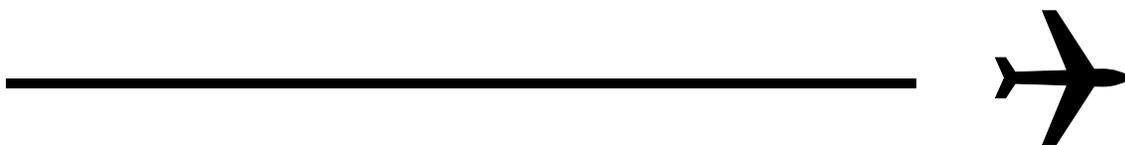


CDC 4E051

Public Health Journeyman

Volume 06. Force Health Management



Air Force Institute for Advanced Distributed Learning

Air University

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THIS sixth volume of CDC 4E051 is designed to increase your knowledge of Force Health Management (FHM). As you are aware, these duties are quite diverse. This volume addresses these duties in the following units.

Unit 1 explains the various duties of FHM. It details the fundamentals of the Preventive Health Assessment and Individual Medical Readiness (PIMR) program. It will give you the guidance of the PIMR program and components so that you can properly oversee the process and accurately manage the data that's involved with overseeing the program. It also discusses the Occupational Health Program, our role as consultants to the immunizations program and closes with our involvement in deployment processing.

Unit 2 addresses medical standards and how to apply those standards to military personnel. It will explain profile management, special purpose profiles, and other types of medical clearances that are accomplished in FHM. Lastly, it ends by discussing the importance of quality controlling medical standards products.

Unit 3 addresses special considerations in regard to Aeromedical waivers and the role of the Aeromedical Consultation Service. Then, you'll learn the DOEHR-HC program, followed by a lesson on procedures for audiometer calibration. It also covers the Air Force Hearing Conservation Program. First, we discuss the fundamentals of the program. Our discussion in this unit also includes the disposition of personnel exposed to hazardous noise.

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To get a response to your questions concerning subject matter in this course, or to point out technical errors in the text, unit review exercises, or course examination, call or write the author using the contact information on the inside front cover of this volume.

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This volume is valued at 6 hours and 2 points.

NOTE:

In this volume, the subject matter is divided into self-contained units. A unit menu begins each unit, identifying the lesson headings and numbers. After reading the unit menu page and unit introduction, study the section, answer the self-test questions, and compare your answers with those given at the end of the unit. Then do the unit review exercises.

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Unit 1. Introduction to Force Health Management

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THE DUTIES IN PUBLIC HEALTH are continually evolving to meet the needs of the Air Force. Force Health Management (FHM) is an element within Public Health. While working FHM, it will become obvious that you play an intricate part in the overall success of the Air Force Medical Service (AFMS).

The unit begins with introducing some general responsibilities within Force Health Management. These duties include, providing administrative oversight of the Preventive Health Assessment and Individual Medical Readiness (PIMR) program. In support of the PIMR program you will gather data and provide reports to Primary Care Management (PCM) teams, unit personnel and to both line and medical leadership. This will provide line commanders with real-time information on the medical readiness status of their forces and will give primary care managers specific information on the health of their enrolled active duty members. You will also provide policy input to both medical readiness and population health functions.

In addition to the previous duties, FHM will provide administrative oversight of the Occupational Health Exam (OHE) Program. You must ensure PCM teams know what occupational exams to perform and provide quality control of the finished examination. You will assist the Hearing Conservation Program Manager with program effectiveness, perform occupational health related audiograms, and provide input (such as epidemiological and compliance data) to the Occupational Health Working Group (OHWG).

The lessons will conclude with an overview of your role as immunizations consultant and how FHM assists with the medical administrative processing for deploying troops. This includes reviewing medical records in order to identify possible disqualifying conditions.

A01. Preventive Health Assessment and Individual Medical Readiness Program Guidelines

Preventive Health Assessment and Individual Medical Readiness (PIMR) program is a medical group program, which requires a joint effort between many sections. FHM's primary role in the PIMR process is to provide central oversight and support. This includes software upgrades, report generation and quality control. FHM or the PCM team may schedule the PHA's; depending on local circumstance. The PCM Teams complete the actual assessment, including the para-professional portion of the exam, record reviews, and any required follow-ups.

The Preventive Health Assessment (PHA) and Individual Medical Readiness (PIMR) program combines the many changes that have occurred over the past several years within the Air Force Medical Service (AFMS) and Military Healthcare Services (MHS). The outcome of PIMR should be a medically fit and ready force. Along with commanders and the individual service members, you have a crucial role in ensuring success of this program.

Individual medical readiness

The primary purpose of IMR is to provide a "real-time" medical readiness assessment of IMR requirements to commanders, individuals, and Primary Care Management (PCM) Teams so they can manage and optimize the readiness status of their assigned or enrolled AF personnel.

The assessment of an individual's medical readiness must be a continuous process. It is independent of the recurring PHA cycle or assessment. As individual IMR services become due, members must be

scheduled by their PCM teams to accomplish them. This ensures members maintain their full readiness status. For example, if an individual completes their PHA in January and becomes due for a required immunization in March or becomes pregnant in June, their IMR status will be reflected in the PIMR program immediately. In order for IMR status to be kept current in PIMR, these items must be updated continuously throughout the year, as you know medical conditions do change. The vast majority of information for the IMR portion of PIMR will be imported into the software from other computer systems or a central server. The rest will be manually entered into the PIMR system as needed. IMR factors are explained in the following paragraphs.

Immunizations

Immunization requirements (including TB skin testing) are established and linked automatically to PIMR. When a required immunization or TB skin test becomes due, the IMR status changes to RED (individual is not cleared for deployment) until it is completed.

Dental classification

Dental classification is managed through the Dental Classification Management System (DCMS) and passed on to PIMR automatically. A dental classification of 1 or 2 will be reflected as IMR GREEN (individual meets all readiness requirements for deployment), 3 or 4 will be reflected as RED.

Physical profile

All profiles will be managed within the PIMR software. Providers will initiate the profile as indicated in AFI 48-123, *Medical Examinations and Standards*, Chapter 10 and by using the guidance in AFPAM 48-133, *Physical Examination Techniques*, Chapter 10, para 10.3. Any profile that brings a member's deployment qualification into question will be reflected as RED.

Medical readiness lab test

The following lab tests are required at the indicated frequency and must be recorded in PIMR:

Lab Test	Frequency
G6PD	Once
DNA	
Blood Type	
Sickledex	
HIV	Within 5 years

If these lab tests have not been accomplished and are not in the PIMR software, this area will show as RED until the requirements are met. The data must be entered manually into the PIMR software in order to change the RED to GREEN.

Health records review date

At a minimum, the health record review (HRR) is accomplished annually. The HRR date is manually entered into the PIMR system and indicates the date the PCM review was last completed. The technician enters the data associated with the HRR once the PCM has completed the review. The first day of the thirteenth month after the last assessment, this area in PIMR turns YELLOW indicating the individual is overdue for an assessment. On rare occasions, such as unannounced or rapid deployment of the individual, the PHA might be delayed up to a maximum of 6 months (or 18 months total). After 18 months, PIMR status turns RED, which reflects that the person should have an assessment completed before any deployment.

Other specific data

Special populations of active duty members may have additional requirements, such as flying and special duty personnel. Additional requirements for those personnel are programmed into the PIMR

software. This information, such as gas masks inserts and Quantitative Fit Training (QNFT), will be entered into PIMR. This includes the date gas mask insert were issued, for those with defective visual acuity, and the date quantitative fit testing of the gas mask was last accomplished. If a member has other required medical equipment, such as hearing aids or orthotic support devices, the date of their issue should also be listed.

Preventive health assessment

The preventive health assessment (PHA) is an annual process, which requires a review of preventive health and individual medical requirements for all Air Force active duty members. If the member has received needed preventive services as part of routine care, and all IMR requirements are current, then little or no additional intervention may be required, and the PHA may be strictly an administrative review. As much as feasible, all reviews should be accomplished before or during any patient visit. All requirements should be identified in advance to minimize the time the members must spend away from their duty sections. When a patient visit is required, all reasonable efforts should be made to streamline the process, combine tests and minimize the impact on the patient; however, this should not be construed as requiring all testing to be accomplished on the same day. For example, it may not be reasonable to schedule multiple tests such as a cholesterol screening, cycle ergometry, a dental exam and a pelvic exam all on the same day. This should be a local decision based upon the needs of the patients, commanders, and staff.

Self-Test Questions

After you complete these questions, you may check your answers at the end of the unit.

A01. Preventive Health Assessment and Individual Medical Readiness Program Guidelines

1. What is FHM's primary role in the PIMR process?
2. What is the outcome of PIMR?
3. List the IMR factors.
4. List the five IMR medical lab tests.
5. Why are PHA requirements identified in advance?

A02. Completing a preventive health assessment

A complete PHA will be defined as having completed a review or update of all IMR requirements and the health history and review of findings.

Review/update all IMR requirements

All IMR requirements must be reviewed and accomplished, if needed, as part of the PHA process. All aspects of the IMR requirements must be evaluated and those issues that can be “turned green”(all medical readiness requirements met/current) should be accomplished. However, the completion of a review does not necessarily affect the IMR status. For example, an individual may have a deployment limiting profile, may be deferred for an immunization, or may not be in Dental Class 1 or 2. Thus, they will be complete for the review, but will remain IMR “Red.”

Health history and review of findings***Health Enrollment Assessment Review***

The Health Enrollment Assessment Review (HEAR) or the 16-question Overprint 600 may be used; local policy will determine which is to be used. It is recommended that it be accomplished before the PHA, (i.e., during the dental exam or fitness exam, etc.). This will allow a thorough review of this “self-reporting” tool for any behavioral risk or health concerns of the individual. Keep in mind that once the HEAR has been completed it must be reviewed as soon as possible (immediately for individuals on the Personal Reliability Program [PRP]) to ensure there are no indicators that require immediate intervention (such as mental health issues that have an immediate impact on PRP status).

Interval history

An interval history (since last PHA) is required for each PHA. Other sources may be used to collect the interval history such as AF Form 696, Dental Patient Medical History; a web-based questionnaire; telephone interview; or other modality. The information collected must be immediately reviewed and forwarded for inclusion in the medical record and available for review at the time of the administration portion of the PHA.

Record review

The individual’s medical record must be reviewed by the PCM team to identify any medical conditions or behavioral risks that require further evaluation or counseling. Historical evidence tells you that a good record review is essential to identifying issues which may need further evaluation, especially in terms of a member’s qualification for deployments.

Clinical Preventive Services

The Clinical Preventive Services (CPS) reflected within PIMR are the minimum recommended studies that an individual needs. These studies are based on recommendations from the US Preventive Health Services Task Force (USPHSTF) and can be found in the Preventive Base Screening Grid, which is part of the algorithm used in the PIMR software. This chart identifies what examinations/studies are needed during the annual PHA. This computer-generated list includes the following elements of the PHA.

- Test needed.
- Frequency of test required.
- Male vs. Female test required.

Tests and procedures for non-flyers are based on age and family history. Tests and procedures for flight personnel are based on the same criteria with the addition of visual and hearing exams.

The PIMR software uses this matrix to determine when individuals are due for these examinations. Providers may change the recommended frequency for individual patients based on his/her risk factors. However, if the provider does change the frequency, his/her rationale for doing so should be clearly explained in the medical records. A manual record review can also identify test and procedures that may be required during a PHA.

CPS studies must be addressed as part of a member’s routine health care. At the time of the annual PHA, all of these requirements and recommendations should be reviewed and any that have not been accomplished should be scheduled and completed.

Self-Test Questions

After you complete these questions, you may check your answers at the end of the unit.

A02. Completing a Preventive Health Assessment Content

1. What two “self reporting tools” are acceptable in accomplishing the health history?
2. Why must the HEAR be reviewed immediately?
3. What is the purpose of reviewing the medical record?

A03. Preventive Health Assessment and Individual Medical Readiness Program Components

Force Health Management is responsible for several components of the PIMR program. In this lesson, you will learn the four components, which include data management, occupational examination oversight, immunizations consultant, and deployment support. You will begin this lesson with an overview of the various responsibilities associated with managing PIMR data.

Data management

The daily management of the PIMR software system is the responsibility of FHM with the assistance of the local systems personnel, as required. PIMR data provided by FHM should be reviewed and analyzed by the Population Health Working Group (PHWG) on a routine basis as part of their outcome management function. This group should work as a team to resolve issues with process completion, staff interactions, scheduling problems, etc., and to ensure line commanders are receiving adequate support.

Occupational health oversight

Force Health Management will oversee the Occupational Health Program by reviewing and analyzing the outcomes of the OHEs. They should work with PCM teams to ensure that they are aware of the occupational health requirements and keep them updated on any changes to the requirements made by the OHWG. Additionally, identification of trends and tracking compliance rates will be performed by FHM. As FHM conducts quality control of the Medical Treatment Facility (MTF) PHA program, they should ensure that any high-risk occupational examinations are included.

Immunizations consultant

As consultants to the immunization section, FHM plays a critical role in protecting the health of all enrolled patients. In addition to making recommendations to the PHWG regarding which immunizations various segments of the population should receive, FHM also plays a part in keeping the PCM teams and line commanders informed. Periodic review of the immunizations database, with reports to the PCM teams and line commanders or unit health monitors, help ensure the patient population is properly immunized.

Deployment support

Force Health Management personnel may be tasked to participate in support of mass deployments. This critical support consists of reviewing medical records in order to identify personnel who may not be qualified to deploy. Most medical groups in the Air Force will at some point be tasked to help prepare deploying personnel. Managing pre- and post-deployment checklists, conducting medical

intelligence briefings, and assisting PCM team members with medical records reviews are all areas involving Public Health technicians.

Self-Test Questions

After you complete these questions, you may check your answers at the end of the unit.

