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The CODING BOOK for

Occupational and Environmental Medical Practices

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The proponents of this technical guide are the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) and the Navy Environmental Health Center. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander USACHPPM, ATTN: MCHB-TS-CDI, Aberdeen Proving Ground, MD 21010-5403. For your convenience, a copy of DA Form 2028 is included at the end of this technical guide.

The purpose of this booklet is to bridge the gap between the ethereal nature of coding and the management needs of the Occupational Health Clinic.

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CHAPTER 1: HISTORICAL OVERVIEW WITH THE BASIC CONCEPTS OF CODING

1-1. WORKLOAD RECORDING VERSUS SERVICE IDENTIFICATION.

a. For two decades military clinics have used the Medical Expense Performance Recording (MEPR) System for tracking workload. Under this system physicians, nurses, and ancillary staff recorded their workload in terms of patient visits. The aim of MEPR was to track workload so that the Military Treatment Facility (MTF) can receive reimbursement for the accumulated workload of all their staff personnel. Under MEPR the reimbursement varied with the workload.

b. The late 1990's brought the concept of capitation as a method for allocating health care resources. With capitation a MTF receives reimbursement based on the number of patients in its catchment area. The aim of each clinic is to efficiently supply services without exceeding the capitated dollars for each patient. Capitated reimbursement, with its emphasis on services appropriate for the patient's care, requires a coding system that reflects services provided rather than workload.

c. While MEPR is a military-unique method for recording workload, the commonly accepted method for receiving reimbursement from civilian insurance carriers uses Current Procedural Terminology (CPT) and International Classification of Disease (ICD-9) codes. The basic model for this coding system is a patient visit to the provider. A billable event arises when a patient receives care from the provider. Emphasis is on the services provided in the context of the doctor-patient visit. Workload to support the service is a secondary issue. The physician receives reimbursement based on the complexity of the services provided the patient. Capitation encourages the providers and the entire clinic to efficient provide services within the capitation rate allowed by the insurer.

d. Like other clinics in the Military Health Service System, the Occupational Environmental Medicine (OEM) practice must change from tracking workload to tracking services. With military OEM practices spread throughout the United States, Hawaii, and Europe, this change requires a major readjustment in thinking to effectively use, and subsequently manage with, CPT/ ICD codes. Civilian practices started the transition to coding in earnest in 1992 when the Health Care Financing Administration (HCFA) required both the ICD and CPT on the HCFA-1500 form for medicare reimbursement. This Code Book builds on the civilian experience by providing a consistent set of codes that most military OEM practices can adopt. The assumption is that the military clinics' use of these coding systems must be the same as their civilian counterparts.

e. Civilian practices have learned the dangers of both overcoding and undercoding (see historical review below). The Code Book builds on these experiences and teaches coding appropriate for the services provides. Like their civilian counterpart, military practices can be penalized for inaccurate coding. Both overcoding, using a code for a level of service higher than the one provided, and undercoding present risks to military clinics in the era of capitation. Overcoding presents a picture of the clinic as a high cost center for which a contractor could provide similar services at a lower cost. Undercoding, using a code lower than the level of service, invites an insurer to send to the clinic sicker patients so that reimbursement is lower that the services required. Coding becomes the language of finance used in selecting those service for outsourcing. Military providers must use the appropriate level of code to avoid consequences that their civilian colleagues have already experienced.

1-2. HISTORICAL PROSPECTIVE, ICD-9 and CPT.

a. The code for diagnosis is the ICD-9CM (clinical modification), the official system of assigning codes to diagnoses and procedures associated with hospital utilization in the United States. The World Health Organization owns the copyright, but in the United States the HCFA and the National Center for Health Statistics (NCHS) oversee updates to the Code. The Veterans Administration started using the ICD for hospital indexing, but in 1977 the NCHS modified the existing ICD-9 to permit its application beyond basic health statistics. The result was the clinical modification to the basic ICD-9, called ICD-9CM. ICD-9 is synonymous with ICD-9CM in this document, which provides appropriate English language adjustments and permits classification of medical records. This code answers the question of "why"

Like other clinics in the Military Health Service System, the Occupational Environmental Medicine practice must change from tracking workload to tracking services. the practice provided a service to the patient. Both NCHS and HCFA update the ICD-9CM annually on 1 October.

b. ICD-9CM occupies a two-volume set, with the first volume the tabular or numeric listing and the second volume the alphabetic listing. HCFA guidelines for correct coding techniques, described in the first pages of the book, require the coder to first search Volume 2 for the descriptive term of the diagnosis. Associated with the term is a three- or four-digit number, which serves as the entry into Volume 1. The numeric volume lists general diagnosis as three-digit codes, with up to two additional digits after the decimal point for more specific subdivisions of the general diagnosis.

c. Associated with the numeric codes are V and E codes. The former describes health care visits for reasons other than specific complaints, such as a Driver's License Exam (V70.3) or a Medical Surveillance Exam (V70.5). V codes, like numeric codes, serve as diagnoses, but E codes do not. The E codes modify the diagnosis to describe the reason for an injury or illness. For example, the coded diagnosis 883.0E920.5 means a puncture wound to the finger (883.0) due to a hypodermic needle (E920.5).

d. CPT is a systematic listing and coding of procedures performed by physicians. The owner of the CPT Codes is the American Medical Association. In 1966 HCFA implemented Medicare, which under Part B reimbursed physicians for services to Medicare enrollees over age 65. In order to identify physician services, HCFA implemented the three-level Health Care Common Procedural Coding Systems (HCPCS, pronounced Hick...Pick). Level 1 HCPCS are the CPT Codes which were first introduced in 1965. These codes answer the question of "what" services the practice provided to the patient. The AMA updates the CPT codes annually on 1 January.

e. Unlike the diagnosis codes, CPT codes are all five digits, with decimal digits sometimes added as modifiers of the basic five-digit code. The first two digits indicate the specific type of service, such as the 70000 series for radiology, 92000 for ophthalmology, and 99000 for Evaluation and Management (E/ M). This latter service reflects the diagnostic nature of the physicians' work and is among the most commonly used codes. Division of the 99000 series is into broad categories such as office visits, hospital visits, consultations, and preventive services. Codes 99201 through 99215 are the office or outpatient services codes. They are further divided into new patient codes, 99201 through 99205, and established patient codes, 99211 through 99215. By contrast, age of patient is the criterion for separating the preventive medicine codes, 99385 through 99397.

1-3. IMPLEMENTING THE ICD-9/CPT CODING SYSTEM.

a. The HCFA serves as the checkbook for Americans receiving care under the Medicare program. Office practices have changed as HCFA altered the rules for obtaining reimbursement from the HCFA checkbook. Prior to the 1980's, medical office practices completed a preprinted superbill which permitted a written description of the diagnosis and accepted a checkmark to indicate the services or procedures performed during the visit. The office kept one part of the Superbill for its records. Medicare enrollees paid the physician and used the second part as a receipt. Enrollees submitted the third part to the medicare carrier for payment. Office practice revenue depended on the number of office visits, each of which were reimbursed on the basis of the provider's Uniform, Customary, or Regular fee.

b. Superbills disappeared in 1988 when Congress passed the Medicare Catastrophic Coverage Act, which required the diagnosis, coded in ICD-9CM, to match the services provided, coded as CPT, or level 1 HCPCS. Practices entered the codes on the Universal Health Claims forms, identified as the HCFA-1500 form, on lines 21 and 24d, respectively. Coding was now a requirement for practices to receive reimbursement, but total reimbursement still depended on the count of visits.

c. The second step in enforcing the use of ICD-9CM/CPT codes occurred in 1992, when HCFA began a 5-year phase in of the Medicare Fee Schedule (MFS) which associated Resource Based Relative Value Units (RBRVU) for each CPT code that HCFA reimbursed. Implementation of the MFS based reimbursements on the RBRVU of the services provided, not on the number of office visits. For example, a new-patient, problem-focused visit, E/M code 99201, represented 0.38 physician RBRVU, while an established patient detailed visit, E/M code 99213, represented 0.55 physician RBRVU. Added to these physician RBRVU are practice expense and malpractice RBRVU, to account for differences in practice expense and legal exposure. The total RBRVU for a procedure is the weighted average of 54% physician work, 41% practice expense and 5% malpractice cost. Multiplication of the total RBRVUs by an annually adjusted conversion factor yielded the total reimbursement to the practice. Table 1-1 shows how the MFS varies with location for two E/M codes. The important issue is that the MFS forced civilian practices to use CPT codes to record services rather than just count the number of visits.

ICD-9CM codes are the official code for diagnoses. V codes also serve to describe the reason for the visit such as Medical Surveillance Exam V70.5.

CPT is a systematic listing and coding for procedures performed. **TABLE 1-1.** MFS, 1996, for two outpatient E/M codes for different locations. This table illustrates the effect of practice location. Two E/M codes, each with similar physician work RVU, have different MFS depending on the RVU assigned to practice expense and malpractice cost for a specific location.

E/M Code	Richmond, VA	<u>Buffalo, NY</u>
99203 99213	\$58.97 \$32.84	\$50.86 \$26.71
E/M Code	Rochester, NY	<u>Manhattan, NY</u>
<u>E/M Code</u> 99203 00313	<u>Rochester, NY</u> \$60.87 \$33.46	<u>Manhattan, NY</u> \$72.53 \$41.26

d. The basic model for reimbursement is a patient visit to the provider with CPT describing "what" the provider did and ICD-9CM describing "why" the doctor provided the service or procedure. Emphasis is on services, while workload of the ancillary staff to support that visit is a secondary issue. Physicians receive reimbursement based on the complexity of the services provided to the patient as outlined in the MFS. Since the introduction of the medicare program, the number of CPT codes available for reimbursement has grown from 2,000 codes in 1965 to 7,000 codes in 1997. The expansion of the codes parallels the growth of medicare expenditures (see Table 1-2).

TABLE 1-2. Growth of health care from 1965 to 1996 expressed in terms of the number of CPT codes, Medicare expenditure, and total health care expenditure. (Medicare expenditures and Total Health Care expenditures from Ginzburg, E, "The changing US Health Care Agenda" JAMA 279,7, 501 - 504, Feb 18, 1998).

	1965	1996
Number of CPT Codes	2,000	7,000
Medicare Expenditure	\$10 billion	\$180 billion
Total Health Care Expenditure	\$41 billion	\$ 1 trillion

e. Because total reimbursement is tied to ICD-9CM/CPT code selection, medical practices and hospitals have a financial incentive to overcode, that is, to use CPT codes that represent more RBRVU than the services actually provided. An HCFA intra-agency audit of 1996 Medicare payments estimated \$23 billion in questionable reimbursement, 22% accounted for by physicians services. To put teeth into HCFA's medical record audits, the Federal False Claims Act of the Health Insurance Portability and Accountability Act of 1996 stated that submitting a claim for an item or service based on incorrect coding can result in a civil monetary penalty. This is no idle threat. Recently the group practice for the University of Virginia Medical School returned over \$8.6 million to HCFA because of an audit that revealed coding irregularities. Accuracy of coding and compliance with the HCFA coding rules are now a major issues for private practices.

1-4. THE HCFA – 1500 FORM AND THE BILLING CYCLE.

a. The universal medical insurance claims form is HCFA-1500 form (see following page). The HCFA developed this form as the method for submitting payment for Medicare claims. Because of its extensive use for Medicare and Medicaid programs, most other insurers also require physicians to submit this form to receive reimbursement. Military clinics will recognize this form as the OWCP–1500 used by civilian physicians when submitting claims for medical services provided to civilian workers compensated under the Federal Employees Compensation Act (FECA). Military providers will not use the HCFA-1500 form, but staff in the Third Party Collections office are familiar with its use.

b. Blocks 21 and 24 show the relation between the diagnosis and the services provided. Note that at block 24D the provider must correlate the service provided with the diagnosis. This is the match between the medical necessity for the services, the ICD-9 code, and the service provided, the CPT-4 code. The HCFA will deny a civilian physician's claim for services if the diagnosis and service do not match. An obvious mismatch is the diagnosis of prostate hypertrophy (ICD-9 code 600), with the service provided as normal vaginal delivery (CPT code 59400). Both Medicare and private insurance carriers run computerized screening checks of the codes entered into these two blocks. Only those claims that pass these screenings, called clean claims, receive immediate payment.

