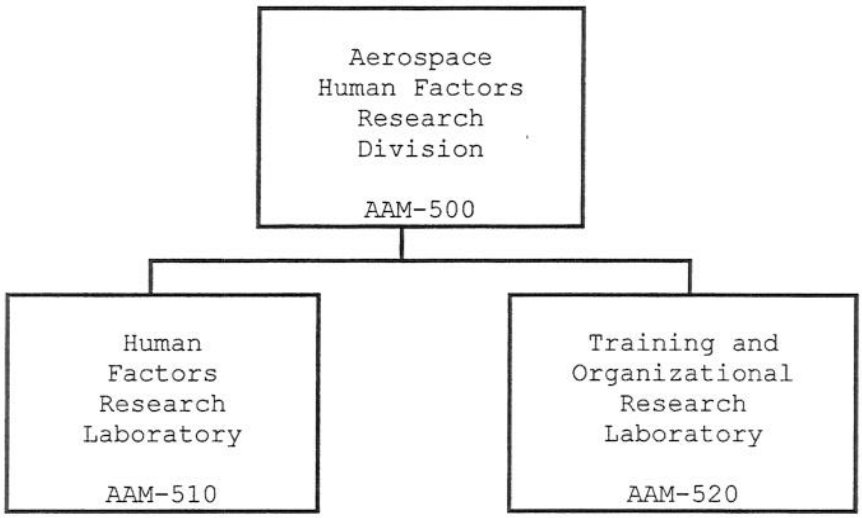

Figure 10-1

CHAPTER 10. AEROSPACE HUMAN FACTORS RESEARCH DIVISION

77. AEROSPACE HUMAN FACTORS RESEARCH DIVISION.

a. Structure. The functional organization of the Aerospace Human Factors Research Division is shown in Figure 10-1.

b. Functions. This division conducts an integrated program of field and laboratory research in organizational and human factor aspects of aviation work environments. Research includes, but is not limited to, assessments of human performance under various conditions of impairment, human error analysis and remediation, agency work force optimization, training analysis and career enhancement, assessing the impact of advanced automated systems on personnel requirements and performance, human factors evaluations of performance changes associated with advanced multifunction displays and controls in general aviation and air traffic control, and the psych-physiological effects of workload and shiftwork on job proficiency and safety in aviation related human-machine systems. This research is accomplished within two research laboratories, the Human Factors Research Laboratory and the Training and Organizational Research Laboratory.

78. HUMAN FACTORS RESEARCH LABORATORY. This laboratory plans and conducts a broad-based program of applied research on human factor issues in the design, operation, and maintenance of components of the National Aerospace System. Research includes assessing the impact of advanced technology, enhancing information transfer, evaluating effects of stressors on human performance, and quantifying the effects of equipment, procedures, and task design on pilot-controller communications, air traffic control/management systems, and general aviation aircraft cockpit design. Research is carried out in the following areas:

a. Advanced ATC Systems Research. Research on the impact of advanced technologies on ATCS performance and implications of advanced automation for information transfer and human/machine design. Develops metrics of performance and workload. Assesses alternative concepts for use of automation in information transfer. Identifies and evaluates applications of intelligent systems and innovative control/display concepts. Utilizes rapid prototyping techniques with advanced real-time ATC simulation capabilities.

b. Behavioral Stressors Research. Conducts research on stressor variables and conditions which could impact safety by impairing an individuals readiness to perform. Considers work environment issues involving ATCS and pilot job performance such as workload, shift management, age, fatigue, adverse physical conditions, stressors involving drug and alcohol usage, and color perception. Assesses the effectiveness of remedial actions, procedural or policy steps, or individual strategies and countermeasures to reduce performance decrements and enhance individual performance.

c. Performance Assessment Research. Conducts aviation human factors research on the design of hardware, software, and procedures with emphasis on general aviation applications. The focus is on objective, human performance data that will aid in identifying affordable initiatives for enhancing aircrew performance and reducing accidents and incidents. This includes the (a) design of cockpit controls and displays associated with emerging technologies; (b) development of performance-based criteria for use in certification and regulation; (c) identification of human casual factors associated with aviation accidents; and (d) effective use of training devices integrated with existing instructional systems.