A03. Preventive Health Assessment and Individual Medical Readiness Program Components

1. Who reviews and analyzes PIMR data as a part of their management function?
2. How does FHM oversee the Occupational Health program?
3. What is the most critical role of the FHM immunization consultant?
4. What is the most critical step in assisting with the deployment process?

Answers to Self-Test Questions

A01

1. Provide central oversight and support.
2. A medically fit and ready force.
3. (1) Immunizations (2) Dental classifications (3) Physical Profile (4) Medical readiness lab test (5) Health Record Review (6) Medical equipment data (7) PHA
4. HIV, G6PD, HGB-S, DNA, and Blood Type
5. To minimize the time away from the duty section.

A02

1. Health Enrollment Assessment Review (HEAR) or 16 Questions, Overprint 600
2. To ensure there are no indicators that require immediate intervention
3. To identify any medical conditions or behavioral risks that require further evaluation or counseling.

A03

1. FHM
2. By reviewing and analyzing outcomes, identifying trends, and tracking compliance rates.
3. Protecting the health of all enrolled patients.
4. Reviewing medical records.

Do the unit review exercises before going to the next unit.

Unit Review Exercises

Note to Student: Consider all choices carefully, select the *best* answer to each question, and *circle* the corresponding letter. When you have completed all unit review exercises, transfer your answers to ECI (AFIADL) Form 34, Field Scoring Answer Sheet.

Do not return your answer sheet to AFIADL.

1. (A01) What is the ultimate outcome of the Preventive Health Assessment Individual Medical Readiness program?
 - a. Fit and ready force.
 - b. To establish ACS study groups.
 - c. To keep the Preventive Health Assessment Individual Medical Readiness (PIMR) database updated.
 - d. Shorter suspense time for waiver cases.
2. (A01) Which of the following colors will a dental classification of 3 or 4 be coded?
 - a. Red.
 - b. Blue.
 - c. Black.
 - d. Green.
3. (A01) Which lab test is not required for Individual Medical Readiness?
 - a. DNA.
 - b. G6PD.
 - c. Pregnancy.
 - d. Blood Type.
4. (A01) At a *minimum*, how often must the Preventative Health Assessment be accomplished?
 - a. Month.
 - b. Quarter.
 - c. Year.
 - d. Two years.
5. (A01) How many months can a member go without a Preventive Health Assessment?
 - a. 6.
 - b. 12.
 - c. 18.
 - d. 24.
6. (A01) How many months can a Preventive Health Assessment be delayed due to a deployment?
 - a. 3.
 - b. 6.
 - c. 9
 - d. 12.
7. (A02) Which of the following is not a Preventive Health Assessment requirement?
 - a. Record review.
 - b. Interval history.
 - c. Fitness Assessment.
 - d. Health Enrollment Assessment Review.

8. (A02) Which of the following Preventive Health Assessment elements is not included on the Preventive Base Screening Grid?
 - a. Test needed.
 - b. Test result.
 - c. Frequency of test required.
 - d. Male vs. Female test required.
9. (A03) Which is not a component of the Preventive Health Assessment Individual Medical Readiness program?
 - a. Aviation service code (ASC) evaluations.
 - b. Data management.
 - c. Deployment support.
 - d. Immunizations consultant.
10. (A03) Who works to resolve process completion issues, staff interactions, and scheduling problems of the Preventive Health Assessment Individual Medical Readiness process?
 - a. Primary care manager (PCM) teams.
 - b. Commander's Executive Staff.
 - c. Population Health Working Group.
 - d. Occupation Health Working Group.
11. (A03) Who make changes to the occupational health requirements?
 - a. Primary care manager (PCM) teams.
 - b. Commander's Executive Staff.
 - c. Population Health Working Group.
 - d. Occupational Health Working Group.
12. (A03) To whom does the immunization section consult with, regarding which immunizations various segments of the population receive?
 - a. Primary care manager (PCM) team
 - b. Flight Medicine
 - c. Population Health
 - d. Force Health Management
13. (A03) The purpose of record reviews for mass deployment is to
 - a. manage deployment checklist.
 - b. enhance intelligence briefings.
 - c. identify PIMR requirements.
 - d. identify personnel who may not be qualified to deploy.

Please read the unit menu for unit 2 and continue →

Unit 2. Medical Management

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AS A PART OF Force Health Management, you will apply medical standards for initial and continued qualification of Air Force members, and will be the focal point to maintain and oversee medical standards for the Medical Treatment Facility. You will evaluate identified medical conditions and compare them to established standards to ensure proper disposition.

One of the many methods used by the Medical Service to provide optimal care is through regular physical assessments, which you read about in unit 1.

Before qualification can be determined, you must first have a basic understanding of medical standards and physical requirements. With this in mind, this lesson begins with the nature of medical standards.

2–1. Medical Standards

As stated in AFI 48–123, *Medical Examinations and Standards*, standards and physical examination requirements ensure acquisition and retention of members who are medically acceptable for military life. As you know, there are many types of physical examinations, each with its own set of medical standards that must be met. Within the pages of AFI 48–123, you will find an itemized account on the medical standards for each type of examination. Included are the specific scope and frequency, accomplishment and recording requirements, as well as a variety of administrative procedures and considerations.

A04. Medical examination

A medical examination may be defined as an investigation and evaluation of an individual’s body and medical history to determine his or her state of physical and mental health. This definition is appropriate because the examiner performs a careful search for evidence of disease or defect (investigation) and then compares these findings with the established normal values (evaluation). The purpose of any medical examination should be to resolve all reasonable questions about a medical defect and to determine the individual’s medical status. To satisfy its definition and purpose, a medical examination must be wide enough in scope to investigate all major body systems. The depth of evaluation for each body system depends upon the type, or class, of the medical examination being processed. An example of this is easily illustrated during the vision testing process—there are fewer tests required on an enlistment physical than for a Flying Class I examination, which is given to pilot applicants.

There are several types of standard medical examinations specified in AFI 48-123, specifically:

- Accession Examinations
- Department of Defense Medical Examination Review Board (DODMERB) for those applying to the service academies
- Initial Flying Duty
- Preventive Health Assessment (PHA)

Each examination is conducted and recorded according to the format and procedures prescribed in AFPAM 48-133, *Physical Examination Techniques*. It is important to note that as long as all requirements are met, a medical examination may serve more than one purpose.

Continued active duty

In addition to the prudent selection of the medically qualified personnel resources, it's an important requirement to ensure timely identification and removal of those individuals who are no longer physically qualified for continued military service. Whenever a member's qualifications for continued service are questionable, the member's case is processed under the provisions provided in AFI 48-123, AFI 44-113, *Medical Evaluation Boards and Continued Military Service*, and AFI 36-3212, *Physical Evaluation for Retention, Retirement, and Separation*. Health care providers and FHM personnel must be familiar with these publications and—since you'll refer to them frequently—maintain them in the FHM publication library.

Continued flying duty

Disqualification for flying duty depends on the particular condition involved. Medical standards for flying duty are designed to avoid compromise of flying safety, mission completion, or the member's well being. The medical conditions listed in AFI 48-123 are primarily for your guidance and that of the flight surgeons; many of the conditions, depending on their severity, may be waived.

A05. Profile management

The physical profile system classifies individuals according to physical functional abilities. It applies to the following categories of personnel:

1. Applicants for appointment, enlistment, and induction into military service.
2. Active duty and Air Reserve components (ARC) throughout their military service.

The majority of the initial enlisted profiles are established through MEPS and are entered in item 45A on the SF 88, Medical Record - Report of Medical Examination. Once the trainees enter basic training at Lackland AFB, TX, their profile is reviewed by a 4EOX1. If a revision is required, a physician will also review the SF 88 and make any required changes on an AF Form 422, Physical Profile Serial Report.

Since officers enter the Air Force from many different sources, their initial profiles are usually located on the commissioning physical examination. When the officer reports to their first permanent duty station, their records must be reviewed by their PCM. During the record review they will establish, verify, and make necessary corrections to the initial profile by using the AF Form 422.

Using the AF Form 422

FHM personnel deal with AF Form 422 almost every day, and by now you have probably had experience using them. This section will detail the purpose and proper administrative handling of this very important form. For detailed instruction on completing an AF Form 422, see AFPAM 48-133.

The AF Form 422 is a device for communicating information to non-medical authorities in layman's terms on the general physical condition or specific duty limitations of military members. The profile system exists to facilitate the following personnel, training, or command actions:

Common uses of the AF Form 422	Additional uses of the AF Form 422
<p>Clearance of the member for worldwide duty.</p> <p>Notification to MPF of worldwide duty changes.</p> <p>Notification to MPF of a member's profile change.</p> <p>Communicate Information to the member's unit commander or supervisor that he or she has an injury or illness that limits job performance.</p>	<p>Notification to MPF for active duty members or component surgeon's office for ARC members of the member's qualification for retirement or separation.</p> <p>Drug abuse reporting to commanders, social actions officers, and other responsible parties of active duty personnel identified as drug experimenters, users, or addicts.</p> <p>Physical restrictions/fitness exemptions.</p> <p>Provides information to MPF of medical recommendations for retaining as shown in fig. 2-1</p>

When to review the AF Form 422

All profiles are accomplished in the PIMR database. You must always review, and may even revise, a physical profile whenever a PHA or physical examination is performed. As you know, a member who is selected for overseas, geographically separated unit (GSU), or combat zone assignments must have medical records reviewed and cleared for worldwide duty. Also, individuals who are discharged or transferred from the hospital must have their medical records reviewed to ensure proper profiling and administrative disposition. For example, a patient being discharged from the hospital who has been diagnosed as having a myocardial infarction must have his or her physical profile revised to a 4T and recommended for a Medical Evaluation Board (MEB).

All members must have their medical records reviewed before they return to normal duty following any illness or injury that significantly affected their duty performance or qualification for worldwide duty. This cannot be over-emphasized. Consider, for example, a patient with a leg in a cast because of a fractured tibia. Perhaps this person must use crutches to walk, and as a result may not be able to perform normal duties. This is only a temporary occupational restriction, and if there are no foreseeable complications, you can estimate that the individual will have the cast on for about six weeks. Therefore, the PCM team would accomplish an AF Form 422 indicating what physical restrictions apply and setting a date on which the restrictions expire.

Any profile with a 4T in it tells the personnel system that the patient's qualification for worldwide duty (WWD) is questionable; therefore, FHM must review the AF Form 422 every 30 calendar days when a member possesses a 4T profile. This is done because the FHM personnel must notify the health care provider to initiate MEB action before the 4T expiration date, if the evaluatee is not expected to return to duty within 1 year of the 4T profile start date. Since pregnancies warrant a 4T profile, they must also be reviewed every 30 days; however, this review may be performed by the clinic providing primary obstetrical care to the patient. This clinic must understand that any changes in the duty restrictions must be referred to FHM. If you don't understand what a "4T" means, don't worry, the next portion explains how and why a profile is given a letter, or "factor," and number, or "grade."

Figure 2-1. Sample, AF Form 422, Physical Profile Serial Report.

Factors

The physical profile serial is based upon the functional ability of an individual to perform military tasks—physical and mental. In relation to this performance, each physical profile serial considers the functions of the body parts, organs, and systems of a particular individual. During development of the

physical profile serial, military physicians divided the human functions into six factors. These factors have come to be known as the “PULHES.” These initials are taken from the first letter of each factor, with the exception of the “S” that is the phonetic sound of the root word, as identified in the following chart.

Factor	Name	Description of What to Rate
P	Physical Condition	Organic defects not shown in the other factors. For instance, cardiovascular, pulmonary, gastrointestinal and renal diseases, allergies, hernias, and dental conditions. Note: <i>A defect in another factor may influence the P factor.</i>
U	Upper Extremities	Functional use, strength, range of motion, and general efficiency of hands, arms, shoulder girdle, and spine (cervical and thoracic).
L	Lower Extremities	Functional use, strength, range of motion, and general efficiency of feet, legs, pelvic girdle, lower back, and lumbar and sacral spine.
H	Hearing	Auditory acuity <i>only</i> . Organic defects of ears are profiled under “P.” “H” profiles are established using the standards contained in AFI 48-123.
E	Vision (Eyes)	Distant visual acuity <i>only</i> . Organic eye diseases, such as glaucoma, retinitis, and chorioretinitis and visual field defects are profiled under “P.” Note: <i>Near visual acuity and color vision are not profiled under any factor.</i>
S	Psychiatric	Emotional stability and neuropsychiatric history and findings.

Although there is not a dedicated “block” on the AF Form 422, a seventh factor, “X,” which indicates the strength aptitude of an individual, is also included in the profile serial. To determine the “X” factor, a strength aptitude test (SAT) is given to rate the member’s ability to lift free-standing weights to various heights. Personnel from the Services Squadron conduct this test at the Fitness Center (gym) and the standards for this factor are contained in AFM 36-2108, *Airman Classification*. Since there is not an “X” factor block on the current version of the AF Form 422, this information must be recorded in the “Remarks” section or documented on the MPF SAT request letter.

Serial grades

There are four physical profile serial grades—1, 2, 3, and 4, that may be used for six of the physical profile serial factors. The “X” factor does not use a number grade; however, a letter code is used to represent the given amount of weight a member must lift. The strength aptitude codes can be found in the “Additional Mandatory Requirements for AFSC Entry” attachment of AFM 36-2108, *Airman Classification*. The following chart lists each combination you can use on the AF Form 422 for the initial six physical profile serial factors mentioned.

Profile	Description
P - Physical Condition	
P1	Free of any identified organic defect or systemic disease.
P2	Presence of minimally significant organic defect(s) or systemic disease(s).
P3	Significant defect(s) or disease(s) under good control, not requiring regular and close medical support. Capable of all basic work commensurate with grade and position.