Form HCFA-1500	PLEASE DO NOT STAPLE IN THIS AREA							APPRC	VED OMB-0938-0008	.8
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	(Medicare #) (Medicaid			File #) (SSN or ID)		4. INSURED'S NAME	/l act Name Firs	t Namo. Mi	iddle Initial)	
	2. PATIENT'S NAME (Last Nam	e, Filst Name, Middle m	iudi)	3. PATIENT'S BIRTH DA' MM DD YY	M F	4. INSURED STRAINE	(Last Name, 113	it Name, wi	udie miliaj	
	5. PATIENT'S ADDRESS (No., S	Street)		6. PATIENT RELATIONS	HIP TO INSURED	7. INSURED'S ADDR	ESS (No., Street)			
			07	Self Spouse	Child Other	0.71			STATE	
	CITY		50	ATE 8. PATIENT STATUS Single Marri	ied Other	CITY			SIAIE	-
	ZIP CODE	TELEPHONE (Includ	le Area Code)			ZIP CODE	TEL	EPHONE	INCLUDE AREA COL	DE)
		()		Employed Full-Ti Studer	nt Student			()	
Health Insurance	9. OTHER INSURED'S NAME (I	.ast Name, First Name,	Middle Initial)	10. IS PATIENT'S COND	DITION RELATED TO:	11. INSURED'S POLI	CY GROUP OR	FECA NUN	IBER	
Claim Form	a. OTHER INSURED'S POLICY	OR GROUP NUMBER		a. EMPLOYMENT? (CUR	RENT OR PREVIOUS)	a. INSURED'S DATE	OF BIRTH		SEX	
				YES	NO	l	D YY	M	F]
	b. OTHER INSURED'S DATE O MM DD YY			b. AUTO ACCIDENT?	PLACE (State)	b. EMPLOYER'S NAM	ME OR SCHOOL	NAME		
	C. EMPLOYER'S NAME OR SC		F	c. OTHER ACCIDENT?	NO	C. INSURANCE PLAM	NAME OR PRO	GRAM NA	ME	
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	2 24. A	В	C	4 D	E	F	G H		J K	
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c. Most medical office systems installed in a private physician's office use an encounter form to accumulate patient demographic data, diagnosis, and procedure information. Some civilian encounter forms are similar to the Ambulatory Data System (ADS) encounter forms (please do not use the term "bubble sheet"). Most private practices employ a coder who checks the accuracy of the ICD-9 and CPT codes selected by the provider on the encounter form. The coder then enters the corrected codes into the office system. At the end of the day the billing clerk either prints the HCFA-1500 for mailing to the designated insurance company or electronically transmits the HCFA 1500 to the Medicare carrier for the local area. While private physician providers, like their military counterpart, never actually see the HCFA-1500, the billing cycle ends only upon the accurate completion and acceptance of this form by the insurance carrier.

CHAPTER TWO: MEDICAL NECESSITY, ICD-9CM CODING FOR ACUTE CARE

2-1. INJURY AND ILLNESS CODING.

a. Workers may receive acute and chronic care for injuries and illnesses (I/I) at OEM practices. The rules for ICD-9 coding for OEM services are no different from those for the emergency room or primary care clinic. By following the HCFA guidelines (see Table 2-1), coders convert the worker's symptoms, signs, and complaints into an ICD-9 code, which establishes the medical necessity of the visit. The introductory section of all codes books presents these HCFA guidelines in more detail. A variety of educational seminars and reference texts are available to train clinic staff who may not be familiar with the use of the coding books and the selection of ICD codes. When coding for I/I at military OEM clinics, use the same codes and rules as those used by civilian coders. The only difference is that military clinics enter codes on the ADS encounter form, while civilian clinics will enter the same codes on the HCFA-1500 form.

TABLE 2-1: Procedures established by HCFA to determine the appropriate ICD-9 code for entry onto blocks 21 and 24D of the HCFA-1500 form. (These coding procedures are described in all ICD-9 manuals sold to private practices.)

- 1. Identify each service, procedure, or supply with an ICD-9 code.
- Identify services for other than disease with V codes.
- 3. Code the primary diagnoses first, then the secondary, tertiary and so on.
- Code to the highest degree of specificity, 4th or 5th digit when necessary.
- 5. Code a chronic disease as often as it is applicable to a patient's treatment.
- 6. When only ancillary services are provided, list the appropriate V code first.
- 7. For surgical services, code the diagnosis applicable to the procedure

b. Two coding considerations are important for the OEM practice, which may not be apparent when coding for family practice or emergency room visits. The first is that the OEM practice uses only the ICD-9 codes, which prompted the workers' visits regardless of other chronic conditions that may be present. This situation arises when an employee with chronic conditions presents for acute care. As an example, consider an employee under treatment for hypertension who sustains a laceration to the finger. The reason for the visit to the OEM clinic is due to a laceration (coded as 883.00 under category Open Wound), not the hypertension. The civilian coder will place 883.00 as the first code in item 21 of the HCFA-1500 (OWCP-1500). The military coder checks the preprinted box for 883.00 on the ADS encounter form, or if not preprinted enters 883.00 on the back of the encounter form as the primary diagnosis. Like the civilian provider, the military clinic should avoid coding for a nonessential diagnosis, such as the hypertension. The laceration, **not** the hypertension, is the reason for the care provided to this employee.

c. The tabular list of diseases, Volume 1 of the ICD-9CM book, ranges from 001 for cholera to 999.9 for unspecified complication of medical care. For the novice, finding the appropriate code for an I/I can be daunting. The first step is the follow the coding procedures outlined in Table 2-1. Always start with the alphabetic index, Volume 2, using the diagnostic term for the I/I. Associated with this term will be a three-digit number or number range. Enter Volume 2 using this number. Select the highest order number, up to five digits, that matches the employee's specific I/I. Do not select the code given from the alphabetic index since the tabular list, Volume 2, usually has more specific diagnoses, each numbered beyond the decimal place of the three-digit code.

d. Suppose the employee has no specific diagnosis, but merely signs and symptoms. In this case refer to Section 16 of the ICD-9CM book titled, "Signs, Symptoms, and Ill Defined Conditions." This section contains codes 780, General Symptoms, to 799, Ill Defined Symptoms. Use of these codes is as acceptable as are numeric codes for specific diagnosis. From the billing prospective the important issue is why the employee sought care in the OEM clinic, not the diagnostic acumen of the provider. Coding for acute injuries and illness is the same for Occupational Health Clinics as it is for Primary Care Clinics. e. In the industrial environment some injuries occur more frequently than others. In 1996 Allen and Blumbing recorded the frequency of diagnosis seen at the staff sick call which serviced the Naval Hospital Portsmouth and Norfolk Naval Shipyard. Appendix A lists the common diagnoses seen during a 1year period. While the mix of patients will certainly vary at other military OEM clinics, a coder may wish to use Appendix A as a quick reference for commonly seen diagnoses. The codes used in Appendix A are selected directly from the ICD-9CM list. Appendix A lists less than 200 codes, which should cover the needs of most OEM clinics.

f. Other lists of common diagnoses coded in ICD-9CM are also available. For the Family Practice, Appendix B lists diagnoses taken from a popular medical practice text. Sentinel events represent failure in disease prevention. Diseases that represent sentinel events should be rare. Appendix C lists the ICD-9CM codes for sentinel events. The diseases appearing on Appendix C should not be frequent enough to place on the ADS encounter form. This appendix is for information only.

2-2. UNIQUE CODES, The E CODES.

a. In the industrial setting, I/I usually arise in the context of an industrial accident. The ICD-9 classification contains E codes which explain the cause of the injury. For the OEM practice the place of occurrence is usually at the industrial location, so E codes describe the specific nature of the industrial accident. E codes are NEVER the primary code; rather, they are an addition to a code from the main chapters of the ICD-9 book. Enter the E code on item 21 as a secondary diagnosis following the primary numeric code.

b. The ICD-9CM codes book contains a section on E codes usually at the end of the alphabetic list, Volume 2. Like the numeric codes, E codes have specific sections and a hierarchical organization. Table 2-2 outlines those E codes sections that are most applicable to the practice of OEM. E codes describe accidents that arise in the industrial environment as a cause of injury. For example, overexposure to industrial chemicals, pesticides, and motor vehicle exhaust gases are in sections E860 through E869. Motor vehicle accidents are in sections E810 to E819. Sections not listed in Table 2-2 are for situations generally not encountered in the typical OEM practice, such as an injury that arises from medicinal error, suicide, and acts of war. **Table 2-2.** Selected E codes and their definition as applicableto the OEM practice.

Definition	E code
Hypodermic needle as cause of accident	E920.5
Overexertion and strenuous movements from pulling, lifting, and pushing	E927
Exposure to noise, noise pollution, and sound waves	E928.1
Motor vehicle accidents involving collision on the highway with injury to the:	
driver of the vehicle passenger pedestrian	E814.0 E814.1 E814.7
Motor vehicle accident involving collision with other motor vehicle with injury to the:	
driver passenger	E812.0 E812.1
Accidental poisoning by insecticides of the organophosphorus compounds	E863.1
Accidental poisoning caused by motor vehicle exhaust	E862.2
Accidental poisoning by unspecified solid and liquids	
lead and its compounds and fumes mercury antimony arsenic other metals and their compounds	E866.0 E866.1 E866.2 E866.3 E866.4
Falls from ladders or scaffolding	E881.0

2-3. SCENARIOS FOR I/I CODING.

Listed below are four scenarios illustrating the use of ICD-9CM numeric codes to describe the I/I. Where appropriate, the scenario also presents the E code. Coders may improve their proficiency in coding entering E codes to support the primary diagrams. At this time ADS coding does not accommodate E codes even when these codes are entered on the encounter form.

	Primary Dx:	883.0	•
	Secondary Dx:	E919.3	•
		an open wound of the fingers without complications. E919.3 he cause of the injury.	•
-	ly stops by the clinic for	ed by his primary care provider for possible hypertension. H or blood pressure checks.	e <u>Scenario 2</u>
-	ly stops by the clinic for Primary Dx:		
-	ly stops by the clinic for	or blood pressure checks.	

	ng in an enclosed space next to an operating gasoline engine on to the OEM clinic, the foreman is alert, but his carboxyhemoglo-	<u>Scenario 2-3:</u>
Primary Dx:	780.2	•
Secondary Dx:	E868.2	•
motor vehicle exhaust, E868.2, convert the symptomatic diagn	e used the symptomatic code for syncope, 780.2, and specified , as the cause of injury. Subsequent testing and evaluation may osis to specific diagnosis of 986, toxic effects of carbon monoxide. 80 series of codes used to describe symptoms. These codes are al diagnoses.	•

CHAPTER THREE: MEDICAL NECESSITY, ICD-9 CODING FOR SURVEILLANCE EXAMS

3-1. UNIQUE VISITS TO THE OEM PRACTICE.