79. TRAINING AND ORGANIZATIONAL RESEARCH LABORATORY. This laboratory conducts a broad, integrated program of research examining ways to enhance workforce performance. Research is focused on improved person-job fit through valid classification, and training of personnel; and improved organizational business practices through reengineering and organizational climate and culture interventions such as forming work-teams, realigning procedures with changing customer needs, structural streamlining, and personal empowerment. This program of research is carried out in the following areas:

a. Selection and Validation Research. Research is focused on the validation and evaluation of aviation workforce selection and placement systems, including job analyses, component measures and tests, and performance criteria. Explores the relationship between aviation workforce attitudes, aviation job/task requirements and demands, and individual and team performance, primarily in applied, field settings. Establishes scientific evidence of the job relatedness of aviation selection systems and their utility in achieving agency and NAS operational objectives. Results will enable the agency to identify and use cost effective hiring, training, and promotion systems and to demonstrate procedural fairness when challenged.

b. Training and Performance Research. Performs laboratory and field research focused on aviation training and on identifying and measuring job performance competencies, communication patterns, and related knowledge, skills, and abilities that impact individual and team safety, efficiency, and effectiveness. Results of research will provide job-relevant criteria to validate selection systems, and identify optimum person/team-job interfaces to guide training enhancements and job/task design.

c. Organizational Effectiveness Research. Performs primarily field research to determine the effectiveness of organizational and technological innovations intended to optimize workforce and organizational performance. Determines the relationship of workforce psychological characteristics (e.g., attitudes, temperament, behavioral preferences) and the work environment (e.g., organizational climate, culture, structure, and business practices). Results of research provides guidance to senior agency management on the relative merits of various innovations intended to enhance safety, efficiency, and effectiveness, workforce health, quality of employee worklife, agency customer satisfaction, and agency mission accomplishment.

AEROSPACE MEDICAL RESEARCH DIVISION

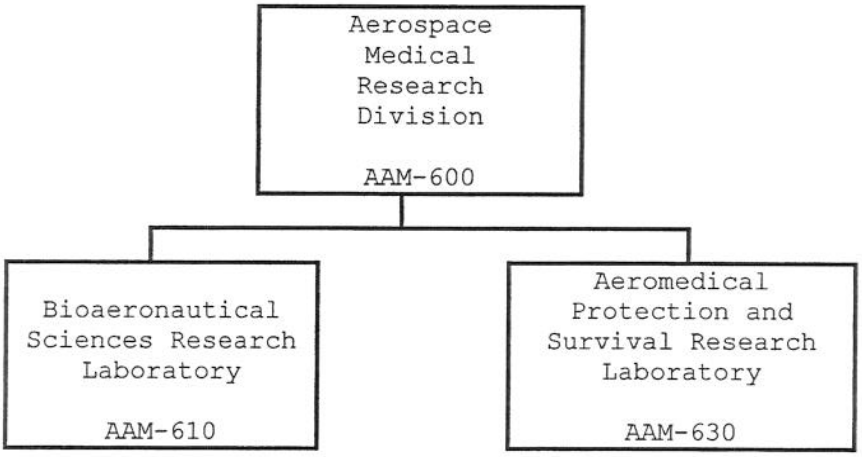

Figure 11-1

CHAPTER 11. AEROSPACE MEDICAL RESEARCH DIVISION

80. AEROSPACE MEDICAL RESEARCH DIVISION.

a. Structure. The functional organization of the Aerospace Medical Research Division is shown in Figure 11-1.

b. Functions. The Aerospace Medical Research Division evaluates human performance in aerospace environments, both simulated and actual, by applying multidisciplinary medical, physiological, pharmacological, and biochemical studies; conducts protection and survival research; initiates both in-house and contractual research related to improving performance; and participates in select onsite visits to investigate and analyze major problem areas.

c. The division has the following responsibilities:

(1) Plans and executes studies to determine the effects of the civil aerospace environment, flight procedures, and equipment upon the human body, and conducts research into the clinical and biomedical capabilities and limitations relating to the effectiveness and reliability of personnel in the National Airspace System.

(2) Investigates selected general aviation and air carrier accidents and searches for biomedical and clinical causes of the accidents, including evidence of disease and chemical abuse; analyzes the accident data for selected aviation populations; and studies accident survival. Maintains a central repository for reports and data concerning the medical and human factors aspects of specific accidents that are investigated.