Profile	Description
P4	Severe organic defect(s) systemic and infectious disease(s), all conditions disqualifying by AFI 48-123 (e.g. diabetes, seizure, etc.). See Notes.
U—Upper Extremities	
U1	Bones, joints, and muscles normal. Able to do hand-to-hand fighting.
U2	Slightly limited mobility of joints, mild muscular weakness or other musculoskeletal defects that do not prevent hand-to-hand fighting and are compatible with prolonged effort.
U3	Defect(s) causing moderate interference with function, yet capable of strong effort for short periods.
U4	Strength, range of motion, and general efficiency of hand, arm, shoulder girdle, and back, including cervical and thoracic spine severely compromised or disqualifying by AFI 48-123. See Notes.
L— Lower Extremities	
L1	Bones, muscles, and joints normal. Capable of performing long marches, continuous standing, running, climbing, and digging without limitation.
L2	Slightly limited mobility of joints, mild muscular weakness, or other musculoskeletal defects that do not prevent moderate marching, climbing, running, digging, or prolonged effort.
L3	Defect(s) causing moderate interference with function, yet capable of strong effort for short periods.
L4	Strength, range of movement, and efficiency of feet, legs, pelvic girdle, lower back, and lumbar vertebrae severely compromised or disqualifying by AFI 48-123. See Notes.
H— Hearing	
H1-H4	Refer to the Hearing Standards attachment in AFI 48-123.
E— Vision (Eyes)	
E1	Minimum vision of 20/200 correctable to 20/20 in each eye.
E2	Vision correctable to 20/40 in one eye and 20/70 in the other, 20/30 in one eye and 20/200 in the other eye, or 20/20 in one eye and 20/400 in the other eye.
E3	Vision which is worse than E-2 profile but better than E-4.
E4	Visual defects disqualifying by AFI 48-123. See Notes.
S— Psychiatric	
S1	No psychiatric disorder.
S2	Mild transient psychoneurosis.
S3	Mild chronic psychoneurosis, moderate transient psychoneurotic reaction.
S4	All psychosis and the psychoneuroses which are persistent or recurrent, requiring hospitalization or the need for continuing psychiatric care or disqualifying by AFI 48-123. See Notes.

Notes: Individuals with a 4 profile may not be qualified for worldwide duty and must meet a MEB. A 4T profile precludes reassignment and deployment until the MEB or PEB processing is completed or the condition is resolved.

1. An AF Form 422 can be processed without an expiration date, referred to as a permanent profile of 1, 2, or 3, when the member has a chronic and stable condition which imposes physical restrictions, but does not preclude worldwide duty assignment, mobility, or fitness testing.
2. When a medical defect permanently precludes further employment within a member's AFSC, a medical recommendation for retraining is sent to the servicing MPF on an AF Form 422 according to AFM 36-2108. The AF Form 422 must accompany a Narrative Summary (SF

502), which includes comments clearly defining the individual's limitations, recommendation by the member's squadron commander, and approval by the medical treatment center (MTF) Commander or senior profile officer. The MPF determines the retraining AFSC and notifies the senior profile officer. The approval authority, which falls within the personnel system, certifies the member medically qualified, or not qualified, for each selected or requested AFSC.

You can see that the interpretation and grading of each individual's functional capacity depend on the examiner's medical and military experience, as well as their clinical judgment.

Suffixes

Suffixes are used to assist the MPF in personnel management actions. Absence of a suffix indicates the physical profile serial is permanent. The following suffixes are authorized:

Suffix	Description
W	The member is considered medically qualified for worldwide duty. This suffix is used when the profile contains only 1s, 2s, or 3s.
T	The profile serial contains one or more 4s, indicating the member is not considered available for worldwide service; the defect responsible for this grading is temporary and can be reasonably expected to resolve in 12 months or less. The T suffix is not used with 1, 2, or 3 profile grades.
L	The member has been awarded limited assignment status (LAS). LAS is awarded to certain members who, through MEB and PEB processing, have been found physically unfit for worldwide duty and whose request to remain on active duty in LAS has been approved. You cannot enter the L suffix unless the LAS has been authorized by HQ AFPC.

Distribution

Complete the AF Form 422, as shown in Figure 2-2, in 5 copies. These copies are distributed in the following way:

Copy #	Distribution
1	Health Record
2	MPF (not required for temporary profiles which will expire within 60 days)
3	Squadron
4	Individual
5	Force Health Management (FHM) Suspense (will not be required when all profiles are done PIMR program)

Notes: Although the distribution of the AF Form 422 is rather straightforward, the following facts must be understood:

- If the members profile or restriction impacts their mobility or worldwide duty qualification, the MPF must be notified formally. Type and submit to the MPF those 4T profiles issued for injuries or illnesses not compatible with worldwide assignment or mobility that *are not* expected to resolve within 60 calendar days.
- 4T profiles issued for periods of 60 days or less are not forwarded to the MPF and can be handwritten.
- In all cases where standards for continued military service, deployment or mobility are not met, the AF Form 422 shall be annotated appropriately and the worldwide qualified block must be checked "no."

The FHM suspense copy (if required) should be maintained until the date of expiration of the temporary restrictions or the date the physical profile serial is adjusted.

Assignment availability roster

The Personnel Systems Management (PSM) section of the MPF provides the assignment availability code roster to the MTF every 30-calendar days on all members possessing 4T profiles. The roster is provided in the three categories: 31 (all 4 profiles), 37 (MEB/PEB actions), and 81 (pregnancies).

Roster Type	Managed By
31	Managed by the FHM section.
37	Managed by the Physical Evaluation Board Liaison Officer (PEBLO).
81	Should be managed by the OB-GYN Clinic, but if a military OB-GYN Clinic is not available, FHM will assume responsibility for this review.

The MTF will review the 31, 37, 81 rosters to identify whether the physical profile serial requires adjustment through the accomplishment of a new AF Form 422. An appropriate note on the SF 600, Chronological Record of Medical Care, in the individual's medical records or OB-GYN records for the 81 roster, will document this review. The SF 600 documentation will be accomplished by FHM or OB-GYN clinic personnel for the 81 roster.

If the patient is not expected to return to duty within 1 year, the reviewer will notify the attending health care provider and the PEBLO, who then initiates MEB action before the 4T expires.

Using the Department of the Army Form 3349

DA Form 3349, Physical Profile Serial, is acceptable in lieu of an AF Form 422. You must review any entry in the DA Form 3349, which recommends temporary or permanent geographic or climate assignment restrictions. It is extremely important to note that an Army "3" profile grade is not compatible with worldwide assignment in the Air Force and it must be converted to a "4" profile.

A06. Maintaining a fit force

The Secretary of the Air Force (SAF) has the authority to retire or separate members who can no longer perform the duties of their office and grade because of medical impairment. Compensating those whose military careers are cut short by medical impairment also is the responsibility of the SAF. The requirement to maintain a physically fit force is the basis for military medicine. The identification and removal of those no longer physically qualified for continued military service begins with an MEB.

Figure 2-2. Sample, AF Form 422, Physical Profile Serial Report.

Special purpose profiles

Physical profile after an MEB

It is the responsibility of the Primary Care Manager (PCM) team, profile officer, and the FHM section of the servicing MTF to complete a proper AF Form 422 for members returned to duty following an MEB action. Physical Examination Boards (PEB) and other boards and councils of the Disability Evaluation System *do not* award profiles.

You will recall the evaluatee, while undergoing MEB evaluation and disability processing, is awarded a temporary “4” profile to prevent his or her reassignment. This must be revised if HQ AFPC returns the evaluatee to duty. Members found to be fit for duty by the Disability Evaluation System cannot be awarded a 4T profile. A profile of 1, 2, or 3 must be awarded unless substantial deterioration warranting a new MEB occurs.

Limited assignment status

An LAS is an exception to the policy that unfit members must be retired or discharged. Certain members found unfit by the Disability Evaluation System may apply to be retained on active duty in LAS with certain limitations and controls over their assignments. Retention in LAS depends upon: the type and extent of the member’s physical defect or condition, the amount of medical management and support needed to sustain the member on active duty, the physical and assignment limitations required, the years of service completed, and the Air Force need for the particular grade and specialty.

The LAS program conserves manpower by keeping needed experience and skills that the Air Force can economically use. It is not the intent of the LAS program to retain a member just to increase benefits or allow the member to complete a period of service.

Members not physically fit for active duty without restriction don’t have a legal or vested right to retention in LAS, and the Air Force doesn’t guarantee retention for any specified period of active duty. The Air Force may retire or discharge members on LAS at any time as the result of medical reevaluation. A member continued on active duty in LAS is not presumed physically fit. The disability system will determine fitness or unfitness on the evidence of record at the time of final retirement or discharge. As you can see, the number of members retained in LAS is held to an absolute minimum.

Members who have completed *15 to 20 years of active duty*, who have physical defects or conditions that limit their worldwide assignment availability, and who have been found unfit by a PEB, may be considered for retention in LAS. A member will not be retained in LAS unless the physical defect or condition has essentially stabilized or, based on accepted medical principles, shows either gradual improvement or slow progression. Members must be able to function in a normal military environment without adverse affect on his or her health, or the health of others, and without need for an excessive amount of medical care.

Members who have *completed over 20 years* are considered for LAS only if there is a unique and overriding need for their particular specialty and their only restriction is being assigned to a base with adequate military or civilian medical facilities to provide the required medical support. Retention under this category may be for a specified number of years of service based on grade. LAS may terminate at any time based on medical reevaluation or the needs of the Air Force.

The MTF examines LAS members at least once a year. The report of examination shows the status of the unfitting physical defects or conditions for which the LAS was assigned, and the status of any additional physical defects or conditions that may affect duty performance. Those in LAS must complete any active service commitments they incur unless their overall physical condition deteriorates to a point where they are no longer acceptable for retention in LAS. LAS members are evaluated by a PEB before discharge or retirement. Those individuals awarded LAS by HQ AFPC are authorized an “L” suffix to their physical profile serial and may be awarded a permanent 4L profile.

Assignment Limitation Code C is yet another possible suffix of the MEB/PEB process that HQ AFPC may award. This code tells the personnel community that the member may not be eligible for certain assignments. Before giving the member an assignment, AFPC will request an update on his/her condition and determine if needed medical support is available at the potential assignment location.

Those individuals returned to duty by the PEB and given an Assignment Limitation Code-C should be profiled and re-evaluated at the intervals determined by HQ AFPC. ARC members placed on Assignment Limitation Code-C will be appropriately profiled and re-evaluated according to guidance from the appropriate ARC Surgeon.

Job retraining after an MEB

Unit commanders must ensure that each member's medical restrictions (on the physical profile) are matched to his or her AF specialty (AFS). The unit commander may seek further recommendation on a member's medical suitability for a specific job or AFS from the medical adviser to the MPF classification and training unit, senior physical profile officer, or MTF commander. If the member is medically incapable of fulfilling the requirements of his or her AFS, the unit commander should request retraining action based on medical documentation and the recommendation.

A07. Medical clearances

FHM provides quality control review of health records. You'll review these records for administrative accuracy to include physical examination requirements, accurate physical profile (AF Form 422, Physical Profile Serial Report), identification of allergies, and any disqualifying defects. Any discrepancy noted during this review should be handled in accordance with current directives and your office protocol. Personnel assigned to FHM also review and process individual cross-training requests, deployment clearances, and security clearances, to name a few.

Other reviews include the medical records of active duty personnel upon discharge or transfer from the hospital to ensure that proper profiling and administrative disposition take place. The Admissions & Discharge (A & D) list shows whether the patient has been moved or discharged. The NCOIC, FHM, or designated individual reviews this list to determine if any active duty personnel have been discharged. If so, their medical records must be reviewed and an AF Form 422 is initiated if needed. They must also establish proper suspense files to ensure timely follow-up of members with either a temporary physical limitation (4-T profile), such as pregnancy, or a condition that requires a future Medical Evaluation Board (MEB) action.

Medical clearances are required for a variety of reasons; they always include a detailed review of health records. The general intent of the record review is to identify medical/psychiatric defects that may be disqualifying for the particular duty or position sought. The following discussion covers some of the most common reasons FHM does these reviews.

Conducting health record reviews on incoming/outgoing PCS active duty personnel

By accomplishing this review, you are ensuring that the member is not only medically qualified for his or her assignment, but that they meet the medical standards for continued military service as well. You are also verifying that he or she has a current physical examination or PHA on file as well as a current AF Form 422, Physical Profile Serial Report. The PCM team will also be involved in this process, especially on incoming personnel.

Processing retraining requests and special duty applications

AFM 36-2108, *Airman Classification*, lists the qualifications all members must meet for a specific AFSC. During the medical records review you must determine whether or not the individual meets these medical standards. It may be necessary to arrange a specialty test or exam to determine whether the individual does in fact meet the standards. A good example of this is when you schedule a member for an Initial Flying Class III physical for Boom Operator or an Initial Ground Based Controller Duty physical examination for air traffic controllers and combat controllers.

Individuals applying for security clearance must meet the requirements in AFI 31-501, *Personal Security Program Management*. It is imperative to determine if the applicant meets the required standards, failure to identify discrepancies may mislead the commander to grant or deny the individual appropriate qualification and/or result in jeopardizing mission accomplishment.

Military Training Instructor (MTI) duty, survival training instructor, all flying classes, remote or isolated duty, etc., must meet the requirements specified according to AFI 48-123.

Reviewing medical records on discharge or transfer from the hospital

This duty is performed to ensure proper profiling and administrative disposition of active duty personnel. It may be necessary to prepare an AF Form 422 for a temporary duty restriction, or to recommend MEB consideration to determine continued military service.

Scheduling and monitoring specialty clinic appointments

You might discover a condition while reviewing a medical record, physical examination or PHA that requires further evaluation. If so, you will need to refer the member to their PCM team for a specialty examination (consultation) or, if not empanelled, ensure that an appointment is made for the individual.