TABLE 3-1. Specific visit types that are unique to occupational health (OH). Listed below are six unique OH visit types, each with a definition and example.

a. The first step in obtaining reimbursement from a third party payer is to establish the reason for the medical service. For injury and illness, discussed in the previous chapter, the patient has symptoms or injury. The coder uses the numeric part of the ICD classification to describe these symptoms, illnesses or injuries. While primary and emergency care are well described by these numeric codes, OEM services frequently involve care to workers without specific symptoms or complaints. Consider a medical surveillance or job certification exam in which the employee seeks care as a preventive measure or as a requirement for continued employment. The numeric codes which describe illness and injury are not sufficient to describe the medical necessity for a visit by an apparently healthy worker.

b. For the purposes of coding, six different visit types are unique to OEM practices. These are exams for Return to Work (RTW), Disability Evaluations (DE), occupational medicine consults, certifications, driver's license, and surveillance. While the Fitness For Duty (FFD) exam is another type of visit, from a coding perspective this exam is similar to the DE. Table 3-1 describes each of these types of visits and provides examples from an OEM practice. Grouping visits to the OEM practice into these six categories permits easier selection of the appropriate ICD code. The central theme in all these visits is that the worker seeks OEM service for a purpose other than to relieve symptoms or acute illness. For visit types not associated with a specific medical complaint, the ICD classification provides the V codes to describe medical necessity.

3-2. V CODE CLASSIFICATION

a. V codes are a separate section of Volume 1, tabular list in the ICD-9 Manual. Their purpose is to provide a classification for those situations when a persons seeks medical care for reasons other than injury or illness. V codes always begin with a "V" followed by a number. Like the numeric codes, specific coding may require a third and even a fourth digit. Some V codes, such as those for the V15 services, may not serve as primary diagnoses. All V codes may be used as secondary diagnoses. This coding situation arises when an employee presents with a stable medical condition but requests services described by V codes. Sections within the V code classification describe heath care services for com-

Visit type	Definition	Example
Return To Work	Considerations are the current health status of the work and the safety sensitivity of the worker's job. Other concerns involve the previous health care of the worker and extent of recovery gained by this care	 Competency following rehabilitation for substance and alcohol abuse Return to work evaluation following an injury or illness
Disability Evaluation or Fitness For Duty	An examination oriented towards defining the extent of the examinee's disability. Outcome of this exam is a rating or opinion which is the extent of the disability compared to a whole or fully functional person	Disability evaluation for purposes of insurance coverage or for continuation of employment
Certification	As a result of this visit the employees has a doctor's certificate to continue a specific job or wear specific personal protective equipment. To obtain this certificate the employee must not have any disqualifying medical conditions. In some circumstances the FFD is a type of certification exam	 Respirator certification Federal Aviation Administra- tion physical Food service worker exam
Driver's License Exam	A specific type of certification based on Department of Transportation requirements for motor vehicle operators or operators of heavy equipment	 Motor vehicle operator, all classes Crane operator
Surveillance Exam	Identifies the earliest reversible biologic effects so that the exposure can be reduced or eliminated before the employee sustains irreversible damage	 Noise Asbestos Lead Hazardous drug
Consult to OEM Practice	The OEM practice receives consults to address concerns of otherwise healthy workers or non-employees. A primary reason for consults is to address concerns about possible overexposure	 Evaluate the possibility of an adverse reproductive outcome. Group or individual counseling

municable disease, health hazards, reproductive and developmental circumstances, aftercare, and liveborn infants.

b. The three V codes used as the primary diagnoses for three of the unique visit types are V70.5, V70.3, and V68.0. For surveillance exams use code V70.5. This V code reflects health exams for defined populations. Examples of these populations are employees selected for pre-placement examination, firefighters, police, and workers in surveillance programs for specific hazards. For driver's license exams use V70.3, defined as exams for administrative purposes. When the physician issues a specific medical certification, such as a respiratory certification or certification as a food worker, use V68.0. Although V68.0 and V70.3 are V codes used as primary diagnosis, in the RTW and DE, the code serves as a secondary diagnosis. c. For the OEM practice, three V codes describe the reason for the unique occupational health visits described in Table 3-1. Table 3-2 outlines the use of these three codes for each visit type.

(1) **V68.0** are encounters for administrative purposes such as the issuance of a medical certification, rating, or statement. Use this code as the primary diagnosis for an Occupational Safety and Health Administration (OSHA) mandated certification program, such as the Respiratory Protection Program, and as the secondary diagnosis for the RTW, which results in the issuance of a fitness for duty statement.

(2) **V70.3** is applicable for an examination required for issuance of a driver's license under Department of Transportation guidelines. Also use this code for issuance of military-specific motor vehicle operating permits, including crane operator exams. Use this code as the secondary diagnosis for a disability evaluation when the physician completes an impairment rating or other insurance certificate. For the DE, the primary diagnosis is the numeric code for the injury.

(3) **V70.5** is the code used for health exams of a defined population such as groups of workers in

surveillance programs. These are workers without specific disease who require periodic screening based on OSHA-mandated exposure levels for hazardous chemicals, vision standards, or noise level. To obtain detail on the nature of the surveillance exam, the coder may use specific V codes as secondary diagnoses, see Table 3-3. The V codes in this table are for secondary diagnosis only and MAY NOT SERVE as primary diagnoses. Four of the secondary diagnoses are the V15 category, which the ICD-9CM code book titles as "Other Personal History Presenting Hazards to Health." Only radiation, (V15.3), asbestos (V15.84), hazardous body fluids (V15.85) and lead (V15.86) reflect specific hazards. For a surveillance exam, codes V72.0 and 72.1, along with the V15 codes, must be the secondary diagnoses with V70.5 as the primary code.

d. Occupational audiologists should be aware of code **V80.3**, which is part of the V80 category for Specialty Screening for neurological, eye, and ear diseases. The code **V80.3** reflects a health status exam for ear disease. General hearing exams remain as **V72.1** so routine surveillance for employees in the Hearing Conservation Program should use this code. Occupational Audiologists will use **V80.3** to reflect a visit for any special study.

Visit Type	Primary Code(s)	Secondary Code(s)	Comments or Services Provided
Return To Work	Provisional symptoms or specific diagnosis	V68.0	OEM staff may provide a wide range of services as needed to make a decision for RTW. Use the Evaluation and Management codes, see Chapter 4
Disability Evaluation	Specific diagnosis or FFD	V70.3	Two primary services are provided, see Table 3-1.
Certification	V68.0	None	Healthy worker
Driver's License Exam	V70.3	None	Healthy worker
Surveillance	V70.5	Table 3-3	Specific surveillance programs
Consult	Specific diagnosis	V70.5	Use V70.5 if no numeric code is appropriate for specific diagnosis.

Table 3-2. Recommended V codes for visits types unique to OH. This table illustrates the suggested primary and secondary V Codes for each visit type.

e. Two other V codes are sometimes applicable for RTW or consultation exams. Code V62.2 is available as a secondary code when dissatisfaction with employment is the reason for the visit. Workers and non-employees may visit the OEM practice because of their concerns about the reproductive consequences of a potential exposure. Use V26.4 to describe this visit.

f. The V code classification has codes describing exams for specific purposes. Use these codes as secondary diagnoses in order to describe the purpose of the surveillance exam. Table 3-3 lists secondary codes that may describe types of surveillance exams. For example, an exam for the Hearing Conservation Program would receive codes V70.5 to reflect the primary diagnosis as a surveillance exam, with code V72.1 to indicate the emphasis on hearing conservation. Use as many secondary codes as applicable.

Table 3-3. V codes used as secondary diagnoses to the primary code of V70.5 for medical surveillance. The table shows the V codes, title and examples of worker populations likely to be in the surveillance program.

V Code	Title of Examination	Worker Population (examples)
V72.0	Eye and vision	Sight conservation
V72.1	Ears, hearing	Hearing conservation
V15.3	Irradiation	Radiation workers
V15.84	Asbestos	Abatement workers
V15.85	Hazardous body fluids	Health care workers
V15.86	Lead	Abatement workers
V15.89	Other stressors	Other programs for stressors

g. Both the RTW and DE require a numeric ICD code as the primary diagnosis. For the RTW exam the employee may present with symptoms or a provisional diagnosis. Table 3-4 lists examples of both common or provisional diagnoses and specific diagnoses that may serve as the primary code. The OEM physician determines this employee's fitness to return to work. Use as the secondary code V68.0. For the DE, the employee presents with a specific diagnosis for which an insurance company or the Federal Employee Compensation Act (FECA) administrator has a specific insurance certification or rating percentage. For this visit type use as the secondary code V70.3.

Table 3-4. Examples of provisional symptoms whichmay prompt a fitness for duty evaluation.

Provisional symptoms as:	
Drunkenness	303.02
Hangover	305.02
Sleeping	780.54
Chest pain	786.51
Malaise, tired	780.7
Specific diagnosis as: Cocaine abuse Ankle sprain Herniated nucleus pulposus with myelopathy	304.23 845.01 722.73

The V codes in Table 3-3 are for secondary diagnosis only and MAY NOT SERVE as primary diagnoses.

h. Many visits to the OEM clinic are for both certification and surveillance exams. For these combined exams use V68.0 as the primary exam to reflect the issuance of a medical certificate and code V70.5 as the secondary code to reflect the population-based exam. The coder may then use additional secondary codes, as listed in Table 3-3, to specify the exact nature of the surveillance exam. Employees whose examination includes the issuance of a medical certificate for a motor vehicle license should receive the code V70.3 as the primary diagnosis.

3-3. SCENARIOS USING ICD-9 CODES.

Scenario 3-1	following an anterior myocard	e worker is returning to the job after a 4-week recuperation dial infarction. Although the recovery was uneventful, the dical evaluation prior to returning the employee to work on
•	Primary Dx: Secondary Dx:	410.01, Acute anterolateral myocardial infarction V68.0 Return To Work exam
Scenario 3-2	supervisor. The smell of alco	his intercity bus driver has a brief conversation with his hol prompts the supervisor to request a fitness for duty ids the driver unfit for duty because of acute intoxication.
•	Primary Dx: Secondary Dx:	303.02Drunkenness, acuteV68.0DE/FFD exam
<u>Scenario 3-3</u>	herniation of the L4 - L5 inter relieve sciatic pain and the pa	ormed a DE on a material-handling worker who suffered evertebral disk several years ago. Laminectomy failed to attent now has the diagnosis of post laminectomy syn- cal evaluation finds disability from the post laminectomy e's provider codes as 722.83.
•	Primary Dx: Secondary Dx :	722.83 Post laminectomy syndrome, lumbar regionV70.3 Disability evaluation rating
Scenario 3-4	A health care worker requests hospital's respiratory protection	medical clearance for use of a respirator as part of the on program
•	Primary Dx: Secondary Dx:	V68.0 Medical certification None
Scenario 3-5	standards, that qualifies him f	ical exam, based on the Department of Transportation or his class 2 operator's permit. During the exam the r findings that were not disqualifying
·	Primary Dx: Secondary Dx:	V70.3 Drivers's License exam Code for findings if desired
Scenario 3-6	A retired asbestos worker wh surveillance exam as required	o reports no symptoms receives an asbestos medical by his company
•	Primary Dx: Secondary Dx:	V70.5 Surveillance ExamV15.84 Asbestos type exam
Scenario 3-7	Blood pressure is initially ele	ibly upset after a dispute with his co-workers. vated but returns to normal as the patient "cools Human Relations Department and released.
	Primary Dx: Secondary Dx:	V62.2 Psychosocial maladjustment796.2 Elevated blood pressure
	code is V6281 to reflect inter	social circumstances of maladjustment. Another possible personal problems, not elsewhere classified. Note that the 796.2, is the secondary diagnosis

CHAPTER FOUR: SERVICE CODES, EVALUATION AND MANAGEMENT CPT CODES

4-1. APPROACH TO CPT CODING.

a. This chapter defines specific OEM services and matches these definitions with the most appropriate CPT. After establishing the necessity for the physician visit using ICD-9 codes, the insurer pays for physician services based on CPT codes. Remuneration depends on the CPT codes listed as item 24D on the HCFA-1500 form. Uniform reimbursement requires that OEM practices use standard definitions of the services that their physicians provide to employees. Consistency of payment also requires uniformity of coding.

b. The approach to CPT coding for OEM services starts with the reason for the visit. The two primary reasons for a visit are for injury and illness care and for occupational-unique visit types such as those listed in Chapter 3, Table 3-1. Chapter 4 examines the CPT codes that the OEM practice is most likely to use for these two categories of visits. Important to note is that the ICD-9 codes determine the exact medical necessity for an employee's visit. Emphasis in this chapter is on the common services that the OEM practice will provide rather than an exhaustive listing of all possible services with their separate CPT codes. Another important concept is that the existence of a CPT code for a specific service is no guarantee of reimbursement for that service.