81. BIOAERONAUTICAL SCIENCES RESEARCH LABORATORY. Studies medical findings in aircraft accidents and defines relationships between those findings and the safe operation of aircraft.

a. The laboratory has the following responsibilities:

(1) One technical team develops bioaeronautical computer models for the simulations of cabin evacuations, cabin airflow, and accident reconstruction. This work will allow researchers to predict passenger and crew evacuation profiles for accidents, proposed aircraft, and existing aircraft. This will reduce the cost and injuries incurred from the use of human subject evacuation tests. Investigates conditions that influence the accuracy, validity, and interpretation of bioaeronautical computer models and procedures and findings. Such investigations address issues such as the effect of size, obstacles, smoke, rates of movement, force, and other factors related to bioaeronautical issues.

(2) A second technical team detects and measures drugs, alcohol, toxic gases, and toxic industrial chemicals in victims of fatal aircraft accidents as a contribution to the analysis of accident causation, and adapts or develops improved methods for making such measurements. Deoxyribonucleic acid/ ribonucleic acid (DNA/RNA) analyses are undertaken both to specifically identify tissue sources and to document biochemical processes such as postmortem alcohol generation.

(3) A third technical team conducts research into problems that affect the civil aerospace industry and that depend primarily on biochemical factors. Performs analytic procedures at a reference laboratory level and contributes to the quality assurance programs required by CAMI.

(4) A fourth technical team performs research on the effects of radiation (both ionizing and non-ionizing) on living systems with particular attention to the characteristics of radiosensitive tissue, identifies radiation hazards within the aviation environment, and studies methods of protection from such hazards.

82. AEROMEDICAL PROTECTION AND SURVIVAL LABORATORY. Conducts studies and research pertaining to the human aspects of protection and survival from exposure to hazardous conditions relative to civil aerospace operations. Research includes, but is not limited to, methods of attenuating or preventing crash injuries, devising concepts and evaluating survival equipment used under adverse environmental and emergency conditions, and establishing human physical limitations of civil aviation operations. Conceives, plans, and accomplishes imagery support for aerospace medical research projects in the division using multidisciplinary techniques and acquired skills in imagery technology.

a. The laboratory has the following responsibilities:

(1) One technical team evaluates the injury potential of new materials and structures by utilizing advanced computational and impact test techniques under simulated crash environments and supports other FAA elements in conducting dynamic tests. Develops new methods, techniques, and equipment for evaluating injury potential.

(2) A second technical team monitors aircraft cabin safety problems and conducts research studies and tests pertaining to the emergency evacuation of aircraft and water survival. Studies emergency situations to determine adequacy of survival equipment and procedures based on human requirements.

(3) A third technical team conducts research into environmental factors including biological/chemical threat environments that detrimentally influence human functioning, physiology and safety in aerospace environments. Studies emergency situations to determine adequacy of aircraft protective breathing devices. Develops improved test methodology and procedures to identify environmental hazards and quantify preventive measures.

(4) A fourth technical team conducts medical and laboratory studies of aircraft accident victims, including onsite participation in selected cases, to analyze medical, engineering, and human factors findings gained from such cases, and conducts appropriate research into the relationships of such findings to the safe operation of aircraft. Develops methods for the better understanding of such factors in aircraft accidents. Studies performance decrements resulting from disease processes to determine their effects on aerospace safety.

(5) A fifth technical team conducts research into the visual aspects of aerospace safety to identify opthalmic deficiencies and corrective methods that may impact aerospace safety. Develops information to support airman certification, identify aircraft/airport environment vision hazards and supports related education/corrective programs.

OCCUPATIONAL HEALTH DIVISION

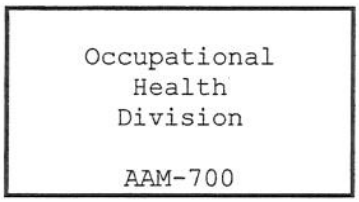

Figure 12-1

CHAPTER 12. OCCUPATIONAL HEALTH DIVISION

83. OCCUPATIONAL HEALTH DIVISION.

a. Structure. The functional organization of the Occupational Health Division is shown in Figure 12-1.

b. Functions. This division administers agency occupational health programs for agency employees pursuant to PL 91-596, the Occupational Safety and Health Act; Executive Order 12196, Occupational Safety and Health Programs for Federal Employees; and provides professional advice and technical knowledge to the Federal Air Surgeon and other agency elements. The division manages a professional, technical, and clerical staff with programs in occupational medicine, clinical services, and industrial hygiene.

c. The division has the following responsibilities:

(1) Occupational Medicine Program.