Standards quality control

FHM is where you will assess the quality of the programs in which you oversee, such as PIMR, OHE, AF 422's and Medical Waivers. The general intent is to ensure a fit and healthy force. You must have a solid understanding of medical standards and physical requirements in order to do this. We have already talked about the specific responsibilities of FHM; the tool that will best help you to accomplish your job is AFI 48-123, *Medical Examinations and Standards*. Within the pages of the AFI, you'll find an itemized account on the medical standards for each type of examination. Included are the scope and frequency, accomplishment and recording requirements, as well as a variety of administrative procedures and considerations. AFP 48-133, *Physical Examinations Techniques* will give you guidance on the format and procedures for recording a physical examination.

Self-Test Questions

After you complete these questions, you may check your answers at the end of the unit.

A04. Medical Examinations

1. What is the purpose of medical standards?

2. In what written publication would you find the different types of medical examinations and their scope?

3. What are the medical standards for flying duty designed to do?

A05. Profile Management

1. What is the purpose of the AF Form 422?

2. How often are 4T profiles reviewed?

3. Match each profile grade in column B with its description in column A. Items in column B may be used only once.

<i>Column A</i>	<i>Column B</i>
___ (1) Upper back injury causing moderate functional interference, yet capable of strong effort for short periods.	a. E1.
___ (2) Slightly limited mobility of joints that do not prevent moderate marching.	b. E2.
___ (3) Range of movement of the lumbar vertebrae severely compromised.	c. L2.
___ (4) Vision correctable to 20/40 in one eye and 20/70 in the other.	d. L4.
___ (5) Infectious diseases, diabetes, and seizure disorders.	e. P1.
___ (6) 20/100 vision correctable to 20/20 in each eye.	f. P4.
___ (7) Free of any identified organic defect.	g. U1.
___ (8) Able to do hand-to-hand fighting.	h. U3.

4. What does the absence of a suffix indicate?

5. List the three categories for the assignment availability roster.

A06. Special purpose profiles

1. Who has the authority to separate or retire members who can no longer perform their duties because of a medical impairment?
2. Who have the responsibility to complete a proper AF Form 422 for members returned to duty following MEB action?
3. What is the purpose of awarding a 4 profile?
4. What is the purpose of the Limited Assignment Status program?
5. Who can award an Assignment Limitation Code C?

A07. Medical Clearances

1. What is the general intent of the medical clearance record review?

2. What specific tasks require you to review AFM 36-2108, *Airman Classification*?
3. Why do you review the medical record of an active duty member when they are discharged from the hospital?
4. What should you do if you discover a medical condition that requires further evaluation during a medical record review?
5. What is the general intent of quality control of physical examinations?

2-2. Waiver Policies and Procedures

From your experience, you have likely found that USAF medical standards provide for the acceptance of a wide range of physical and mental defects. These medical standards are flexible enough to meet the needs of the USAF without incurring undue risks of liability compensation to the examinee later. Not only do the established medical standards found in AFI 48-123 apply to an individual throughout his or her specialized training and subsequent specific duty, such as flying duties, but more specifically, these standards apply throughout his or her AF career. In the following lesson, you'll study how the Air Force makes adjustments when an individual fails to meet the standard. We'll also discuss the unique function of the Aeromedical Consultation Service (ACS). Now that you know where you're headed, you can begin this lesson about medical waivers.

Earlier, medical standards were said to be a set of values to which you compare the health status of an examinee. Although this fundamental statement is true, AFI 48-123 actually lists medical standards as "cause to reject." Is this confusing? Consider it this way—after an examination has been completed; compare the results to the listed standards for the specific type of examination. If a result or diagnosis, an item of medical history, or a physical measurement exceeds the listed cause for rejection, the examinee is disqualified for the purpose of the examination.

As prescribed, medical standards are a guide to gauge an individual's physical or mental qualification. The examining health care provider must consider the results of the examination, and then exercise prudent medical judgment in applying these standards. The physician must categorize a medical condition as either temporary or permanent. A condition is permanent if it is one such as a missing finger, a difference in leg length, or a congenital deviation of the spine. In contrast, dental caries, a healing fracture of a leg, or pneumonia, are examples of temporary defects. A permanent defect, if listed as a cause for rejection, is normally not considered acceptable, nor is it usually reevaluated. Of course, there are always exceptions to the rule. Thus, if the examiner feels that an individual with a defect can perform his or her duties satisfactorily, the examiner records the findings with a full description of the defect and then submits the case to the waiver authority for review and action.

So, what does the term waiver mean as it applies to flying personnel? The following paragraphs should help you understand waivers, the USAF policy regarding them, and the proper administrative procedures for obtaining a waiver for flying personnel.

A08. Waiver process

Once the flight surgeon decides that a case is worthy of waiver consideration, the Aeromedical Primary Care Management (PCM) team will accomplish the physical exam for submission to the waiver authority. The physician should take advantage of all specialty consultants who can contribute to the support of his or her recommendation. The medical standards in AFI 48-123 may specify certain conditions that must be met before favorable consideration of the waiver is given. For example, a member with an elevated blood pressure on the day of exam must undergo a 5-day blood pressure check. Once the waiver has been completed and is ready for submission, it will be forwarded to FHM for final review. Copies of all specialized evaluations should be part of the supporting documents that accompany the waiver request. Keep in mind that the certification and waiver authority reviewers are depending on your written word to “paint a picture” of the individual’s condition. All supporting documents should accompany the typed SF 88, Report of Medical Examination, and SF 93, Report of Medical History (for initial exams), or an Aeromedical Summary (for periodic exams), in sufficient copies to satisfy the requirements of AFI 48-123.

Types of waivers

Any defect can be a cause for rejection based on the judgment of the examining flight surgeon. Also, any condition that, in the opinion of the flight surgeon, presents a hazard to flying safety, the individual’s health, or mission completion is cause for disqualification. By definition, to be considered waivable, any disqualifying condition should meet the following criteria:

1. Pose no risk of sudden incapacitation.
2. Pose minimal potential for subtle performance decrement, particularly with regard to the higher senses.
3. Be resolved or stable and be expected to remain so under the stresses of the aviation environment.
4. If the possibility of progression or recurrence exists, the first symptoms or signs must be easily detectable and not pose a risk to the individual or the safety of others.
5. Cannot require exotic tests, regular invasive procedures, or frequent absences to monitor for stability or progression.
6. Must be compatible with the performance of sustained flying operations in austere environments.

Examination type and waiver consideration

Before the flight surgeon can decide for or against a waiver request on an initial flight or special operational duty physical, he or she must first consider the purpose of examination. This is a very important step since the type of exam dictates which category of standards apply and where the waiver authority lies. Even more important though, the exam type determines the subsequent action that you and the flight surgeon will take once a defect is noted. The precise handling of an initial examination with noted disqualifying defects is reflected in the following table.

Flying Class	Action
I and IA	Complete all examinations regardless of the nature of the disqualifying defect. Send the completed SF 88 and SF 93, along with all relevant documents, to the appropriate certifying authority—according to AFI 48-123—through the requesting agency, such as the MPF, AF Recruiting, ROTC detachment, etc. The examining flight surgeon must completely identify, describe, and document the disqualifying defect.
II or III, Initial Controller and Space Operations Crew Duty	Complete all examinations when a disqualifying defect is likely to receive favorable waiver consideration. Send the complete waiver package, as outlined in AFI 48-123, to the appropriate waiver authority. NOTE: Discontinue the examination if it is unlikely to receive a waiver and annotate the SF 88 that the individual was medically disqualified locally and forward package to the Major Command (MAJCOM)/SG.

Since the local medical facilities do not have disqualification certification authority, each medical facility will forward medical disqualifications to the respective MAJCOM/SG for review and final disposition.

Aeromedical Information Management Waiver Tracking System

Aeromedical Information Management Waiver Tracking System (AIMWTS) is a web-based management tool designed to replace existing databases, to enter patient demographics, diagnoses, ACS data, and waiver dispositions.

Air Force Medical Operations Agency (AFMOA) is the administrator for the AIMWTS program, and will assign a user administrator at each MAJCOM. MAJCOM administrators in turn assign user access within their offices and assign a user administrator at each of their subordinate facilities. User administrators will give instructions on assigning MAJCOM and base flight surgeon and technician user authority.

Waiver authority

The certification and waiver authority for medical defects is listed as one of the attachments to AFI 48-123. Although the list is quite explicit, it's very easy to understand. To reprint the entire attachment here would in no way enhance the lesson, but be aware of some key areas relating to waivers. The following table provides a breakdown by waiver and certification authority and a few of their specific policies.

HQ USAF/SG
<ul style="list-style-type: none"> The ultimate waiver authority for all medical waivers.
HQ AFMOA/SGOA
<ul style="list-style-type: none"> All initial categorical flying waivers and changes from one category to another or removal of a categorical restriction and previously medically disqualified rated members. (Note: Consult AFI 48-123 for delegation of waiver authority to MAJCOM/SG.) All initial waivers in cases previously certified medically disqualified by HQ AFMOA/SGOA or MAJCOM/SG on rated members. All cases for which ACS recommends disqualification or a change in waiver status. (Exception: Change of Waiver Status — Active clinical management members who are on a waiver who have new findings during ACS re-evaluation involving the same body system. If the ACS recommends waiver, MAJCOM/SG retains waiver authority. All categorical IIC waivers except as delegated to MAJCOM/SG. Any controversial condition that in the opinion of the MAJCOM/SG warrants a HQ AFMOA/SGOA decision. All general officers, regardless of diagnosis, being considered for waiver.

MAJCOM/SG
<ul style="list-style-type: none"> • Forwards a copy of disqualified cases on rated members to HQ AFMOA/SGOA. • Provides information to the Centralized Flying Waiver Repository (WAVR File) located at Brooks AFB, Texas, on rated members medically disqualified. This is to assure that the WAVR File is properly updated. • Does not grant or renew waivers for members of active ACS study groups without concurrence from the clinical sciences division chief (USAFSAM/FECA).
Local Base (active duty only)
<ul style="list-style-type: none"> • Flight surgeons (AFSC 48G4/3 or 48A4X), normally the aerospace medicine squadron/flight commander or the senior squadron medical element (SME) flight surgeon (tenants only) as specifically identified by the parent MAJCOM, retain this authority. At locations with flight surgeons who do not meet this criteria, the certification/waiver authority reverts to the MAJCOM of assignment.

Routing of the request for waiver, regardless of designated waiver authority level, must be sent through command channels. Each level reviews the case and makes recommendations.

Delegation of waiver authority for flying personnel

In order to expedite the waiver certification process, the Air Force allows higher authorities the option to delegate certain certifications down to the base level. Most of the conditions are similar across AF channels, but some of them may be MAJCOM specific. Regardless of your MAJCOM, the following paragraphs cover a few of the general rules regarding delegation of waiver authority.

Command surgeons may delegate their certification or waiver authority to the senior flight surgeon at local bases. However, this authority will not be delegated further. When this occurs, the MAJCOM must provide a copy of the policy letter to HQ AFMOA/SGOA.

NOTE: Authority to grant flying class III waivers to rated personnel who have been medically disqualified for flying class II remains with the individual's MAJCOM of assignment.

Command surgeons may delegate waiver authority to another command surgeon. If this option is exercised, the originating MAJCOM must provide HQ AFMOA/SGOA a copy of the policy letter.

Certification and waiver authority for ARC members, or assignment to ARC flying positions remains with the appropriate ARC surgeon. ARC members include both the AF Reserves and the Air National Guard.

Certification/WAIVER stamp information

Place the certification information in a visible location on the front of the SF 88. The proper way to annotate the front of SF 88 with a disqualifying defect is illustrated in the following sample.

<p>89 AMDS/SGP (<i>date</i>)</p> <p>Medically disqualified for Flying Duty, Class III by reason of thoracic levoscoliosis in excess of 25 degrees as measured by the Cobb method.</p> <p>(<i>signature</i>)</p> <p>JOHN Q. PUBLIC, Col, USAF, MC, SFS</p> <p>AFSC: 48GX</p> <p>89 AMDS/CC</p>

Sample, SF 88 disqualification stamp

Submission of reports

A report of medical examination that is submitted to a reviewing authority must be a quality report. It must be accurate, complete, and as objective as possible. Remember, the reviewing authorities do not have the advantage of examining the individual. They must rely on your interpretations. Volume, redundancy, and reiteration of the same facts are of no value. A concise summary of the history and findings in each case, along with a clear statement of the problem, conclusions, and recommendations of the examiner, are all vital parts of the presentation to the reviewing authority. Before you send the waiver package out for higher review, first refer to AFI 48-123 to ensure you have the right forms, correct number of copies, and information is placed in the proper sequence.

Term of validity

The waiver authority establishes the term of validity (period) for which a waiver is valid. This duration is based on several factors and the following administrative details must be adhered to:

1. Place an expiration date on waivers for conditions that could progress or require periodic reevaluation.
2. Waivers are valid for the specified condition. Any exacerbation of the condition or other changes in the patient's medical status automatically invalidates the waiver and a new one must be requested.
3. If a condition resolves and the member is qualified by appropriate medical standards, forward an aeromedical summary to the MAJCOM/SG.

Depending on the severity of the defect and type of duty the examinee performs or will perform, the waiver authority may grant an indefinite waiver.

A09. Aeromedical consultation service

Some patients will be evaluated at the ACS, located at Brooks AFB, Texas. Acutely ill patients or those patients considered inpatients are not accepted. All initial workups must be completed by the referring medical treatment facility (MTF) before their ACS referral. While aviators may feel concern about exposure to the thorough assessment experienced at the ACS, it's worth noting that a great majority of those evaluated are granted waivers. In some cases, record reviews at the ACS will suffice for an aeromedical recommendation to be made. The ACS is not a waiver authority or treatment facility. The main purpose of ACS is to be available for consultation on unusual or difficult cases; they also play a significant role in the development of medical standards. ACS recommendations are made to AFMOA or other waiver authorities for their final disposition. Receipt of a note from an ACS flight surgeon, or telephone call indicating the ACS recommendation *does not* constitute a waiver. *Waiver disposition action follows the chain from the ACS to AFMOA or MAJCOM, to the referral medical facility.*

History

The ACS was established in 1955 and has accomplished over 32,000 aeromedical evaluations; the average number seen is approximately 700 per year. Ophthalmologic problems have accounted for the most common cause for a referral. Cardiovascular problems have accounted for just under half of the workload and have ranged from serial electrocardiographic changes and subclinical coronary artery disease, to valvular heart disease. Neuropsychiatric diagnoses, such as history of syncope or head injury, have been the third most common cause for referral. During the calendar years 1993 through 2002, a favorable recommendation for return to flying status was made in over 80 percent of the cases evaluated at the ACS.