4-2. SERVICES FOR I/I CARE.

a. Practices that provide I/I care use the same evaluation and management (E/M) codes as other primary care clinics. CPT coding permits five different levels of E/M codes, each representing a different intensity of care. The provider selects the appropriate level of the E/M code based on the complexity of the history, examination, and medical decision making. These three components are the key factors in determining the level of complexity of the office visit. Table 4-1 lists the key factors in order of increasing complexity. Visits associated with complex factors are of higher level for E/M coding than simple visits. Time spent with the patient is a contributing factor that IS NOT used as a primary determinator for the level of service. b. The second division of the E/M codes is between a new and an established patient. By definition from the American Medical Association (AMA), a new patient is one who has not received any professional services from the physician or another physician in the same group within the past 3 years (Current Procedural Terminology, fourth edition, AMA -1997). The Health Care Financing Administration adheres to this definition in reimbursement for Medicare patients. In clinical medicine, this definition emphasizes recognition of a new patient visit only when the practice has not had contact with that patient for at least 3 years. A new patient means a new medical record.

 Table 4-1. Key factors, listed in order of increasing complexity, that determine the level of the E/M Service.

History and Examination	Level of Complexity
Problem focused	Low
Extended problem focused	Low/intermediate
Detailed	Intermediate
Comprehensive	High
Medical Decision Making	
Limited number of management options	Low
Complex medical record, tests,	
or other information to be analyzed	Intermediate
Specific risk of complications.	High
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c. The five levels of E/M codes for OEM practices providing I/I care are 99201 to 99205 for new patients and 99211 to 99215 for established patients. Table 4-2 outlines those key factors identified in Table 4-1 that must be met for assignment to each of the five levels of care. For primary care clinics, experienced coders have noted that 50% of the E/M codes should be level 3, with the rest divided between levels 2 and level 4 (Medical Economics, "The 80/20 Rule of CPT Coding," November 25, 1996, 163 - 164). Practical experience in a military OEM practice shows that very few times do providers use codes beyond level 3.

4-3. CODING AVAILABLE FOR USE BY TECHNICIANS.

a. The E/M codes are for use by credentialed providers only. Only recently has HCFA redefined code 99211 for use by technicians. The HCFA strictly enforces the use of this code when auditing the HCFA-1500 forms for medical reimbursement submitted by private medical offices. The Medicare programs pays only for the services provided by physicians.

b. In the military a credentialed provider includes not only physicians, but anyone else who can order services through the Composite Health Care System (CHCS). Thus audiologists, physician assistants, nurse practitioners, and social workers can use the full scope of the E/M codes. Other providers can also use all the codes as long as a supervising physician completes the back of the encounter form. Unsupervised occupational health technicians working in their assigned duties may use only code 99211 for the services they provide to patients.

TABLE 4-2. Key factors that must be met for assignment to each of the five levels of code.

Level of Complexity		1	2	3	4	5
	Minimal	Problem Focused	Expanded	Detailed	Comprehensive	Com High
New Patient		99201	99202	99203	99204	99205
Established Patient	99211	99212	99213	99214	99215	99215
Consultation		99241	99242	99243	99244	99245
History	Nurse's assessment	Chief complaint; brief history of present illness history	Chief complaint; brief history of present illness past/family and social history	Extended history of present illness; pertinent past past/family and social history	Extended history of present illness; complete	Extended history of present illness; complete
Examinations	Does not require presence of physician	One area of the body	Problem pertinent area and system review	More extrinsic examination	Complete single system or multi- system review	Major system review or multi- system review
Severity of problem	Minimal	Self-limited	Low to moderate	Moderate	Moderate to high	Moderate to high
Diagnosis	Supervised	Minimal (one)	Limited	Multiple	Multiple	Extensive
Complexity of data to review		Minimal or none	Limited	Moderate	Extensive	Extensive
Time with patient and/or family	5 minutes	10 min (new) 10 min (est) 15 min (consult)	20 min (new) 15 min (est) 30 min (consult)	30 min (new) 25 min (est) 40 min (con)	45 min (new) 25 Min (est) 60 min (con)	60 min (new) 40 min (est) 80 min (consult)

4-4. CPT CODES AND RBRVS.

a. In 1992 the HCFA, which administers Medicare, transitioned physician payments from a uniform, customary, and reasonable payment method to a Resource Based Relative Value Scale (RBRVS). Each CPT code has a RBRVS, which is an assigned value composed of the physician's work (54%), practice cost (41%), and malpractice expense (5%). The RBRVS for the physician work component varies with each CPT code, while the other components are uniform within a specified HCFA region. Table 4-3 shows the physician work component for the Outpatient Evaluation and Management Codes. Under Medicare, HCFA does not pay for preventive medicine service, so the RBRVS does not apply. b. Every year the U.S. Congress establishes the conversion rate, which converts the RBRVS work units into monetary reimbursement for the provider. In 1997 the conversion factor for a primary care practice was \$35.76 per work unit. Separate conversion factors are set for surgical services (\$40.96) and non-surgical services (\$33.84). In 1994 the primary care and surgical services conversion factors were \$33.72 and \$35.16, respectively. The CPT codes that the practice places on the HCFA -1500, or OWCP-1500, translate directly into the reimbursement received from HCFA. Most private insurers also use the HCFA-1500 and a similar RBRVS for provider reimbursement.

TABLE 4-3. RBRVS for the physician work component of outpatient evaluation and management codes.

Description	Code	<u>RBRVS</u>
New patient, problem focused	99201	0.38
New patient, expanded	99202	0.75
New patient detail	99203	1.14
New patient, comprehensive	99204	1.17
New patient, comprehensive, high	99205	2.28
Examination by technician	99211	0.17
Established patient, expanded	99212	0.38
Established patient, detailed	99213	0.55
Established patient, comprehensive	99214	0.94
Established patient, comprehensive, high	99215	1.51

4-5. SCENARIOS USING E/M CODES. Providers and coders may review the scenarios listed below to better appreciate the applicability of the office based codes. Use these scenarios to guide selection of CPT codes

Scenario	Recommended Code	
Initial office visit for a contusion of a finger.	99201	Scenario 4-1
Employee needs a medication refill because her physician is out of town.	99201	• <u>Scenario 4-2</u>
Housekeeper presents with a rash after doing extensive wet work.	99201	• <u>Scenario 4-3</u>
Initial evaluation of an older employee with a significant threshold shift where both noise-induced hearing loss and presbycusis are diagnoses.	99202	• <u>Scenario 4-4</u> •
Initial office visit for an employee with a likely allergic skin reaction to a known allergen at work.	99202	• <u>Scenario 4-5</u> •
Initial evaluation of a 48-year-old worker with low back pain radiating to the leg.	99203	• <u>Scenario 4-6</u>
Initial evaluation of a long-time worker exposed to chromium, who now presents with nasal discharge, blood, and sometimes obstruction. Detailed exam includes use of topical anesthesia.	99203	• <u>Scenario 4-7</u> •
Initial evaluation of a worker who noted painless blood per rectum associated with bowel movement. Worker has had multiple positions at the industrial facility.	99203	• <u>Scenario 4-8</u> •

		Scenario	Recommended Code
<u>Scenario 4-9</u>	• • •	Return-to-work evaluation of an employee who received care from a private provider and has completed treatment. Employee saw the Navy's provider before seeking care with a nongovernment physician.	99212
<u>Scenario 4-10</u>	• •	Physician involved in a supervised drug screen or a worker previously counseled on risks of drug use.	99212
<u>Scenario 4-11</u>	•	Office visit of a female worker for a blood pressure check reviewed by the physician.	99212
<u>Scenario 4-12</u>	• • •	Office visit for a worker previously treated by a local physician for a cold who has symptoms of sore throat and fever during work shift.	99212
<u>Scenario 4-13</u>	• • •	Pesticide application seen yesterday for skin itching, who now returns with eruptions on both arms from poison ivy.	99213
<u>Scenario 4-14</u>	• · · · · · · · · · · · · · · · · · · ·	Office visit for a 60-year-old female treated earlier for ankle sprain at a Government orthopedic surgery department who returns to the occupational physician for followup care.	99213
<u>Scenario 4-15</u>	•	Office visit for a patient previously seen for INH (isoniazid) induced hepatitis, but is currently stable.	99213
<u>Scenario 4-16</u>	• • •	Agitated employee seen frequently in occupational health clinic with hypertension after argument with his supervisor.	99213
<u>Scenario 4-17</u>	•	A patient fails to show for a scheduled office visit.	no CPT code (non-billable)
<u>Scenario 4-18</u>	• • •	The Occupational Health technician completes a spirometry test on an employee as part of a medical surveillance exam.	99211 (Technician) 94010 (Spirometry)

CHAPTER FIVE: SERVICE CODES, SPECIAL USE CPT CODES

5-1. E/M CODES FOR THE OCCUPATIONAL AUDIOLOGIST.

a. Non-physician providers, such as the credentialed audiologist, also use the E/M codes as outlined in Table 4-2. Selecting the appropriate level of services requires knowledge about the complexity of the history, physical exam and medical decision making as show in Table 4-1. Because the audiologist's exams are very specific, the services they provide can be associated with specific levels of E/M codes. Listed below in Table 5-1 are the recommended E/M code for the audiologist's services.

TABLE 5-1. Recommended Evaluation and Management Codes for Use by the Occupational Audiologist.

99211 -Examination by the Technician

- 1) Annual or follow-up audiogram
- 2) Baseline audiogram
- 3) Hearing protection evaluation and/or fitting
- 4) Hearing conservation counseling/ training

99201 - New Patient or 99212 Established Patient

- 1) Masked audiogram
- 2) Ear mold impression
- 3) Cerumen removal

99202 - New Patient or 99213 for Second Opinion
1) Initial evaluation of employee with a confirmed Significant Threshold Shift (STS) due to a cochlear hearing loss, conductive loss, or a mixed sensory and conductive type loss. The differential diagnosis includes noise induced hearing loss, presbycusis, pathology or disease, trauma, hereditary conditions, or a combination of these diagnoses

2) Fitness For Duty or Certification for a Particular Job Service. The examination may include audiometric testing with and/ or without hearing aids

99203 - New Patient or 99214 for Second Opinion. Initial evaluation of the employee with a positive STS, including examination for retrocochelar pathology, central hearing loss, or non-organic hearing loss. The complexity of both the examination and management options require a high level E/M code. b. The difference between the 99202/99213 level and the 99203/99214 level of service is not just the location of the pathology. Services required for diagnosis and treatment of centrally located lesions are more complex than for simple conductive hearing loss. The lower level service codes, 99202/99213, involve pathology related to sensory or conductive loss which requires less complex decision making than a hearing loss due to pathology from central or neural diseases. Higher level codes, 99203/99214, reflect this increased complexity of decision making.

5-2. UNIQUE SERVICES FOR THE OEM PRACTICE.

a. In addition to I/I care the OEM practice provides unique services that fall into three separate CPT coding categories. The coding categories and their application are as follows:

(1) Preventive Medicine Services (99381-99397). Like the outpatient service codes these services differ for new and established patients.

(2) Preventive Medicine Counseling for Individuals (99401-99404) and for groups (99411-99412). Time is a major differentiator for these groups.