(a) Provides professional and technical guidance and evaluation for all elements of the agency concerning occupational medicine. Acts as consultant to the Federal Air Surgeon (FAS), Regional Flight Surgeons (RFS), and Flight Surgeons (FS).

(b) Manages assigned portions of the FAA ATCS Health Program. Acts for the Federal Air Surgeon by reviewing employee appeals of medical disqualifications made by RFS. Develops and maintains a current group of medical specialists to act as a consultant panel to assist in medical decisions of appeal cases, as needed.

(c) Manages the agency electronic medical records system which contains all data from periodic physical examinations of ATCS's. Ensures that the system operates in such a manner that accurate data can be extracted that meets the needs of AAM.

(d) Develops and recommends minimum medical standards for agency ATCSs, and other employees, as required by the Office of Personnel Management (OPM) or the FAA. Recommends to the Federal Air Surgeon those FAA positions which should have medical standards. Reviews and prepares FAA orders which contain medical standards for all positions requiring such standards.

(e) Provides technical guidance, reviews results of supplemental medical evaluations performed by medical specialists outside the agency on agency employees covered by medical standards when requested by the RFS, and makes recommendations to the Federal Air Surgeon on the disposition of these specially referred problem cases.

(f) Assists in the development of plans to validate and properly control Office of Workers' Compensation Plan (OWCP) chargeback payments to the Department of Labor for on-the-job medical disability cases. This includes the prevention of on-the-job disabilities through the application of sound occupational medicine preventive measures, and the review and evaluation of medical factors in cases applying for OWCP disability retirement, or, when appropriate, cases already granted OWCP disability retirement.

(g) Provides the CAMI Emergency Readiness Officer.

(h) Maintains liaison with the medical elements of major air transport entities.

(i) Serves as the FAA Institutional Review Board that approves protocols for protecting human research subjects. In addition to approving protocols for CAMI, this division provides oversight for the FAA Technical Center that operates a local IRB that approves research with minimal risk to human subjects. The division also provides other related research support and serves as the technical expert on the protection of human subjects.

(2) Clinical Services Program.

(a) Provides primary care level of medical services and assists with referrals and consultations for domestic and international students attending the FAA academy.

(b) Provides limited medical services, primarily for minor care of illnesses and injuries, to improve efficiency and reduce time lost from work for Mike Monroney Aeronautical Center employees and its tenants.

(c) Provides consultation, advice, and emergency treatment for on-the-job illness or injury of agency personnel located at the Mike Monroney Aeronautical Center.

(d) Plans and administers medical services to support the Mike Monroney Aeronautical Center emergency operations program.

(e) Conducts a medical monitoring program for Mike Monroney Aeronautical Center employees who are potentially exposed to recognized health hazards.

(f) Develops, conducts, and coordinates, with the Aerospace Medical Research Division (AAM-600), projects involving clinical factors in aerospace safety.

(g) Performs the clinical functions associated with all FAA Employee Substance Abuse Programs at the Mike Monroney Aeronautical Center.

(h) Physician in charge serves as Medical Review Officer (MRO) for the Mike Monroney Aeronautical Center.

(i) Provides a Health Awareness Program (HAP) available to all Federal employees at the Mike Monroney Aeronautical Center.

(j) Physician in charge of the clinic serves as clinic team coordinator.

(3) Industrial Hygiene Program.

(a) Provides consultation in industrial hygiene for the Federal Air Surgeon, Regional Flight Surgeons, Flight Surgeons, and other agency officials.

(b) Provides industrial hygiene services to the Mike Monroney Aeronautical Center as outlined in the Mike Monroney Aeronautical Center/CAMI Tenancy Agreement.

(c) Provides the coordinator for the CAMI Safety Education Program.