In addition to performing aircrew evaluation, ACS personnel participate in the education and training programs of the USAF School of Aerospace Medicine (i.e., each Resident in Aerospace Medicine [RAM] spends a portion of their training period working at the ACS under the supervision of staff members).

The ACS is operated under the direction of its parent organization, the Clinical Sciences Division of the Department of Force Enhancement within USAF School of Aerospace Medicine (USAFSAM). The cumulative experience gained from the ACS aircrew evaluations over the years has formed the basis for the Clinical Sciences Division's robust aeromedical epidemiological research program. This research has answered a steady supply of operational aeromedical problems and led to changes in the USAF/SG medical policy for aviators. Interesting case reports and study findings are shared with the international aeromedical community through frequent contributions to scientific journals and presentations at professional meetings

Evaluations

All evaluations at the ACS are received by the AIMWTS. These evaluations request are individualized and directed toward the primary medical problem of the aircrew member. Following the review of the AMS and supporting documentation, a decision is made to schedule an ACS evaluation, send a recommended aeromedical disposition to the waiver authority, or request additional medical data from the local base. Once the decision is made, the referring base flight surgeon's office is notified of the proposed ACS evaluation. The evaluatee's health record will be hand-carried to the ACS appointment.

Special services available within the Clinical Sciences Division include aerospace medicine, occupational medicine, internal medicine, cardiology, exercise physiology, ophthalmology, optometry, psychiatry, clinical psychology, audiology, and radiology. Consultations in other specialties (i.e., neurology, orthopedics, dermatology, otolaryngology, or urology) are arranged at Wilford Hall Medical Center and Brooke Army Medical Center, as required. Specialized facilities available at Brooks AFB include the altitude chamber, centrifuge, facilities for testing vestibular function, treadmill for evaluation of the patient's cardiovascular status under conditions of maximum exercise, and nuclear medicine studies. Facilities for cardiac catheterization, MRI, computed tomography (CT) and position emission tomography (PET) are readily available in the local area.

Each evaluatee meets their Aeromedical Case Manager and assigned ACS flight surgeon the first morning. During the initial interview, a history and physical are performed and a general orientation to the remainder of the clinical evaluation is given. Upon completion of the evaluation, a departure briefing is given to the evaluatee by his or her ACS flight surgeon, during which the various findings are discussed. The ACS flight surgeon notifies the referring base flight surgeon of these findings by telephone the same day the evaluatee departs.

According to AFI 48-123, the following personnel are eligible for referral to ACS:

1. USAF active duty on flying status or persons removed from flying duty for medical reasons.
2. ARC personnel approved by AFMOA.
3. Army and Navy personnel with approval of the US Army Aeromedical Agency (USAAMA), Fort Rucker, Alabama, or the Naval Aerospace and Operational Medical Institute (NAOMI), Pensacola, Florida.
4. Military personnel of foreign countries when approved by the State Department and AFMOA.
5. NASA.
6. Applicants for flying training with approval by HQ AETC or AFMOA.

Final review and disposition action in each case will be taken by the appropriate waiver authority according to AFI 48-123 or AR 40-501. In order to expedite this administrative action, the ACS Patient Status Worksheet (PSW) is e-mailed directly to the waiver authority (AFMOA, USAAMC, or MAJCOM) within 2 duty days of the evaluatee's departure. The ACS recommendation is also included in AIMWTS, and then sent to the Air Force waiver authority. The ACS electronically forwards the final report to the appropriate waiver authority within 60 duty days. The waiver authority in turn forwards the final report to the referring medical facility for inclusion in the evaluatee's medical

records. The local Flight Surgeon will brief the evaluatee on details of the findings and recommendations. The ACS permanently maintains a copy of all ACS evaluations.

Referral procedures

The referring flight surgeon prepares a waiver package according to AFI 48-123. The attending Flight Surgeon must assure the individual meets any prerequisites. Instructions concerning preparatory diet, use of drugs, and other information are sent to the evaluatee's local waiver technician.

NOTE: It's imperative that each evaluatee be briefed by the local flight surgeon and given a copy of these instructions.

Web page

For additional information concerning the ACS, waiver process, waiver diagnosis guide, referral procedures, and other Clinical Sciences Division activities, log onto the Brooks web site at: <http://wwwsam.brooks.af.mil>.

Self-Test Questions

After you complete these questions, you may check your answers at the end of the unit.

A08. Waiver process

1. What is used as a guide to gage an individual's mental and physical qualification?
2. What dictates which category of standards applies and where the waiver authority lies?
3. Match each waiver/certification authority in column B with its control in column A. Items in column B may be used more than once.

<i>Column A</i>	<i>Column B</i>
___ (1) All initial waivers in cases previously certified medically disqualified by MAJCOM on rated members.	a. Local base.
___ (2) Waiver/certification authority is reverted here when a local flight surgeon is not a 48G4/3 or a 48A4X.	b. HQ USAF/SG.
___ (3) Any controversial waiver that in the opinion of the MAJCOM warrants a higher decision.	c. MAJCOM/SG.
___ (4) Forwards a copy of disqualified cases on rated members to HQ AFMOA.	d. HQ AFMOA/SGOA.
___ (5) Provides information to the Centralized Flying Waiver Repository.	
___ (6) Only a specifically identified tenant 48G4 flight surgeon.	
___ (7) The ultimate waiver authority.	
___ (8) All general officers.	

A09. Aeromedical consult service

1. What is the purpose of ACS evaluations?
2. What agency authorizes Aeromedical Consultation Service evaluations on Air Reserve component personnel?

3. How must a member's medical record arrive at the Aeromedical Consultation Service?

4. Who has final review and disposition action of ACS cases?

Answers to Self-Test Questions

A04

1. Ensure acquisition and retention of members who are medically acceptable for military life.
2. AFI 48-123, *Medical Examinations and Standards*
3. Avoid compromise of flying safety, mission completion, or the member's well being.

A05

1. Communicate information to non-medical authorities in laymen terms on the general condition or specific duty limitations of military members.
2. Every 30 days.
3. (1) h.
(2) c.
(3) d.
(4) b.
(5) f.
(6) a.
(7) e.
(8) g.
4. That the profile is permanent.
5. (1) 31—all 4 profiles.
(2) 37—MEB/PEB actions.
(3) 81—pregnancies.

A06

1. The Secretary of the Air Force.
2. PCM Team, profile officer and FHM.
3. To prevent reassignment.
4. Conserves manpower by keeping needed experience and skills that the AF can use.
5. HQ AFPC.

A07

1. To identify medical/psychiatric defects that may be disqualifying for the particular duty or position sought
2. Processing retraining request and special duty applications
3. To ensure proper profiling and administrative disposition of active duty personnel
4. Refer the member to their PCM team
5. Ensure a fit and health force

A08

1. Medical Standards
2. Types of exams
3. (1) d
(2) c
(3) d
(4) c
(5) c
(6) a
(7) b
(8) d

A09

1. To be available for consultation on unusual or difficult cases
2. AFMOA
3. Hand carried
4. By the appropriate waiver authority

Answer the Unit Review Exercise questions before starting the next unit.

Unit Review Exercises

Note to Student: Consider all choices carefully, select the *best* answer to each question, and *circle* the corresponding letter. When you have completed all unit review exercises, transfer your answers to ECI Form 34, Field Scoring Answer Sheet.

Do not return your answer sheet to ECI.

14. (A04) The medical standards and the frequency, scope and instructions for completing required physical examinations properly are specified in
 - a. AFI 48-123.
 - b. AFI 48-133.
 - c. AFM 36-2108.
 - d. AFPAM 48-133.
15. (A04) Where will you find guidance on the frequency and scope of physical examinations?
 - a. AFM 37-138.
 - b. AFI 48-123.
 - c. AFI 48-210.
 - d. AFPAM 49-101.
16. (A04) During a physical examination, the depth of evaluation of any body system depends *primarily* upon the
 - a. availability of equipment.
 - b. specialty service available.
 - c. type of medical examination.
 - d. medical history of the examinee.
17. (A05) The purpose of the AF Form 422 is to
 - a. establish the initial physical profile.
 - b. reveal the state of health on all military members.
 - c. communicate information to non-medical authorities in layman terms.
 - d. ensure acquisition and retention of members who are medically acceptable for the military.
18. (A05) How often must 4T profiles be reviewed?
 - a. 10 days.
 - b. 15 days.
 - c. 30 days.
 - d. 45 days.
19. (A05) How many human function factors are considered in the physical profile serial?
 - a. 6.
 - b. 4.
 - c. 3.
 - d. 1.
20. (A05) What is the main consideration under the “E” physical profile factor?
 - a. Near vision only.
 - b. Organic eye diseases.
 - c. Distant visual acuity only.
 - d. Distant and near visual acuity.

21. (A05) A strength aptitude test is rated in which of the following profile factors?
 - a. P.
 - b. U.
 - c. L.
 - d. X.
22. (A06) The identification and removal of those no longer physically qualified for continued military service begins with which of the following processes?
 - a. MEB.
 - b. BMT.
 - c. FHM.
 - d. PHWG.
23. (A06) Which of the following processes conserve manpower by keeping needed experiences and skills that the Air force can economically use?
 - a. MEB.
 - b. MTF.
 - c. LAS.
 - d. PEB.
24. (A07) The qualifications for a specific AFSC can be found in
 - a. AFI 44-113.
 - b. AFI 48-123.
 - c. AFM 36-2108.
 - d. AFPAM 48-133.
25. (A07) Force Health Management's responsibility in processing AFSC retraining requests is to
 - a. notify the individual if retraining is approved or disapproved.
 - b. determine if the individual meets medical standards for a specific job.
 - c. schedule a physical examination on all requests and send it to the military personnel flight (MPF).
 - d. arrange a specialty test to determine whether the individual meets the standards.
26. (A07) When discharged from the hospital, Force Health Management personnel review the medical records of active duty members to
 - a. determine any medication sensitivity.
 - b. ensure the discharge summary is complete and accurate.
 - c. ensure proper profiling and administrative disposition take place.
 - d. establish the need for a periodic or special purpose physical examination.
27. (A07) If you discover a condition while reviewing a medical record that requires further evaluation, to whom should you refer the member?
 - a. Force health management (FHM).
 - b. PCM team.
 - c. Their supervisor.
 - d. MTF Commander.
28. (A08) What action is taken when a disqualifying defect is found during a Flying Class I physical examination?
 - a. Discontinue the exam and send it to the certifying agency.
 - b. Discontinue the exam and file the incomplete physical in the individual's medical record.
 - c. Complete the exam regardless of the defect then send it to the appropriate certifying authority.
 - d. Complete the exam if the defect is likely to receive favorable wavier consideration and send it to the certifying authority.

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-
29. (A08) What action is taken when a disqualifying defect is found during a Flying Class III physical examination?
- Discontinue the exam and send it to the certifying agency.
 - Discontinue the exam and file the incomplete physical in the individual's medical record.
 - Complete the exam regardless of the defect then send it to the appropriate certifying authority.
 - Complete the exam if the defect is likely to receive favorable wavier consideration and send it to the certifying authority.
30. (A08) Which of the following agencies has the ultimate waiver authority for all medical waivers?
- HQ ARC/SG.
 - HQ USAF/SG.
 - MAJCOM/SG.
 - HQ AFMOA/SGOA.
31. (A08) The waiver authority for all general officers, regardless of diagnosis, is
- HQ AFMOA/SGOA.
 - MAJCOM/SG.
 - HQ USAF/SG.
 - HQ ARC/SG.
32. (A08) When establishing the term of validity, the waiver authority may grant an indefinite waiver based on the
- age and experience of the examinee.
 - class or type of physical examination.
 - member's defect and type of duty performed.
 - recommendations of the examining flight surgeon.
33. (A08) What web-based management tool is used for waiver requests?
- FLYREC.
 - ASIMS.
 - AWSF.
 - AIMWTS.
34. (A09) What is the *main* purpose of the Aeromedical Consult Service?
- Directed toward the primary medical problem.
 - Treats all defects/illnesses requiring waiver action.
 - Approves or disapproves waivers based on the results.
 - Provides consultations on unusual or difficult cases.
35. (A09) What describes the evaluations performed by the Aeromedical Consultation Service *best*?
- Directed toward the primary medical problem.
 - Treats all defects/illnesses requiring waiver action.
 - Approves or disapproves waivers based on the results.
 - Provides consultations on unusual or difficult cases.
36. (A09) How must a member's medical record reach the Aeromedical Consultation Service?
- Airmail.
 - Hand-carried.
 - Express mail.
 - Medical records are not required.

37. (A09) What organization authorizes Aeromedical Consultation Service evaluations on Air Reserve Component personnel?
- a. HQ ARC.
 - b. HQ USAF.
 - c. HQ AFMOA.
 - d. MAJCOM/SG.
38. (A09) When scheduling a member for an Aeromedical Consultation Service evaluation, who is responsible for ensuring the individual meets pre-requisites?
- a. HQ AFMOA.
 - b. MAJCOM/SG.
 - c. Medical facility.
 - d. Referring Flight Surgeon.

Unit 3. Hearing Conservation

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NOISE CAN HARM PEOPLE in many ways—its effects vary and often include the loss of hearing. The value of hearing usually is not appreciated until it is lost. Unlike such obvious injuries as fractures, amputations, and blindness, hearing loss is generally not noticed until it is too late. Worse yet, unlike broken limbs, it is usually non-correctable.