(3) Special Evaluations and Conferences such as a disability exam (994455/6), walk through (99362) and record review (99358/9).

b. Tables 5-2 through 5-5 describe these codes as applicable to the services provided by the OEM practice. The E/M codes for Preventive Medicine represent routine examination performed in **the absence of** patient complaints or symptoms. Preventive Medicine codes for new (99381 - 99387) and established (99391 - 99395) patients vary by age. In OEM practices, a new patient is one who presents for their first surveillance or certification exam. Like the new patient rule for outpatient services, an established patient is one who returns for a repeat surveillance or certification exam within 3 years. For example, recording the first exam for a 35-year-old employee's driver's license uses code 99385. Medical clearance for reissuance of the license in 2 years Medical Surveillance Examinations (V70.5) are considered preventive in nature (i.e., absence of patient complaints) and are coded as Preventive Medicine Services and are not differentiated by the length of the visit. uses code 99396. Table 5-2 presents the CPT codes for Preventive Medicine Services. Note that if the employee presents with a specific complaint during the medical surveillance exam, then the coder must **add** the appropriate E/M code for outpatient services.

TABLE 5-2. Preventive Medicine Services. Listed below are the CPT codes for surveillance and certification exams. Note that each code identifies a specific age group.

Initial or Repeat Exam	СРТ	Age
New Exam	99385	18-39
New Exam	99386	40 - 64
New Exam	99387	64 -
Repeat Exam	99395	18-39
Repeat Exam	99396	40 - 64
Repeat Exam	99397	64-

c. A frequent service of OEM clinics is counseling individuals and groups of patients. As an example of this service, consider an industrial operation that inadvertently exposes an individual employee or group of employees or non-employees to overexposure of toxins, fumes, or physical hazards. The OEM staff must counsel these individuals or groups on the health effects of these overexposures. For these services, use the codes of Preventive Medicine Individual Counseling (99401 - 99404) and Preventive Medicine Group Counseling (99411 and 99412). These codes differ by the amount of time that the provider spends with the individual or group. Table 5.3 outlines the counseling services as applicable to OEM practice. Providers should use these codes for counseling patient rather than the Preventive Medicine Administrative and Interpretation code, 99420.

TABLE 5-3. Counseling Services. Listed below are the CPT codes appropriate for OEM services related to counseling.

Counseling Type	CPT Code	Time Spent
Individual	99401	15 minutes
Individual	99402	30 minutes
Individual	99403	45 minutes
Group	99411	30 minutes
Group	99412	60 minutes

d. A final group of CPT codes applicable to specific services that the OEM practice may provide are those related to disability exams, walk-through evaluations, and record review. Table 5-4 summaries the CPT codes to use for these sets of services. Clinics may use code 99455 for a basic disability evaluation of one of their patients. Disability examinations by OEM practices OTHER THAN the treating physician use CPT code 99456. Worksite familiarization and evaluation, the "Walk Through," are common services that OEM professionals use to evaluate patient interactions with tools and industrial processes. The Walk Through evaluation is a team conference so codes 99361/2 are applicable. See paragraph 5-3, Case Management Services, for a description of team conferences.

e. Provision of OEM services frequently requires records review of documents such as job descriptions, medical records, and disability claims. This records review may not involve direct, face-toface contact with the patient. In these circumstances code 99358 is used to report the first hour of prolonged records review which may occur before or after a direct patient encounter. Coders may use 99358 in addition to any outpatient service code or disability evaluation which involves direct patient contact. For a prolonged records review the recommended code is 99358, with code 99359 for each additional halfhour.

TABLE 5-4 .	Evaluation and management codes for
assorted OEN	A services

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Table 5-5. CPT codes for case management. Both telephone consultation and team conferences are applicable to case management.

Code

Service	Code	Description
Walk through	99362	Medical conference of 1 hour
Disability Exam	99455	Basic disability exam by treating physician
Disability Exam	99456	Disability exam by other than treating physician
Record Review, no patient contact	99358	Prolonged evaluation and management service, first hour
Record Reviews	99359	For each additional half hour of review

	Service	Code	Description
	Team conference	99361	Medical conference less than 30 minutes
	Team conference	99362	Medical conference of about 60 minutes
t	Telephone call	99371	Intermediate complexity such as initiating therapy, discussing results, or coordinating medical management for a new problem with an established patient
	Telephone call	99373	Complex/lengthy, such as a lengthy counseling session, prolonged discussion with family members, lengthy communication necessary to coordinate complex services.

5-3. CASE MANAGEMENT SER-VICES.

a. A major impact of the managed care initiatives on OEM practices is the importance of case management of the disabled worker. For this service the OEM practices provide direct care of a patient as well as the coordination and access to other health care services that the injured or ill employee may need. For case management two sets of CPT codes are applicable. One is the code for team conferences and the other is for telephone calls. Two codes for team conferences are 99361 and 99362, reflecting different lengths of time for a conference with an interdisciplinary team of health professionals. Note that the medical conference codes are also applicable to the walk through evaluation that OEM professional performs in the work site.

b. OEM providers typically use the telephone to deliver consultation services to other providers, patients, and administrators. In 1995, Medicare started reimbursing doctors for telephone care under a new CPT code for case management of hospice and home health care (MEDICAL ECONOMICS, "Should You Charge for Telephone Medicine?", 28 May 1996, 149). Codes 99371, 99372, and 99373 classify a call as simple, intermediate or complex. The terms refer to the complexity of the call and not its duration. Physicians must make these calls to the patient for a simple call or to nurses, therapists, or other health professionals for the more complex calls. Table 5-5 outlines the codes used for telephone consultation and team conferences, both applicable in case management. Along with these codes the OEM practice may use the CPT code for records review for complex case management.

c. Another set of CPT codes reflects Care Plan Services in which the OEM staff provides supervisor roles only. These codes are 99375 and 99376. OEM practices may review these codes if they provide oversight services.

5-4. CODING FOR VACCINATION

SERVICES. Vaccinations are becoming an increasingly important aspect of care in the Occupational Health Clinic. Specific occupations such as health care workers, police, firefighters, and public works employees have specific vaccination requirements. Advances in immunology are resulting in new vaccines, different combinations of existing vaccine, and changes in vaccination schedules. Both ICD-9 and CPT Codes are available to recognize these vaccinations. Table 5-6 indicates the appropriate codes, as of 1999, for vaccination commonly used in the Occupational Health Clinic.

<u>CPT</u>	IMMUNIZATION	<u>ICD-9</u>
90581	Anthrax	V03.89
90725	Cholera	V03.0
90700	DtaP	V06.8
90701	DTP	V06.1
90632	Hepatitis A, adult	V05.3
90745	Hepatitis B adolescent/high-risk	V05.3
90746	Hepatitis B adult	V05.3
90371	Hepatitis B Immune Globulin	V07.2
90748	Hepatitis B/Hb	V07.2 V06.8
90645	Hib (HBOC)	V00.8 V03.81
90646	Hib (PRP-D, for booster use only)	V03.81 V03.81
90647	Hib (PRP-OMP)	V03.81 V03.81
90648	Hib (PRP-T)	V03.81 V03.81
90281	IG	V05.81 V07.2
90657	Influenza (split-virus, 6-35 months)	V04.8
90658	Influenza (split-virus, ≥ 3 years)	V04.8
90659	Influenza (whole –virus)	V04.8
90660	Influenza (nasal formulation)	V04.8
90735	Japanese encephalitis	V05.0
90665	Lyme disease	V03.9
90705	Measles, monovalent	V04.2
90707	MMR	V06.4
90710	MMR/Varicella	V06.8
90733	Meningococcal	V03.9
90727	Plague	V03.3
90732	Pneumococcal	V03.82
90713	Polio, injectable	V04.0
90712	Polio, oral	V04.0
86580	PPD	V74.1
90676	Rabies, ID	V04.5
90675	Rabies, IM	V04.5
90375 90706	Rabies Immune Globulin Rubella	V07.2 V04.3
90708	Tetanus-diphtheria	V04.3 V06.5
90703	Tetanus toxoid	V00.5 V03.7
90389	Tetanus Immune Globulin	V03.7 V07.2
90692	Typhoid, injectable	V03.1
90690	Typhoid, oral	V03.1
90716	Varicella	V05.4
90396	Varicella Zoster Immune Globulin	V07.2
90717	Yellow fever	V04.4

TABLE 5-6. Vaccination Services – ICD-9, CPT Codes.

CHAPTER SIX: MEDICAL TEMPLATES FOR THE OCCUPATIONAL HEALTH CLINIC

6-1. STANDARD ENCOUNTER FORMS FOR ADS.

a. Occupational Health Clinics use the Encounter Form generated from ADS to record the ICD-9 and CPT codes for each visit (see Ambulatory Encounter Summary, next page). Military hospitals have conducted seminars to instruct their clinics on the construction of these forms. The emphasis of these training sessions has been on the construction of an Encounter Form unique to the needs of the clinic. Each Occupational Health Clinic has interpreted the ICD-9 and CPT codes based on its hospital's training. Since Medicare does not reimburse civilian providers for care provided in an industrial setting, HCFA has no guidance on coding for occupational illness and disease. The result is vastly different Encounter Forms constructed by each clinic that provides occupational health services.

b. The purpose of this chapter is to provide standard Encounter Forms that any Occupational Health Clinic can implement with few changes. While clinics often incorrectly refer to the ADS Encounter Forms as "Bubble Sheets," the correct term used by private practices and practice management firms is Encounter Forms. In ADS the Encounter Forms originate from a template which each hospital constructs for their clinics. This chapter classified clinics in terms of their predominate services. Some clinics provide primarily surveillance exams while other deliver primarily preventive services. Large clinics at industrial facilities provide acute care to the military and worker populations. For each of these clinics, this chapter presents a standardized template. The expectation is that clinic managers will change their existing ADS templates to match the standards presented in this chapter. The benefit to the military is uniformity in reporting codes between clinics and different services.

6-2. CLINICS PROVIDING SURVEIL-LANCES EXAMS.

a. Clinics that provide surveillance exams emphasize compliance with OSHA statues, medical surveillance for specific hazards, and return to work evaluations. Exams of this type use the V codes. Primary V codes to describe diagnoses are V68.0, and V70.3, and V70.5. In addition to these V codes, six V codes identify specific hazards. These six codes are secondary diagnoses to V70.5. Refer to Chapter 3, especially Tables 3-2 and 3-3. The diagnosis section of the ADS must use these codes.

b. For the EM code clinics that provide this service, use the Preventive Medicine Service codes 99385 to 99397; note that these codes depend ONLY on age of the patient and status as a new or established patient. Also available are E/M codes for counseling services. Chapter 5 explains these service codes and Tables 5-2 through 5-4 summarize their use.

c. The encounter form, displayed in Table 6.1 below, represents the mandatory EM codes and ICD-9CM codes. Note that the text describing the mandatory diagnosis (ICD-9) codes start with an X for the primary diagnosis and Y for secondary diagnosis. ADS sort the text field alphabetically. Using the X and Y prefixes assures that these diagnosis codes appear as a group at the bottom of the Encounter Form labeled diagnosis. A physician can easily locate this group of codes. Clinics may use unused space in the diagnosis column for numeric ICD codes of their selection.

d. The mandatory E/M Codes for use by clinics providing surveillance exams are those from Tables 5-2 through 5-4.

TABLE 6-1. Mandatory Portion of ICD-9 and E/M Codes for Use by Clinics Providing Surveillance Exams.