Frequently, hazardous noise levels are, or seem, enjoyable. For instance, individuals often are exposed in situations where loud noise is involved, such as loud music at a concert, the roar of engines at a race track, snowmobiles, etc. How many times have you attended such events and worn some sort of hearing protection? Answer: Probably never!

Most people perceive any result from the loud noise at these events to be temporary and, therefore, neither use nor understand hearing protection. Yet, inescapably, noise exposure generates problems.

The Air Force has set up a program to protect personnel from the harmful effects of hazardous noise—the Air Force Hearing Conservation Program (HCP). This unit will discuss your responsibility in this program, for example: what your part is in calibration of the audiometer, how to perform audiometric examinations, and what to do with noise-exposed personnel when they experience a loss of hearing. You will also review human audition so that you can get a better understanding of what noise does to your ears when you are exposed to loud levels. This chapter is intended to provide an overview of the hearing conservation program. For further specifics of the HCP, consult applicable publications and operation manuals.

3-1 Fundamentals of the Hearing Conservation Program

Before you get into the administrative portion of the program, let's talk about various responsibilities within the HCP, the principles of sound, and look at how the ear operates.

A10. Hearing Conservation Program

An effective HCP is not the sole responsibility of any one section or organization. Although the Public Health (PH) Flight is responsible for the overall management of the HCP, there are many participants in the program, each with an important role.

Duties and responsibilities

The line officers must follow the chain of command to solve problems related to hazardous noise, beginning with the individual and working up to the Base Commander. Individuals, in turn, are responsible for wearing proper hearing protection when exposed to noise, and supervisors must promote the required use of such hearing protection by subordinates. The Medical Treatment Facility (MTF) Commander implements support under the provisions of AFOSH Standard 48-20, *The Hearing Conservation Program*. The formal education of personnel in the HCP is the primary responsibility of the PH Flight. "Informal education" in the program should be practiced by all other sections, as well as work center supervisors.

Bioenvironmental Engineering Services

There are various elements to the program for which certain groups have specific responsibilities. For example, Bioenvironmental Engineering Services (BES) conducts “noise assessment.” The BES evaluates noise in work centers, as well as identifies exposure and risk in hazardous noise areas, jobs and situations. “Noise control” is the responsibility of both BES and PH personnel. For example, the BES makes noise control engineering recommendations; fitting personnel with PH gives hearing protection.

Public health

PH+ conducts the audiometric testing, as well as certain calibration procedures. PH personnel, who are certified USAF Hearing Conservationists, are authorized to perform audiometry. There are, however, particular requirements for education and training in order to work as a hearing conservationist. These include a background in physical acoustics, the effects of noise, audition, audiometric testing, and hearing protection. These are needed in order for hearing conservationists to perform their hearing conservation duties properly. As a 4E, your initial certification was through the 4E Apprentice Course at Brooks AFB, TX. The Air Force, Federal Law, and DOD guidelines require this certification. These requirements are specified in AFOSH Standard 48–20. There is also a requirement for this certification to be renewed every 5 years by attendance to a re-certification course. This certification serves as a legal validation for the individual to perform in this capacity.

We must stress that there are limitations to the role hearing conservationists play. They are not diagnosticians. Therefore, they must not perform tests for which they are not trained (i.e. bone conduction, masking, etc.). This is specified in AFOSH 48–20. Remember, only certified personnel can conduct the audiometric testing. It is then a joint decision of the health care provider and PH personnel to provide the best course of action for workers based on the results of audiometry and other applicable guidelines. Later in this unit, you will learn about the disposition of personnel exposed to noise.

Defense Occupational Environment Health Readiness System Hearing Conservation

The Defense Occupational Environment Health Readiness System Hearing Conservation (DOEHRS-HC) is a database application used to manage the Hearing Conservation Program (HCP) within the Department of Defense (DoD). The full system consists of the government-developed DOEHRS-HC software and commercial off-the-shelf audiometer software. The system automates hearing test procedures and provides reporting capabilities. DOEHRS-HC analyzes the test results, and determines whether a significant hearing loss exists or if changes in hearing have occurred.

Due to continuing updates, users of DOEHRS-HC should refer to the user’s manual and updates on the website.

A11. Human audition

Before you can fully appreciate the function of the hearing mechanism, let alone determine the damage done to the system by noise, it is necessary to understand the basic principles of sound.

Understanding human audition

First, let’s define sound. “Sound,” for the purposes of hearing conservation, is the effect produced within the ear by vibrations of the air. Imagine air molecules bumping into one another in a chain reaction, causing the eardrum (tympanic membrane) to move in response. The vibrations of the tympanic membrane are conducted to the cochlea through the ossicular chain (the three middle ear bones). The cochlea converts these vibrations to an electrical signal that is transmitted to the brain by the VIIIth cranial nerve. The sounds you hear are made up of a multitude of different frequencies, or number of vibrations.

Other important factors explained in the following table relate to sound and the human auditory system:

Factor	Explanation
Frequency	Frequency, or pitch of a sound, is expressed in Hertz (Hz). The more vibrations, the higher the frequency or pitch. For example, 500Hz is a low frequency sound; 6000Hz is a high frequency sound. The frequencies of most importance for the HCP are: 500, 1000, 2000, 3000, 4000, and 6000 Hz.
Intensity	Intensity is perceived as the loudness of a sound. It is a relative measure, expressed in decibels (dB). The higher the number, the higher the intensity or volume of sound. It is a relative measure, because it must always be compared with some reference (i.e. normal hearing, absence of sound, etc.).
Duration	Duration refers to the length of time an individual is exposed to sound. For the purposes of hearing conservation, duration is considered the amount of exposure time to hazardous noise. When calculating dosage of allowable exposure for noise-exposed personnel, that dosage is an important element.
Distance	The measure of space intervening between the noise producing object and the individual exposed to it. The intensity of sound decreases as the distance increases.

Understanding the variable dimensions of sound can help you devise ways of protecting your hearing while still allowing you to conduct your work and to enjoy your recreational activities. At this point, you need to turn your attention to the hearing mechanism to look at the possible effects sounds can have.

“Hearing,” a sense which most of us take for granted, depends on many delicate structures and intricate functions. It can be damaged permanently by noise even before the listener is aware of a problem. You must understand human audition so you can communicate an appreciation of hearing capability to those who perform duties in hazardous noise areas.

Briefly, let's discuss the hearing mechanism (figure 3-1).

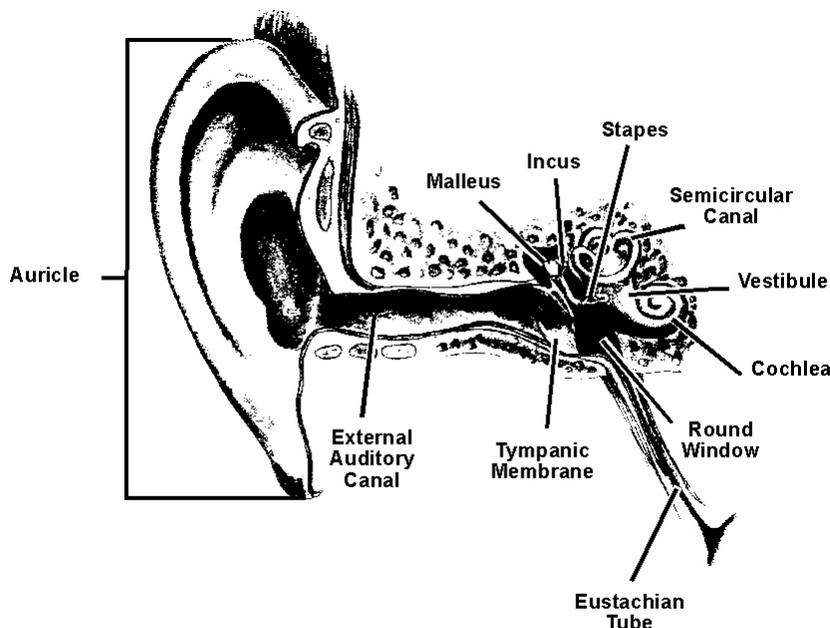


Figure 3-1. Hearing mechanism.

Outer ear

The external ear, the pinna or auricle, collects the sound waves and funnels them into the external auditory canal that terminates at the tympanic membrane.

Middle ear

The tympanic membrane stretches across the ear canal and separates the external ear from the middle ear. The middle ear includes the tympanic membrane and the air-filled cavity containing the set of tiny bones, the ossicles. The tympanic membrane vibrates in response to sound waves. These vibrations are then transferred through the ossicles to the inner ear. Total loss of the ossicles through disease or severe trauma might result in an approximate 60 dB loss in all frequencies.

Inner ear

The inner ear contains the structures required for hearing and equilibrium (balance) (figure 3-2). The semicircular canals are involved in determining equilibrium. The cochlea contains receptors (hair cells) that produce electrical impulses that the brain processes as sound.

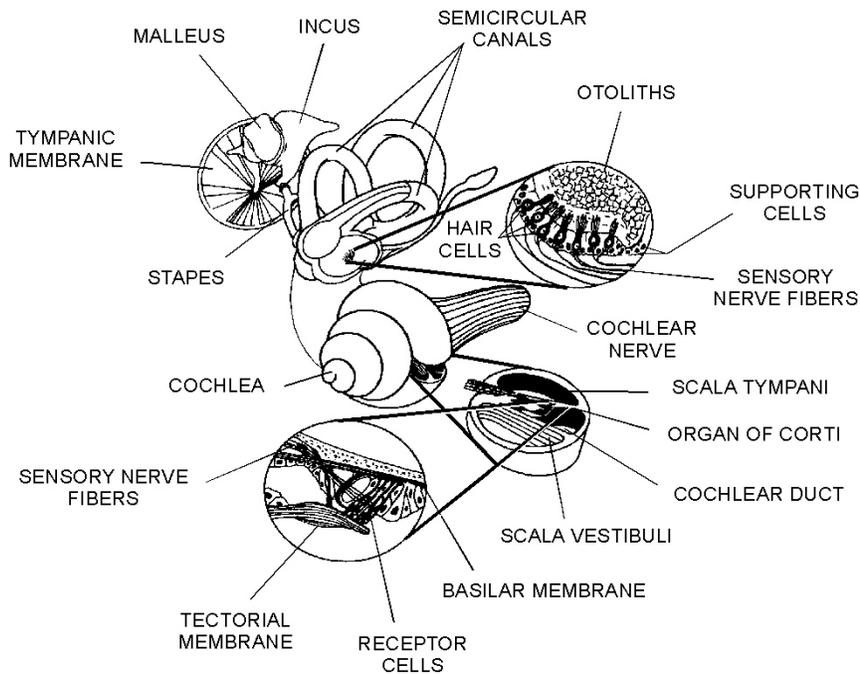


Figure 3-2. The inner ear.

The cochlea contains a structure called the “basilar membrane.” This membrane is lined with elastic fibers of varying lengths, surrounded with fluid. As vibrations pass through the fluid, the ripple causes movement in the elastic fibers. These movements cause movements in the sensory hairs of the organ of Corti. In turn, the movements of the sensory hairs create generator impulses, which result in sensory impulses to the brain.

The basilar membrane is “tonotopic,” or arranged anatomically according to the most sensitive frequency of stimulation. This means that the hair cells in the bottom of the cochlea are sensitive to high frequencies, and hair cells in the apex of the cochlea are sensitive to low frequencies.

Self-Test Questions

After you complete these questions, you may check your answers at the end of the unit.

A10. Hearing Conservation Program

1. Who is responsible for the formal education of personnel?
2. Who conducts noise assessments?
3. What is PH's responsibility in the HCP program?
4. How is certification for a USAF Hearing Conservationist accomplished by the 4E?
5. Who determines the best course of action for workers based on the results of audiometry?
6. For what does the acronym DOEHRS stand?
7. What does DOEHRS analyze?

A11. Human audition

1. How are the different frequencies of sound expressed?
2. What frequencies are most important to the HCP?
3. List three important factors relating to sound and the human auditory system.
4. After the auricle or pinna collects sound waves, where are they funneled?
5. In what part of the ear are the ossicles located?

6. Total loss of the ossicles results in approximately how much dB loss?

3-2. Audiometric Monitoring

The purpose of audiometric monitoring is to detect hearing loss at its earliest stages, preferably before it becomes a communication handicap. Personnel involved with the program can use the test results to alert individuals of hearing loss and evaluate the effectiveness of personal hearing protection devices. In this lesson, you will learn the Department of Defense Occupational Environmental Health Readiness System. This Department of Defense system, used by all military services, is commonly referred to as DOEHRS. DOEHRS is a computer software package designed to perform audiometric testing and manage audiometric findings. This section covers the calibration requirements. This section also covers the process used to dispose of individuals who have experienced a shift in hearing.

A12. Calibration of equipment

An “audiometer” is essentially like any other piece of equipment. It may be working properly, but then again, it may not. Calibration is the process whereby the audiometer is checked against a known standard to ensure accuracy. The critical daily calibration and functional check of an audiometer is the responsibility of the hearing conservationist. Federal law and Air Force mandates require calibration.

Annual electroacoustic calibration check

The Medical Equipment Repair Center (MERC) performs this calibration check once a year. This is done by an electronic coupler/analyzer used to check the frequency and output level accuracy of an audiometer. MERC will perform any adjustments that may be necessary for proper operation.

Daily calibration and functional check

From a medical/legal standpoint, this calibration check is the most important calibration done in PH. You must test an individual with known hearing levels each day and compare the results with their previously accomplished baseline test. Record the levels on a DD Form 2217, Biological Audiometer Calibration Check, as shown in figure 3-3. If there is a discrepancy (difference of 5 dB or more at any frequency when compared to the baseline), test a second individual, recording the levels on a separate DD Form 2217. If a discrepancy still exists, contact MERC for assistance.

BIOLOGICAL AUDIOMETER CALIBRATION CHECK																															
<i>(This form is subject to the Privacy Act of 1974)</i>																															
1. AUDIOMETER																															
a. MANUFACTURER MAICO Inc.				b. MODEL MA 1000		c. SERIAL NUMBER 22474		d. LAST ELECTROACOUSTIC CALIBRATION DATE 1999/10/22																							
2. LISTENER																															
a. NAME <i>(Last, First, Middle Initial)</i> me1022				b. FACILITY BAFB				c. LOCATION SAM																							
3. DATES AND DATA REVIEW																															
4. HEARING THRESHOLD LEVELS OF TEST FREQUENCIES RE: ANSI S3.6 - 1989																															
DATE (YYYYMMDD)		NAME OF EXAMINER <i>(Last, First, Middle Initial)</i>		CALIBRATION CHECK		LEFT EARPHONE (1)				RIGHT EARPHONE (2)																					
a.		b.		c.		a. BASELINE																									
				PASS: + - 5 dB of Baseline (1)		FAIL: Greater Than 5 dB of Baseline (2)		500		1000		2000		3000		4000		6000		500		1000		2000		3000		4000		6000	
1999/11/0		WNEK, WILLIAM R						65		65		65		65		70		65		65		65		65		65		70		65	
b. PERIODIC BIOLOGICAL CALIBRATION CHECKS																															
5. REMARKS																															

DD FORM 2217E, MAY 96

PREVIOUS EDITIONS ARE OBSOLETE
Approved for Electronic Generation by WHS-DIOR

Figure 3-3. Sample, DD Form 2217, Biological Audiometer Calibration Check.

The use of an electroacoustic artificial ear (BIO Joe or similar) may be substituted for testing an individual. Regardless of the approach, daily calibration must also be accompanied by a daily functional check. The functional check must be completed before completion of any daily calibration. During the functional check, the hearing conservationist listens to the headphones for any abnormal

output (i.e. static, clicks, distortion, etc.). DOEHRS software requires that daily functional and calibration checks are performed before initiating any patient testing. DOEHRS automatically records calibration and functional check information in the computer. Calibration forms are generated by DOEHRS, and may be easily retrieved for periodic printing.

Standards for calibration

In order to obtain test results that can be compared from one audiometer to another, it is necessary that all audiometers use the same intensity or output levels. This is called a calibration standard. Calibration standards are based on the testing of individuals as far back as 1936. The American Standards Association (ASA) provided the primary values used by the Air Force in 1951 and were used until 1964. In 1964, ASA standards were dropped and International Standards Organization (ISO) 1964 values were implemented. These were felt to be more realistic values. The standard values you use today are primarily American National Standards Institute (ANSI) 1989. These standards are, for the most part, equivalent to ISO 1964, and no conversion is necessary.

Acceptable listening devices

In order to guarantee correct calibration, the TDH 39, 49, or 50 headphones and the MX-41/AR cushion is the only coupler system permitted. The use of noise reducing enclosures, commonly known as “audio cups” are also acceptable.

Calibration record keeping

The Air Force Hearing Conservation Data Registry (HCDR) will keep records on the annual electroacoustic calibration checks performed by the MERC for 30 years. Daily biological calibrations should be maintained at the MTF for one year after the audiometer is turned in. If there are any questions on calibration requirements, contact the HCDR (DSN 240-2940).

A13. Disposition of noise-exposed personnel

Monitoring audiometry is the essence of any HCP. However, in order for monitoring audiometry to be useful, there must be a process for identifying individuals to be tested. Once this is accomplished, the individuals need to be scheduled. If, following testing, a shift in hearing is detected, further decisions have to be made regarding the disposition of the individual.

Reference audiogram

All personnel who routinely enter a hazardous noise area (i.e., areas the daily exposure levels of which exceed those given in AFOSH Standard 48-19 or where impulse/impact noise exceeds 140 dB) must have a reference audiogram. In addition, those individuals who require a flying examination will be monitored routinely.

The establishment of a reference audiogram is documented on DD Form 2215, Reference Audiogram (figure 3-4). When scheduling an individual, try to schedule that person for testing before the time in which the actual work in noise begins. When an individual arrives at his or her first duty station, a reference audiogram must be accomplished within 30 days. It is the intent of the reference audiogram to establish a “baseline” audiogram as early as possible in the individual’s career.

REFERENCE AUDIOGRAM										1. ZIP CODE/APO/FPO/PAS				
<i>(This form is subject to the Privacy Act of 1974 - use Blanket PAS - DD Form 2005)</i>										21005				
2. DOD COMPONENT					3. SERVICE COMPONENT									
F		A - ARMY N - NAVY		F - AIR FORCE M - MARINE CORPS		1 - OTHER			R		R - REGULAR V - RESERVE		G - NATIONAL GUARD 1 - OTHER	
4. SOCIAL SECURITY NUMBER				5. NAME (Last, First, Middle Initial)				6. DATE OF BIRTH		7. SEX				
116315119				GREEN, HERBETTE P				1974/03/12		F		M - MALE F - FEMALE		
8. PAY GRADE UNIFORMED		9. PAY GRADE CIVILIAN		10. SERVICE DUTY OCCUPATION CODE		11. MAILING ADDRESS OF ASSIGNMENT								
E 05				1A291		USAFSAM/AFCF 4445 DEADEND STREET BROOKS TX 78235								
12. LOCATION - PLACE OF WORK					13. MAJOR COMMAND			14. DUTY TELEPHONE (Include area code)						
SOMEWHERE AFB					ACC			(222) 333-4444						
AUDIOMETRY														
15. REASON FOR CONDUCTING AUDIOGRAM														
1 - REFERENCE ESTABLISHED PRIOR TO INITIAL DUTY IN HAZARDOUS NOISE AREAS														
2 - REFERENCE ESTABLISHED FOLLOWING EXPOSURE IN NOISE DUTIES														
3 - REFERENCE RE-ESTABLISHED AFTER FOLLOW-UP PROGRAM														
16. AUDIOMETRIC DATA RE: ANSI S3.6 - 1996														
17. DATE OF AUDIOGRAM														
2000/04/19														
18. MEETS REFERRAL CRITERIA														
2 - 1 - NO 2 - YES														
19. MILITARY TIME OF DAY (Optional)				20. HOURS SINCE LAST NOISE EXPOSURE				21. EAR, NOSE, AND THROAT PROBLEM AT TIME OF TEST						
10:21				14				1 - NO 2 - YES 3 - UNKNOWN						
22. EXAMINER														
a. NAME (Last, First, Middle initial)				b. TRAINING CERTIFICATION NUMBER				c. SERVICE DUTY OCCUPATION CODE		d. OFFICE SYMBOL				
GREEN, BEN F				001501				4F031		SG				
23. AUDIOMETER														
a. TYPE		b. MODEL		c. MANUFACTURER		d. SERIAL NUMBER		e. LAST ELECTROACOUSTIC CALIBRATION DATE						
3		MA 1000		MAICO Inc.		22474		1999/10/22						
24. PERSONAL HEARING PROTECTION														
a. TYPE ISSUED				b. SIZE EARPLUGS				c. DOUBLE PROTECTION USED		d. GLASSES WORN		e. FREQUENCY GLASSES WORN		
1 - SINGLE FLANGE (V51R) 2 - TRIPLE FLANGE 3 - HANDFORMED EARPLUG 4 - EAR CANAL CAPS				L R 1 - XS 4 - L 2 - S 5 - XL 3 - M				1 - NO 2 - YES		1 - NO 2 - YES		1 - ALWAYS 2 - SELDOM 3 - N/A		
1				3 3				1		1		3		
25. REMARKS (Include Exposure Data)														
Routinely Noise Exposed, See IH Report for Noise Levels, >H-2, High Freq. Hearing Loss, Low Freq. Hearing Loss.														

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Figure 3-4. Sample, DD Form 2215, Reference Audiogram.

An individual must meet the following prerequisites before reference testing is accomplished and considered valid:

1. Personnel must be noise-free for at least 14 hours before testing. “Noise-free” is defined as being in areas (on- and off-duty) of less than 72 dB (without hearing protection). A rule of thumb is that, if you have to raise your voice when talking at a distance of 3 feet, the noise level present probably exceeds 72 dB.
2. Individuals must be free from ear, nose, and throat (ENT) disease. Technicians trained to perform otoscopic examinations should do so at that time. If not performed ask the patient whether or not he or she has any ENT problems. Most importantly, use common sense. If an ENT problem is suspected, put off the testing until it is resolved.
3. Previous military entrance processing station (MEPS) or other entrance station records cannot be used as a reference since there is no guarantee that they were noise-free.

Profiling requirements for hearing standards are listed in AFI 48-123. If an individual meets an H-1 profile, that person can begin duties and will be reevaluated in one year. If he or she fails H-1 standards, the person must be referred to an HCDC for a fitness and risk evaluation to determine whether or not he or she can work in hazardous noise (according to AFOSH 48-20).

Standard threshold shift determination

A standard threshold shift (STS) occurs when there is a change in hearing levels, relative to the baseline (reference) audiogram, of an average of +/- 10 dB or more at 2000, 3000, and 4000 Hz in either ear, or any single frequency of +/- 15 dB at 1000, 2000, 3000, or 4000 Hz. Although the DOEHRS software automatically calculates these shifts and prints the value on the DD Form 2216, Hearing Conservation Data, the following discussion will give you a quick refresher on STS calculations.

To calculate the average change in hearing levels from the baseline to the annual hearing test, first determine the amount of change between the two tests at the given frequencies in each ear. Add the three values together and divide by three to determine the average.

The following table is an example of calculating the averages when the annual audiogram results, minus the reference audiogram, equal the following values:

Frequencies (Hz)	2000	3000	4000	Average =	? STS
Change in	-10	+10	+20	6.6	no
hearing	0	+10	+20	10.0	yes
levels	+10	+20	+20	16.6	yes

Also, see the example in figure 3-5.

HEARING CONSERVATION DATA											1. ZIP CODE/APO/FPO/PAS	
<i>(This form is subject to the Privacy Act of 1974 - use Blanket PAS - DD Form 2005)</i>											21005	
2. DOD COMPONENT			3. SERVICE COMPONENT			R - REGULAR			G - NATIONAL GUARD			
F A - ARMY N - NAVY			F - AIR FORCE 1 - OTHER M - MARINE CORPS			R			V - RESERVE 1 - OTHER			
4. SOCIAL SECURITY NUMBER			5. NAME (Last, First, Middle Initial)				6. DATE OF BIRTH		7. SEX			
222809413			THOMAS, CYNTHIA G				1963/01/21		F M - MALE F - FEMALE			
8. PAY GRADE UNIFORMED SERVICES		9. PAY GRADE CIVILIAN		10. SERVICE DUTY OCCUPATION CODE		11. MAILING ADDRESS OF ASSIGNMENT			0134-FAWE-023A			
O 03				43H3		USAFSAM/AFCF 4445 DEADEND STREET BROOKS TX 78235						
12. LOCATION - PLACE OF WORK					13. MAJOR COMMAND		14. DUTY TELEPHONE (Include area code)					
BROOKS AFB					AFMC		(210) 555-1212					
15. AUDIOMETRY												
a. PURPOSE												
1 - 90 DAY 2 - ANNUAL 3 - TERMINATION 4 - OTHER												
AUDIOMETRIC DATA RE: ANSI S3.6 - 1989												
LEFT 500 1000 2000 3000 4000 6000 RIGHT 500 1000 2000 3000 4000 6000												
b. CURRENT AUDIOGRAM												
DATE 2000/04/19 65 65 60 65 60 65 60 65 60 65 70 60												
c. REFERENCE AUDIOGRAM												
DATE 2000/04/07 10 -5 0 0 5 10 5 5 10 0 -5 15												
d. SIGNIFICANT THRESHOLD SHIFT (STS)												
1 - NO 2 - YES												
e. THRESHOLD SHIFT												
70 60 65 55 60 50 65 75												
f. REMARKS (Include Exposure Data)												
Routinely Noise Exposed, See IH Report for Noise Levels, >H-2, Positive STS, I am aware of a change in my hearing and the need to return for further follow-up. Signature OSHA Reportable Hearing Loss Left and Right Ear(s).												
g. TYPE OF PERSONAL HEARING PROTECTION USED												
1 - SINGLE FLANGE (V51R) 4 - EAR CANAL CAPS 2 - TRIPLE FLANGE 5 - NOISE MUFFS 3 - HAND FORMED EARPLUG 6 - OTHER 5 7 - NONE												
h. NAME (Last, First, Middle Initial)				i. TRAINING CERTIFICATE NO		j. SERVICE DUTY OCCUPATION CODE		k. OFFICE SYMBOL				
GREEN, BEN F				001501		4F031		SG				
l. AUDIOMETER TYPE		m. MODEL		n. MANUFACTURER		o. SERIAL NUMBER		p. LAST ELECTROACOUSTIC CALIBRATION DATE				
3 1 - MANUAL 2 - SELF-RECORDING (Automatic) 3 - MICROPROCESSOR		MA 1000		MAICO Inc.		22474		1999/10/22				
16. FOLLOW-UP NO. 1												
a. MINIMUM 14 HOURS NOISE FREE SINCE CURRENT AUDIOGRAM (See Item 15.B)												
AUDIOMETRIC DATA RE: ANSI S3.6 - 1989												
LEFT 500 1000 2000 3000 4000 6000 RIGHT 500 1000 2000 3000 4000 6000												
b. CURRENT AUDIOGRAM												
DATE												
c. REFERENCE AUDIOGRAM												
DATE												
d. SIGNIFICANT THRESHOLD SHIFT (STS)												
1 - NO 2 - YES												
e. THRESHOLD SHIFT												
f. EXAMINER NAME (Last, First, Middle Initial)												
g. TRAINING CERTIFICATE NO.				h. SERVICE DUTY OCCUPATION CODE		i. OFFICE SYMBOL						
j. AUDIOMETER TYPE		k. MODEL		l. MANUFACTURER		m. SERIAL NUMBER		n. LAST ELECTROACOUSTIC CALIBRATION DATE				
1 - MANUAL 2 - SELF-RECORDING 3 - MICROPROCESSOR												
17. FOLLOW-UP NO. 2												
a. MINIMUM 14 HOURS NOISE FREE SINCE CURRENT AUDIOGRAM (See Item 15.B)												
AUDIOMETRIC DATA RE: ANSI S3.6 - 1989												
LEFT 500 1000 2000 3000 4000 6000 RIGHT 500 1000 2000 3000 4000 6000												
b. CURRENT AUDIOGRAM												
DATE												
c. REFERENCE AUDIOGRAM												
DATE												
d. SIGNIFICANT THRESHOLD SHIFT (STS)												
1 - NO 2 - YES												
e. THRESHOLD SHIFT												
f. EXAMINER NAME (Last, First, Middle Initial)				g. TRAINING CERTIFICATE NO.		h. SERVICE DUTY OCCUPATION CODE		i. OFFICE SYMBOL				
j. AUDIOMETER TYPE		k. MODEL		l. MANUFACTURER		m. SERIAL NUMBER		n. LAST ELECTROACOUSTIC CALIBRATION DATE				
1 - MANUAL 2 - SELF-RECORDING 3 - MICROPROCESSOR												

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Figure 3-5. Sample, DD Form 2216, Hearing Conservation Data.