ICD-9 Dia	agnoses	Evaluation and Management
V68.0	X: Certification	99385 Worker New 18-39 yrs
V70.3	X: Motor Vehicle	99386 Worker Exam New 40-60 yrs
V70.5	X: Surveillance	99395 Worker Exam Est. 18-39 yrs
V62.2	X: Worker Dissatisfaction	99396 Worker Exam Est. 40-60 yrs
V26.4	X: Reproductive Concerns	99403 Preventive Counsel, Indiv. 99412 Preventive Counsel Group
V15.3	Y: Radiation Exam	99362 Walk Through
V15.84	Y: Asbestos Exam Nontreating	99456 Disability Exam,
V15.85	Y: Hazardous Body Fluid	
V15.86	Y: Lead Exam	
V72.0	Y: Vision/Laser	
V72.1	Y: Hearing Conserv	vation

"X" and "Y" should be used to assist in sorting Occupational Health Clinic Visits alphabetically.

6-3. TREATING CLINICS PROVID-ING ACUTE CARE, RETURN TO DUTY AND SURVEILLANCE EXAMS.

a. Clinics that provide acute care as well as surveillance exams offer a full range of occupational and environmental services. For surveillance exams these clinics should use the same codes as shown in Table 6-1. For acute care these full service clinics will use codes very similar to those used in the Emergency Department and Family Practice Clinic. To help with selection of ICD-9 diagnosis codes, refer to Appendices A and B. These two appendices contain the most common diagnoses seen in clinics that serve military personnel and civilian workers. Full-service clinics should use codes V68.0 and V70.3, respectively, as secondary codes. For both Return to Work and Disability Evaluations the primary code is the specific diagnosis accounting for the injury.

b. Low back pain is a major illness affecting the working population. Working together the Veteran's Administration (VA) and Department of Defense (DOD) have endorsed common guidelines for treatment of this illness. The Army has documented these guidelines as MEDCOM Form 695-R (Medical Record - Low Back Pain). Because of the variation in low back pain and the frequency of this diagnosis, coding for this illness is mandatory. Four different codes comprise this illness for low back pain. Table 6-2 shows the mandatory ICD-9 diagnosis and E/M code which a full service occupational/environmental clinic must use.

c. The E/M codes are the same as for surveillance clinics with the addition of the outpatient codes. Because clinics are unlikely to provide comprehensive services, the mandatory outpatient codes extend only to level 3 (see Table 4-2). **TABLE 6-2.** Mandatory portion of ICD-9CM and E/M Codes for use by fullservice Occupational Environmental Clinics. These clinics provide acute care as well as surveillance exams.

<u>ICD-9 I</u>	Diagnosis	<u>E</u> v	Evaluation and Management		
724.2	Acute Low Back Pain	99201	New Patient, problem focused		
725.3	Acute Sciatica	99202	New Patient, expanded		
724.9 729.5	Chronic Low Back Pain Chronic Sciatica/Limb Pain	99203	New Patient, detailed		
		99211	Exam by Technician		
		99212	Established patient, Expanded		
		99213	Established patient, detailed		
V68.0	X: Certification	99385	Worker New 18 20 two		
V08.0 V70.3	X: Motor Vehicle	99385	Worker New 18-39 yrs		
V70.5	X: Surveillance	99380	Worker Exam New 40-60 yrs		
V 70.3 V62.2	X: Worker Dissatisfaction	99393 99396	Worker Exam Est. 18-39 yrs Worker Exam Est. 40-60 yrs		
V02.2 V26.4	X: Reproductive Concerns	99390	Preventive Counsel, Indiv.		
V 20.4	A. Reproductive Concerns	99403	Preventive Counsel Group		
V15.3	Y: Radiation Exam	99362	Walk Through		
V15.84	Y: Asbestos Exam	99456	Disability Exam, Nontreating		
V15.85	Y: Hazardous Body Fluid	JJ 4 50	Disability Exam, Wohreating		
V15.86	Y: Lead Exam				
V72.0	Y: Vision/Laser				
V72.1	Y: Hearing Conservation				

Figure 6-1 Example of ADS Encounter Form for Full Service Occupational Health Clinic*

mmm	0000000000	And	no	mm	200000000	Sol.	Sor	00000000	10000
000	000000000000000000000000000000000000000	000	200	001		101	206	000000000000000000000000000000000000000	00000
Income in the local division of the		000	000					PROCEDURES	00000
and the second se	-CM DIAGNOSES	0000	s vars vars		LUATION AND MANAGEMENT NEW PT, FOCUSED	(E)	92552	AUDIOMETRY PURE TONE	(D) (D) (D) (D)
	ABRASIONS FINGERS LACERAT	(D (2) (3		99202	NEW PT EXPANDED	CED	92552	CHEST XRAY FRONTAL/LAT	(D (D (D)
	ALLERGIC RHINITIS UNSP ASTHMA UNSP	(D (2) (3		99203	NEW PT DETAIL	œ	93005	EKG W/O INTERPRETATION	0000
		0000		99203		(2)	85021		0000
000.0	BEE STING/SPIDER/TICK	0000		99212	EST PT EXAM BY TECH	Œ	92015	HEMOGRAM AUTOMATED REFRACTION	000
	BURN UNSP UPPER ARM	ගා ශා ශ		99212	EST PT F/U EXPANDED EST PT F/U DETAIL	CED	92015	SPECIMEN HANDLING	(D (2) (D)
	BURN UNSP WRIST & HAND	00000			RECORD REVIEW	Œ	94010	SPIROMETRY	(D) (D) (D)
	CARPAL TUNNEL SYNDROME	0000		99358 99362	MEDICAL TEAM CONFERENCE	œ	81000	UA WITH MICROSCOPY	000
	CHEST PAIN UNSP CONJUNCTIVITIS ACUTE UNSP	0000		99362	TELEPHONE CONSULT	3	92019	VISION SCRN/COL/DEP PER	000
	CONTACT DERMATIT SOLVENTS	DCDC		99385	WORKER EXAM NEW 18/39YRS		92081	VISUAL FIELD EXAM	(1)(2)(1)
	CONTUSION HAND	000		99386	WORKER EXAM NEW 18/391RS WORKER EXAM NEW 40/64YRS	Œ	02001	VISCIE I IEED EANNI	023
	CONTUSION WRIST	0000		99386	WORKER EXAM NEW 40/64 IRS WORKER EXAM EST 19/39YRS	Œ			(D) (D) (D)
		(D (D (J		99396	WORKER EXAM EST 19/391RS WORKER EXAM EXT 40/64YRS	Œ			000
100.2	COUGH	0000		99403	PREVENTIVE CONSEL INDIV	Œ			000
	DIABETES MELLITUS NIDDM DIZZINESS AND GIDDINESS	000			PREVENTIVE CONSEL INDIV PREVENTIVE CONSEL GROUP	Œ			0000
	ELEVATED BLOOD PRESSURE	0000		99412 99362	WALK THROUGH	00			0000
	EPISTAXIS	(D (D) (3		99362 99456	DISABILITY EXAMINATION	Ð			(T) (D) (D)
10111	FB CORNEAL	CD CD CI		55450	DISABILITI LAAMINATION	(E)			(D (D (3)
000.0	FEVER	0000							00000
100.0	FRACTURE FINGER CLOSED	00000		DISE	POSITION (Unless Inpatient)		1000		000000
	FRACTURE TOE CLOSED	0000		and the second second	Released without limitations				000
		00000			Released w/work/duty limitations	s			000
	HEADACHE HEARTBURN	0000			Sick at home/quarters				0000
	HERNIA INGUINAL UNSP	(1) (2) (1			Immediate referral	0	10.00		0000
	HYPERTENSION ESSENTIAL	000		1.	Left without being seen				0000
	INSPECT BITE UPR ARM/SHLDR	00000		12.20	Left against medical advice				00000
	LATERAL EPICONDYLITIS	0000		1 22 3	Admitted				(1) (2) (3)
	LOWBACK PAIN/ACUTE	(1) (2) (3		1 5 70 M	Expired				(D) (D) (D)
	LOWBACK PAIN/CHRONIC	0000		Concession of the local division of the loca	INISTRATIVE (Optional)	1975			നത്ത
	MIGRAINE COMMON	0000	(A) (U)		Consultation requested		1999		(1)(2)(3)
	NIHL SENSORIAL	000			Referred to another provider				000
	OVERUSE SYN MYOSITIS	0000	0.00	0	Convalescent leave				0000
	PATELLAR PAIN SYN/SPRAIN	000	(D) (D) (D)	0	Medical board				000
	PHARYNGITIS ACUTE	00000	(A) (U)	01	Medical hold		1		000
	SCIATICA/ACUTE	0000	0.00	APP	OINTMENT STATUS				000
	SCIATIC/LIMB PAIN/CHRONIC	30203	0. (4) (8)	0,	Appt. Sched. O Sick-call				(I) (I) (I)
	SPRAIN ANKLE	0000			Walk-in 🔷 Tele. Consu	ilt			0000
	SPRAIN HIP	00000	o do cu	0	Cancelled O No-show				(1) (2) (2)
	SPRAIN SHOLDER	0000	000	1	by Patient ' .	1	FOR	CLINIC USE ONLY	
	SPRAIN THORACIC	00 20 0	(4) (D)	0	Cancelled				(A) (B) (C) (D)
	SPRAIN WRIST CARPAL JOINT	(D) (2) (3			by Facility				(A) (B) (C) (D)
	SPRAIN/STRAIN CERVICAL	00000	(A) (D)	01	Inpatient O APV				(A) (B) (C) (D)
	SPRAIN/STRAIN KNEE/LEG	00000		00	Mark here if you have address				
	STRESS	0000		1	changes or corrections. Pleas make corrections on the back				(A) (B) (C) (D)
	URI	0000			this form.	01			
	UTI UNSP	0000							
	X: DISSATISFY WITH JOB	003							
	X : CERTIFICATION	023	the second second	1 8					
	X: MED SURV CERT	0000			hose codes fr	on	n ta	hle 6.2 are h	hahlo
	X: MOTOR VEHICLE	(1) (2) (3		1	nose cours II	011	ii ta		onucu
	X: REPRODUCTIVE CONSULT	DOC		an	d should be u	60	dh	v all OHCe	other
	Y: EYE & VISION EXAM	(D (2) (3		an	u shoulu be u	36	u D	y an ones,	other
	Y: RADIATION EXAM	(D (D) (000	les should be	er	hooi	fic to the	
	Y: ASBESTOS EXAM	DQG		CUL	ies should be	P	Jeci	ne to the	
	Y: HAZARDOUS BODY FLUID	0000		no	nulation conv	bo			
V15.85	1. HAZARDOUS BODI FLUID								
	Y: LEAD EXAM	00 (2) (2		ho	pulation serve	eu	•		

APPENDIX A: COMMON DIAGNOSES

In this appendix the Navy's 22 morbidity classes serve as the major groupings for an alphabetic list of common diagnoses. Where appropriate, the appendix suggests the use of E codes to supplement the ICD-9 code. Common diseases and injuries with their ICD-9 code originate from a study of consecutive diagnoses seen within Sick Call at the Naval Hospital Portsmouth and the Norfolk Naval Shipyard. [reference: Allen, JW, Blumling R (1996). "Variations in Practice Patterns Within Sick Call": NAVY MEDICINE, Jan/Feb 96, pages 17 - 21 (part 1) and Mar/Apr 96, pages 3 - 6 (part 2)].

1. Audiology/H	earing	
	cerumen plug	380.4
	noise induced hearing loss secondary workplace	
	(sensorineural)	389.1 (E928.1)
2. Blood Disea	Se	
2. 10004 101504	needle stick injury (finger)	883.0(E920.5)
	(blood borne pathogens)	· · · ·
2 Cardiovago	low diagona	
3. Cardiovascu	mild, essential hypertension	401.9
	myocardial Infarction	410
		110
	The following fifth digit subclassification is for use with category 410:	
	0 episode of care unspecified	
	1 initial episode of care	
	2 subsequent episode of care (still less than 8 weeks old)	
	of anterialateral wall	410.0
	of other anterior wall	410.1
	of inferolateral wall	410.2
	of inferoposterio wall	410.3
	of other inferior wall	410.4
	of other lateral wall	410.5
	true posterior wall infarction subendocardial infarction	410.6 410.7
	of other specified sites	410.7
	unspecified site	410.9
	unspectice site	410.9
4. Digestive		790.0
	abdominal pain, rule out appendicitis	789.0
	(need fifth digit identifying site, e.g., LUQ, RUQ) gastroenteritis, viral	008.8
	gastroesophageal reflux disease	530.81
	hemorrhoids, internal	455.2
	external	455.5
	irritable bowel syndrome	564.1
5. Endocrinolog	gy/nutritional and metabolic diseases	
	hyperlipidemia	272.4
	diabetes mellitus (hypoglycemia)	250.90
		250.80

6. Genital System, Male	
sexually transmitted disease	V01.6
reproductive consult/evaluation	V26.4
male infertility, unspecified	606.9
7. Gynecology, Female	
prescription for Birth Control Pill	V25.01
initiation of other contraceptive device	V25.02
(fitting of diaphragm, foams, creams)	
insertion of implantable subdermal contraceptive	V25.5
dysfunctional uterine bleeding	626.8
pregnancy, declaration	
reproductive consult (E codes 860 to 869 for exposure)	V26.4
Female infertility, unspecified origin	628.9
8. Infectious and Parasitic Disease	
tuberculosis	V01.1
chickenpox	052.9
Herpes simplex, Type 1	054.9
Herpes Zoster, without mention of complications	053.9
(should code to fourth and fifth digit)	
Meningococcal Meningitis	036.0
9. Injuries and Adverse Effects	
abrasions, face, neck, scalp, no infection (sand blasting)	910.0
trunk	911.0
shoulder & upper arm	912.0
elbow, forearm & wrist	913.0
hands, excluding fingers	914.0
fingers	915.0
hips, thigh, legs, and ankle	916.0
Toes and foot	917.0
amputation, thumb, without complications	885.0
amputation, finger, without complications	886.0
bee sting	989.5
bone Contusion, unspecified site	924.9
(need to list by body part in order to code to the highest level (fifth digit)	
burns, (need to use fifth digit)	
upper limb, unspecified degree, upper limb,	
unspecified, (welders burns)	943.00
upper limb, unspecified degree, forearm	943.01
upper limb, unspecified degree, elbow	943.02
upper limb, unspecified degree, upper arm	943.03
upper limb, unspecified degree, axilla	943.04
upper limb, unspecified degree, shoulder	943.05
upper limb, unspecified degree, scapular region	943.06
upper limb, unspecified degree, multiple sites of upper limb, except wrist and hand	943.07
	743.07
face, head and neck, unspecified degree, face and head, unspecified site	941.00
face, head and neck, unspecified degree,	741.00
ear (any part	941.01
face, head and neck, unspecified degree,	74 1.01
eye (with other parts of face, head and neck)	941.02
eye (what outer parts of face, near and neek)	771.02

face, head and neck, unspecified degree, lip(s)	941.03
face, head and neck, unspecified degree, chin	941.04
face, head and neck, unspecified degree, nose (septum)	941.05
face, head and neck, unspecified degree, scalp [any part], (temple region)	941.06
face, head and neck, unspecified degree, forehead and cheek	941.07
face, head and neck, unspecified degree,	941.08
face, head and neck, unspecified degree, multiple sites [except with eye] of	2.1100
face, head, and neck	941.09
trunk unspecified degree, unspecified site	942.00
unspecified degree, breast	942.00
unspecified degree, chest wall excluding breast and nipple	942.01
	942.02
unspecified degree, abdominal wall	
unspecified degree, back [any part]	942.04
unspecified degree, genitalia	942.05
unspecified degree, other and multiple sites of trunk	942.09
wrist and hands	
unspecified degree, hand, unspecified site	944.00
unspecified degree, single digit [finger (nail)] other than thumb	944.01
unspecified degree, thumb (nail)	944.02
unspecified degree, two or more digits, not including thumb	944.03
unspecified degree, two or more digits, including thumb	944.04
unspecified degree, palm	944.05
unspecified degree, back of hand	944.06
unspecified degree, wrist	944.07
unspecified degree, multiple sites of wrist(s) and hand (s)	944.08
lower limb, unspecified degree	
lower limb [leg], unspecified site	945.00
toe (s) (nail	945.01
foot	945.02
ankle	945.03
lower leg	945.04
knee	945.05
thigh [any part]	945.06
multiple sites of lower limb(s) multiple specified sites	945.09 946.0
	2.000
extensor tendon tear (need to code to body site, 840 area) contusion	
hand	923.20
wrist	923.20
face, scalp, and neck except eye(s)	920
trunk, unspecified part	922.9
crush injury,	144.9
5 .	026.0
trunk, other specified sites	926.9 027.0
upper limb & shoulder, unspecified	927.9 816.0
fracture	816.0
finger, closed	822.0
toes, closed	826.0

	dislocation shoulder, unspecified closed finger, unspecified part, closed wrist, unspecified part, closed heat stress (Heat stroke and sunstroke)	831.00 834.00 833.3 992.0
10. Lymphatic	few patients seen	
11. Mental Disc	order	
	agoraphobia, with panic attacks alcohol withdrawal delirium claustrophobia depressive disorder, not elsewhere classified insomnia, subjective complaint manic-depressive disorders, single episode post traumatic stress, unspecified	300.21 291.0 300.29 311 307.49 296.0 308.9
12. Musculosk	eletal system carpal Tunnel Syndrome lateral Epicondylitis low Back Pain myositis, unspecified (overuse syndrome) occupational Bursitis rotator Cuff Syndrome patellar chondromalacia patellar pain syndrome sciatica	354.0 726.32 724.2 729.1 727.2 726.10 717.7 717.9 724.3
	sprained ankle, other (Achilles Tendon sprained wrist, unspecified site tenosynovitis, unspecified	845.09 842.0 727.0
13. Neoplasms	few patients seen	
14. Nervous sy	stem disease migraine headache, unspecified, without mention of intractable migraine cluster headache, without mention of intractable migraine tension headache anxiety, unspecified	346.9 346.20 307.81 300.00
15. Ocular/Opt		
	conjunctivitis (pink eye), unspecified foreign body, corneal iritis, unspecified subconjunctival hematoma	372.3 930.0 364.3 372.7
16. Otorhinola	ryngology Otitis media,	
	Acute serious Temporal mandibular joint syndrome unspecified	381.0 381.1 524.6

17. Childbirth

few patients seen

18. Respiratory system disease	
allergic rhinitis, due to pollen	477.0
asthma, unspecified type, without status asthmaticus	493.90
sinusitis	
acute, unspecified	461.9
chronic	473.9
upper respiratory tract infection, acute	
unspecified site	465.9
acute nasopharyngitis (common cold)	460
tonsillitis, acute	463
19. Signs and symptoms of ill defined conditions	
benign positional vertigo	386.11
vestibular neuritis	386.12
cough, chronic	786.2
anemia, unspecified (essential)	285.9
proteinuria	791.0
glycosuria, unspecified	791.5
elevation of transaminases or LDH, nonspecific	790.4
chest pain (unspecified)	786.5
obesity, unspecified	278.0
20. Skin and subcutaneous disease	
acne vulgaris, other/unspecified	706.1
contact Dermatitis	700.1
-from solvents	692.2
-from other chemicals	692.4
paronychia, unspecified	681.02
pityriasis Rosea	696.3
pseudofolliculitis barbae	704.8
sunburn	092.71
tinea of groin	110.3
body	110.5
scalp and beard	110.0
21 Summlan antal Classification	
21. Supplemental Classification	1705
medical surveillance exams	V70.5
job certification exams	V68.0
22. Urinary System Diseases	
urinary tract infection, unspecified	599.0
cystitis	595.9
urethritis	597.80
kidney stone	592.0

APPENDIX B: COMMON FAMILY PRACTICE DIAGNOSES

Common diagnoses seen in a family practice clinic. from: Rakel RE.[1996] SAUNDERS MANUAL OF MEDICAL PRACTICE. W.B. Saunders Company.

Α

Acne	
Alcoholism, other and unspecified	
Alopecia, unspecified	
Altered Mental State, other general	
symptoms	
Altitude Sickness	
Alzheimer's Disease	
Amebiasis unspecified	
Amenorrhea	
Anaphylaxis	
Anemia, Megaloblastic	
Anemia, Sickle Cell	
Angina	
Angioedema	
Animal Bites	
Ankle Fractures	
Anorexia Nervosa	
Anuria	
Aortic Dissection	
Appendicitis, unqualified	541
Arrhythmias	
Arthritis, Rheumatoid	
Ascaris Infection	127.0
Ascites	
Asthma	
Atelectasis	518.0
Atrial Fibrillation	427.31

B

Destaurania 7007
Bacteremia790.7
Basal Cell Carcinoma
Bell's Palsy
Bladder Cancer
Blastomycosis
Bleeding Disorders
Blood Transfusion, Adverse Reaction to
Bowel Obstruction
(small and large bowel) Adrenal
Brain Tumor, unspecified
Brain Tumor, unspecified
Breast Cancer unspecified 174.9
Breast Cancer unspecified
Breast Cancer unspecified

С	
Calluses or corns	
Cancer Screening, unspecified	V76.9
Cardiac Arrest	
Cardiomyopathy	
Carpal Tunnel Syndrome	
Cellulitis, Orbital	
Cellulitis, unspecified	
Cervical Cancer	
Cervicitis	616.0
Cheilitis	
Cheilitis, Angular	
Cholecystitis, NOS	575.1
Chronic Fatigue Syndrome	
Chronic Obstructive Pulm Disease	496
Cirrhosis, without mention of alcohol .	571.5
Claudication	
Coagulation	
Coccidioidomycosis, unspecified	
Colorectal Cancer	153.9
Condyloma Acuminata	
Congestive Heart Failure	
Conjunctivitis	372.30
Constipation	
Contraception	
Birth Control Pills	V25.94
Implantable subdermal,	
Intrauterine	V25.42
Corneal Ulceration	
Costochondritis	
Crohn's Disease	555.9
Croup	
Cushing's Syndrome/Disease	

D

Decubitus Ulcer	
Deep Venous Thrombosis	
Dementia	
Depression, NOS	
Dermatitis, Atopic	
Dermatitis, Contact, NOS	
Dermatitis, Seborrheic	690
Diabetes Mellitus, Type I	
Diabetes Mellitus, Type II	
Diarrhea, Acute	
Diarrhea, Chronic	
Diarrhea. Infectious	

Disseminated Intravascular	
Diverticulitis	562.11
Domestic Violence	
Drug Allergy	
Dysfunctional Uterine Bleeding	
Dyslexia	
Dysmenorrhea	
Dysuria	
•	

E

Earache	388.70
Ectopic Pregnancy	
Edema, Leg	
Elbow Dislocations	832.00
Endocarditis	424.90
Endometrial Cancer	
Endometriosis	617.9
Endometritis	615.9
Enuresis	
Epicondylitis	
Epidymitis	604.90
Epistaxis	
Erysipelas	035
Erythroplasia, unspecified,	

F

Fecal Impaction	560.30
Fetal Alcohol Syndrome	760.71
Fetal Lung Immaturity	
Fever and Chills	
Fever of Unknown Origin (FUO)	
Fibrocystic Disease of the Breast	
Finger Dislocations	834.00
Finger Fractures	
Fluid Balance 276.5, Overload	
Food Allergy	
Food Poisoning	
Foot Fractures	
Frostbite, unspecified	
Fungus Infections	
U	

G

3	
Gallstones	574.2
Gastritis	535.5
Gastroesophageal Reflux	530.81
Generalized Anxiety Disorder	300.00
Gestational Hyperglycemia/Diabetes (fifth)	648.8
Giardiasis	007.1
Glaucoma	365.9
Glomerulonephritis	583.9
Goiter, unspecified,	240.9
Gout, unspecified,	274.9
Guillain-Barre Syndrome	357.0
Gynecomastia	611.1