Shifts in hearing thresholds for the better (negative shifts) are also of concern. When this occurs, referral to HCDC may be necessary to determine validity of the audiogram.

Annual audiogram

An annual audiogram will be done on all personnel who are exposed to hazardous noise. The individual does not need to be noise-free before being examined.

If the individual's annual audiogram reveals a threshold shift, he or she must undergo additional tests to confirm the shifts. A patient with an STS must receive one, or both, of the follow-up audiograms: the 14-hour (Follow-up No. 1 on DD Form 2216), and the confirmatory audiogram (Follow-up No. 2 on DD Form 2216) noise-free audiograms. These two follow-up tests will confirm the presence or absence of any permanent threshold shifts.

Follow-up no. 1 audiogram

Individuals who experience STS are retested after being noise-free for 14 hours before test. (Noise-free is defined as no noise exposure greater than 72 dB.) This auditory rest usually is adequate to allow temporary threshold shifts to return to pre-exposure threshold levels. If a patient is seen for a Follow-up #1 audiogram and no STS is detected, the individual should be reeducated regarding noise and hearing protection, then returned to normal duty. If STS is found, a second follow-up exam (Follow-up #2) must be accomplished. This exam may be done the same day.

Close scrutiny (stringent audiometric monitoring) audiogram

You may need to carefully monitor those individuals who work in excessive noise areas (even with the use of hearing protection), or unprotected/unknown noise exposure. An example of unprotected and unknown noise exposure would be headphone noise for radio operators and linguists. You may also need to monitor an individual if a physical or other medical problem exists and ear protection cannot be worn properly. This stringent medical monitoring is needed to make sure that further hearing loss does not occur. Although there is no specific period of monitoring, it is suggested that these individuals receive a quarterly audiogram. DOEHS has appropriate selections in "audiogram type."

Termination audiograms

Termination audiograms are completed when an individual stops working in a hazardous noise area. Most times these audiograms will be performed when a person retires or separates. However, some individuals may still be employed, but not work in hazardous noise. Disposition for termination audiograms is the same as for routine audiograms. On occasions where it is not possible for the person to return for the appropriate follow-up activities, fully document this in the medical record.

Air Force Hearing Conservation Diagnostic Centers

Air Force Hearing Conservation Diagnostic Centers (HCDC) centers are set up in regional areas and are staffed with at least an otolaryngologist and an audiologist. The primary purpose of an HCDC is to give direct ENT and audiology consultation service for the USAF HCP. Referral to HCDC is governed by AFOSH Standard 48-20 and done with the use of an AF Form 1672, Hearing Conservation Diagnostic Center Referral.

. Patients should not be referred to the HCDC without an AF Form 1672, their medical records, any pertinent noise exposure data, and current job description. Following the actual HCDC evaluation, the HCDC will provide guidance as to the disposition of the patient.

Self-Test Questions

After you complete these questions, you may check your answers at the end of the unit.

A12. Calibration of equipment

1. Who accomplishes annual electroacoustic calibration checks?

2. What is considered medically and legally the *most* important calibration?
3. How is the daily calibration check accomplished?
4. On what form is the daily calibration check recorded?
5. What is considered a discrepancy on the daily calibration check?
6. Explain the daily functional (listening) check.
7. What standards are used today for calibration values?
8. What are the only acceptable listening devices?
9. How long should the daily biological calibrations be maintained?

A13. Disposition of noise-exposed personnel

1. When establishing a reference audiogram, when should you try to schedule the exam?
2. What is the intent of the reference audiogram?
3. Why is an individual referred to an HCDC when he or she fails to meet the H-1 profile standard?
4. Define a standard threshold shift.
5. Define a negative shift.
6. Define noise-free.

7. What is the disposition of a patient who does not have an STS on the 14-hour follow-up audiogram?

8. What is the primary purpose of an HCDC?

Answers to Self-Test Questions

A10

1. Public Health flight.
2. Bioenvironmental Engineering Services (BES)
3. To conduct audiometric testing as well as certain calibration procedures.
4. Initially through the 4E0X Apprentice Course, then by attending a re-certification course every 5 years.
5. Health Care Provider and PH personnel.
6. Defense Occupational Environment Health Readiness System Hearing Conservation Program (DOEHRS-HC)
7. Test results and determines whether a significant hearing loss exists or if changes in hearing have occurred.

A11

1. In Hertz (Hz).
2. 500, 1000, 2000, 3000, 4000, and 6000 Hz.
3. Intensity, duration, and distance.
4. The external auditory canal.
5. Middle ear.
6. 60 dB.

A12

1. Medical Equipment Repair Center (MERC).
2. The daily calibration check.
3. By testing an individual with known hearing levels each day and comparing the results with his or her previously accomplished baseline test. An artificial ear, such as the ME-500 or similar, may be used.
4. DD Form 2217, Biological Audiometer Calibration Check.
5. A difference of 5 dB or more at any frequency when compared to the baseline.
6. A hearing conservationist listens to the headphones at a various of intensities for any abnormal output such as static, clicks, clarity, and crossover from one headphone to another.
7. American National Standards Institute (ANSI) 1989.
8. The TDH 39, 49, or 59 headphone with the MX-41/AR cushion.
9. For 1 year after the audiometer is turned in.

A13

1. Before the time in which the actual work in noise begins. If this is not possible, accomplish the test as soon as possible (within 30 days) after the individual has begun work in noise.
2. To establish a baseline audiogram.
3. For a fitness and risk evaluation to determine whether or not they can work in hazardous noise.
4. A change in hearing level, relative to the baseline audiogram, of an average of +/- 10 dB or more at 2000, 3000, and 4000 Hz in either ear or any single frequency of +/- 15 dB at 1000, 2000, 3000, or 4000 Hz.
5. Shifts in hearing thresholds for the better.

6. No noise exposure greater than 72 dB.
7. The individual should be reeducated regarding noise and hearing protection, then returned to normal duty.
8. To give direct ENT and audiology consultation service to the USAF HCP.

Do the Unit Review Exercises (URE) before going to the next unit.

Unit Review Exercises

Note to Student: Consider all choices carefully, select the *best* answer to each question, and *circle* the corresponding letter. When you have completed all unit review exercises, transfer your answers to ECI Form 34, Field Scoring Answer Sheet.

Do not return your answer sheet to ECI.

39. (A10) How many years is the certification for hearing conservationists valid?
- 1.
 - 3.
 - 5.
 - 6.
40. (A11) The measurement expressed in Hertz (Hz) refers to what principle of sound?
- Frequency.
 - Duration.
 - Distance.
 - Intensity.
41. (A11) From where does the external auditory canal receive sound waves?
- Auricle.
 - Ossicles.
 - Basilar membrane.
 - Tympanic membrane.
42. (A11) Total loss of the ossicles results in *approximately* how much dB loss in all frequencies?
- 40.
 - 60.
 - 80.
 - 100.
43. (A11) Hair cells in the apex of the cochlea are sensitive to what type of frequency?
- None.
 - High.
 - Middle.
 - Low.
44. (A12) When compared to the baseline audiogram, what difference constitutes a discrepancy on a daily calibration check?
- 5 dB or more at any frequency.
 - 5 dB or less at 2000 through 4000 Hz.
 - Only 10 dB at any frequency.
 - Only 10 dB at 2000 through 4000 Hz.
45. (A12) On what form are the daily calibration checks recorded?
- DD Form 2215.
 - DD Form 2216.
 - DD Form 2217.
 - AF Form 2272.

-
-
46. (A12) How long should the daily biological calibration checks be maintained at the medical treatment facility after an audiometer has been turned in?
- a. 6 months.
 - b. 1 year.
 - c. 3 years.
 - d. 5 years.
47. (A13) The reference audiogram is recorded on a
- a. DD Form 2215.
 - b. DD Form 2216.
 - c. DD Form 2217.
 - d. AF Form 2272.
48. (A13) Fourteen-hour follow-up audiograms are recorded on what form?
- a. DD Form 2215.
 - b. DD Form 2216.
 - c. DD Form 2217.
 - d. AF Form 2272.
49. (A13) Initial reference audiograms should be accomplished within how many days of hazardous noise exposure?
- a. 15.
 - b. 30.
 - c. 45.
 - d. 60.
50. (A13) After a standard threshold shift on follow-up audiogram #1, how much time must pass before follow-up #2?
- a. Can be done the same day.
 - b. 24 hours with no hazardous noise exposure.
 - c. 48 hours with no hazardous noise exposure.
 - d. 72 hours with no minimal hazardous noise exposure.

Student Notes

Glossary of Abbreviations and Acronyms

A&D	Admissions and Discharge
ACS	Aeromedical Consultation Service
AFI	Air Force Instruction
AFM	Air Force Manual
AFMOA	Air Force Medical Operations Agency
AFMS	Air Force Medical Service
AFOSH	Air Force Occupational Safety and Health
AFPAM	Air Force Pamphlet
AFPB	Air Force Personnel Board
AFRES	Air Force Reserves
AFS	Air Force Specialty
AFSC	Air Force Specialty Code
AIMWTS	Aeromedical Information Management Waiver Tracking System
ALC	Assignment Limitation Code
AMP	Aerospace Medicine Primary
AMS	Aeromedical Summary
ANG	Air National Guard
ANSI	American National Standards Institute
AR	Army Regulation
ARC	Air Reserve Component
ASA	American Standards Association
ASC	Aviation Service Code
BEF	Bioenvironmental Engineering Flight
BES	Bioenvironmental Engineering Services
BSC	Biomedical Sciences Corps
CPS	Clinical Preventive
CT	Computed Tomography
DA	Department of the Army
dB	Decibels
DC	Dental Corps
DCMS	Dental Classification Management System

DNA	Deoxyribonucleic Acid
DNIF	Duty Not Involving Flying
DOD	Department of Defense
DODMERB	Department of Defense Medical Examination Review Board
DOEHRS-HC	Defense Occupational Environment Health Readiness System Hearing Conservation
EAD	Extended Active Duty
ENT	Ear, Nose, and Throat
EPTS	Existed Prior To Service
FHM	Force Health Management
FPEB	Formal Physical Evaluation Board
GSU	Geographically Separated Unit
HCDC	Hearing Conservation Diagnostic Center
HCDR	Hearing Conservation Data Registry
HCP	Hearing Conservation Program
HCP	Health Care Provider
HEAR	Health Enrollment Assessment Review
HQ AFMOA	Headquarters Air Force Medical Operations Agency
HRR	Health Record Review
Hz	Hertz
IAW	In Accordance With
IMR	Individual Medical Readiness
IPEB	Informal Physical Evaluation Board
LAS	Limited Assignment Status
LOD	Line of Duty
MAJCOM	Major Command
MC	Medical Corps
MDG	Medical Group
MEB	Medical Evaluation Board
MERC	Medical Equipment Repair Center
MHS	Medical Health Services
MPF	Military Personnel Flight

MRI	Magnetic Resonance Imaging
MSC	Medical Service Corps
MTF	Medical Treatment Facility
MTI	Military Training Instructor
MWR	Moral, Welfare, and Recreation
NAOMI	Naval Aerospace and Operational Medical Institute
NCOIC	Non-Commissioned Officer In Charge
OB-GYN	Obstetrics-Gynecology
OHE	Occupational Health Examination
OHWG	Occupational Health Working Group
OIC	Officer In Charge
PCA	Permanent Change of Assignment
PCM	Primary Care Manager
PCM	Primary Care Management
PCS	Permanent Change of Station
PDS	Personnel Data System
PEB	Physical Evaluation Board
PEBLO	Physical Evaluation Board Liaison Officer
PH	Public Health
PHA	Preventive Health Assessment
PHWG	Population Health Working Group
PIMR	Preventive Health Assessment Individual Medical Readiness
PRP	Personnel Reliability Program
PSM	Personnel Systems Management
PSW	Patient Status Worksheet
QNFT	Quantitative Fit Training
RTD	Returned to Duty
SAF	Secretary of the Air Force
SAT	Strength Aptitude Test
SF	Standard Form
SG	Surgeon General
SSN	Social Security Number

STS	Standard Threshold Shift
TB	Tuberculosis
TDRL	Temporary Disability Retired List
TDY	Temporary Duty
USAAMA	US Army Aeromedical Agency
USAFSAM	USAF School of Aerospace Medicine
USPHSTF	US Preventive Health Services Task Force
WAVR File	Centralized Flying Waiver Repository

Student Notes

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