H

Hair Disorders	
Head Injury in Sports	
Head Lice,	
Body	. 132.1
Pubic	. 132.2
Headache	
Hearing, Impaired	389
Heartburn	
Heat Exhaustion	. 992.5
Heat Stroke	. 992.0
Hematuria	
Hemoglobinopathy	. 282.7
Hemolytic Anemia	. 282.9
Hemoptysis	. 786.3
Hemorrhoids	. 455.6
Hepatitis	. 573.3
Herpes Simplex Infection	. 054.9
Herpes Zoster Infection	. 053.9
Hirsutism	. 704.1
Histoplasmosis	
HIV Associated Infections	.042.0
HIV Infection, Asymptomatic	
	V08
HIV Infection, Asymptomatic	V08 042
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic	V08 042 042
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease	V08 042 042 201
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic	V08 042 042 201 . 126.9
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection	V08 042 042 201 . 126.9 . 603.9
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele	V08 042 042 201 . 126.9 . 603.9 . 782.4
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele Hyperbilirubinemia	V08 042 042 201 . 126.9 . 603.9 . 782.4 . 275.4
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele Hyperbilirubinemia Hypercalcemia	V08 042 042 201 . 126.9 . 603.9 . 782.4 . 275.4 . 275.4
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele Hyperbilirubinemia Hypercalcemia Hypercalciuria	V08 042 042 201 . 126.9 . 603.9 . 782.4 . 275.4 . 275.4 . 780.8
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele Hyperbilirubinemia Hypercalcemia Hypercalciuria Hyperhidrosis Hyperkalemia Hyperlipidemia	V08 042 042 201 .126.9 .603.9 .782.4 .275.4 .275.4 .780.8 .276.7 .272.4
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele Hyperbilirubinemia Hypercalcemia Hypercalciuria Hyperhidrosis Hyperkalemia	V08 042 042 201 .126.9 .603.9 .782.4 .275.4 .275.4 .780.8 .276.7 .272.4
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele Hyperbilirubinemia Hypercalcemia Hypercalciuria Hyperhidrosis Hyperhidrosis Hyperlipidemia Hyperlipidemia Hypernatremia Hyperparathyroidism	V08 042 042 201 . 126.9 . 603.9 . 782.4 . 275.4 . 275.4 . 275.4 . 276.7 . 272.4 . 276.0 . 252.0
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele Hyperbilirubinemia Hypercalcemia Hypercalciuria Hypercalciuria Hyperkalemia Hyperlipidemia Hypernatremia	V08 042 042 201 . 126.9 . 603.9 . 782.4 . 275.4 . 275.4 . 275.4 . 276.7 . 272.4 . 276.0 . 252.0
HIV Infection, Asymptomatic HIV Infection, Early Symptomatic HIV Infection, Late Symptomatic Hodgkin's Disease Hookworm Infection Hydrocele Hyperbilirubinemia Hypercalcemia Hypercalciuria Hyperhidrosis Hyperhidrosis Hyperlipidemia Hyperlipidemia Hypernatremia Hyperparathyroidism	V08 042 042 201 . 126.9 . 603.9 . 782.4 . 275.4 . 275.4 . 275.4 . 276.7 . 272.4 . 276.0 . 252.0 . 253.1
HIV Infection, Asymptomatic	V08 042 042 201 .126.9 .603.9 .782.4 .275.4 .275.4 .275.4 .276.7 .272.4 .276.0 .252.0 .253.1 .401.9 .306.1
HIV Infection, Asymptomatic	V08 042 042 201 .126.9 .603.9 .782.4 .275.4 .275.4 .275.4 .276.7 .272.4 .276.0 .252.0 .253.1 .401.9 .306.1 .275.4
HIV Infection, Asymptomatic	V08 042 042 201 .126.9 .603.9 .782.4 .275.4 .275.4 .275.4 .275.4 .276.7 .272.4 .276.0 .252.0 .253.1 .401.9 .306.1 .275.4 .251.2
HIV Infection, Asymptomatic	V08 042 042 201 .126.9 .603.9 .782.4 .275.4 .275.4 .275.4 .276.7 .272.4 .276.0 .252.0 .253.1 .401.9 .306.1 .275.4 .251.2 .276.8
HIV Infection, Asymptomatic	V08 042 042 201 . 126.9 . 603.9 . 782.4 . 275.4 . 275.4 . 275.4 . 276.0 . 252.0 . 252.0 . 253.1 . 401.9 . 306.1 . 275.4 . 276.0 . 252.0 . 253.1 . 275.4 . 275.4 . 275.4 . 276.0 . 252.0 . 253.1 . 275.4 . 275.4 . 275.4 . 275.4 . 276.0 . 275.4 . 276.0 . 275.4 . 276.0 . 275.4 . 276.0 . 276.0 . 275.4 . 276.0 . 276.0 . 276.0 . 276.0 . 275.4 . 276.0 . 276.0 . 276.0 . 275.4 . 276.0 . 276.0 . 275.4 . 276.0 . 276.0 . 275.4 . 276.0 . 276.

I

Impetigo	684
Impotence	302.72
Inappropriate Secretion of Antidiuretic	
hormone	
Indigestion	536.8
Induction of Labor, (fifth)	659
Infertility	
Female	628.9
Male	606.9

Influenza	
Insect and Spider Bites	919.4/5
Insomnia	780.52
Insufficency	
Interstitial Lung Disease	515
Intussusception	560.0
Iron Deficiency Anemia	
Irritable Bowel Syndrome	

J

Jaundice,	unspecified,	,	782.4
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K

Kaposi's Sarcoma	176.9
Ketoacidosis	276.2
Kidney Cancer	189.0

L

Laryngitis	
Larynx Cancer	
Lead Poisoning	
Leprosy	
Leukemia	
Leukoplakia	
Lipoma	
Lung Cancer	
Lupus Erythematosus	
Lyme Disease	
Lymphadenopathy	
Lymphoma, unspecified site	

Μ

Malaria	
Malnutrition	
Measles	
Melanoma	
Meniere's Disease	386.00
Meningitis	
Menopause	
Metastatic Cancer of Unknown Origin	
Migraine Headache (use fifth digit)	
Miliaria	
Mononucleosis, Infectious	
Multiple Sclerosis	340
Myasthenia Gravis	
Myocardial Infarction, Acute	
Myofascial Syndromes	

Ν

Nails, diseases of	
Nerve Entrapments	
Neutropenia	
Nevi	
Nicotine Dependence	
Nongonococcal Urethritis	099.40

0

Obesity	
Obsessive Compulsive Disorder	
Oliguria	
Optic Neuritis	
Osteoarthritis (fifth)	
Osteochondrosis	
(Osgood-Schlatter Disease)	
(Osgood-Schlatter Disease) Otitis Externa	

P

Pancreatic Carcinoma	157.9
Pancreatitis	577.0
Parkinson's Disease	
Patella Dislocations	
Patellofemoral Pain Syndrome	719.45
Pelvic Inflammatory Disease	614.9
Penile Discharge	
Peptic Ulcer Disease	
Pericarditis	
Peripheral Arterial Disease	443.9
Peripheral Neuropathy	
Personality Disorders	
Pheochromocytoma	
Phobia	
Pinworms	
Pityriasis Rosea	696.3
Plantar Fasciitis	728.71
Pleural Effusion	511.0
Pneumonia	486
Pneumothorax, spontaeous	512.8
Polycythemia	
Polymyalgia Rheumatica	725
Postconcussion Syndrome	
Postpartum Hemorrhage	666
Pregnancy	V22.2
Pregnancy Induced Hypertension	
Premenstrual Syndrome	
Preoperative Evaluation	V72.84
Preterm Labor	
Prostate Cancer	185
Prostates	
Prostatic Hyperplasia, Benign	600
Proteinuria	

Pruritus	698.9
Psoriasis	696.1
Pulmonary Edema, Acute	518.4
Pulmonary Embolus	415.1
Purpura	287.2
Pyelonephritis	. 590.80

R

Raynaud's Phenomenon	443.0
Red Eye	379.93
Reflex Sympathetic Dystrophy	337.20
Renal Failure, Acute	548.9
Renal Failure, Chronic	585
Respiratory Distress Syndrome, Acute	518.82
Respiratory Infection, Upper	465.9
Rhinitis, Allergic, cause unspecified	472.0
Rib Fracture	807.00
Rosacea	695.3
Rubella	056.9

S

Salmonellosis	
Sarcoidosis	135
Scabies	133.0
Schizophrenia, unspecified	295.90
Scleroderma	
Scrotal Mass	608.89
Seizure Disorder	
Sepsis	
Sexually Transmitted Diseases	
Shock	785.50
Shoulder Dislocations	831.00
Sinusitis	473.9
Sleep Apnea	780.57
Sleep Disorders	780.50
Snakebite	
Somatoform Disorders, undif	780.50
Sore Throat	462
Spermatocele	608.1
Statsis Ulcer	454.0
Stomatitis	528.0
Stomatitis, Aphthous	528.2
Stroke	436
Subdural Hematoma	
(non-traumatic)	
(traumatic)	
Suicide Assessment	300.9
Syncope	

Т

Tapeworm Infections	123.9
Tattoos	709.09
Temporal Arteritis	446.5
Temporomandibular Joint Syndrome	524.60
Tendinitis	726.90
Thalassemia	
Third Trimester Bleeding	641
Thrombocytopenia	
Thyroid Carcinoma	

U

Ulcerative Colitis	556
Undescended Testicle	752.5
Urinary Incontinence	788.30
Urinary Stone	592.9
Urinary Tract Infection in Adults	
and in Children, Acute	599.0
Urticaria	708.9

V

Vaginal Bleeding, metrorrhagia	
Vaginal Discharge	
Vaginitis	
Valvular Heart Disease, ill defined	
Thyroid Nodule	
Thyroiditis	
Tinnitus	
Toxic Shock Syndrome	040.89
Transient Ischemic Attack	
Trigeminal Neuralgia	
Tuberculosis	
Typhoid Fever	
Varicella	
Varicocele	
Varicose Veins	
Vitiligo	709.01
Vulvar Pruritus	

\mathbf{W}

Warts, viral, unspecified	078.10
Wrist Fractures	814.00

APPENDIX C: ICD-9 CODES FOR SENTINEL HEALTH EVENTS

In an occupational health clinic a Sentinel Health Event (SHE) is a disease, disability, or death which serves as a warning for failure in primary or secondary prevention. The SHE's are negative indicators of health care so they deserve special attention to ICD-9 coding. Appendix C lists SHE in ascending order of ICD-9 code. When diagnosing a worker with a SHE, the cause of the accidental death or injury must be classified using the E code system. [ref: Mullon RJ, Marthy LI, (1991). Occupational Sentinel Health Events: An updated list for physician recognition and public health surveillance. American Journal of Industrial Medicine 79: 775 - 799.]

ICD-9 Code	Condition	Agent
011	Pulmonary tuberculosis	Mycobacterium tuberculosis
011.40	Silicotuberculosis	Silica + mycobacterium tuberculosis
020.9	Plague, unspecified	Yersenia pestis
021.9	Tularemia, unspecified	Francisella tularensis Pasterelli tularensis
022.9	Anthrax, unspecified	Brucillus anthracis
023.9	Brucellosis, unspecified	Brucella abortus, suis
031.1	Fish-fancier finger	Mycobacterium morium
054.6	Herpetic whitlow	Herpes simplex virus
037	Tetanus	Clostridium tetani
042	Human immunodeficiency virus	Human immunodeficiency virus
056	Rubella	Rubella virus
070.1	Hepatitis A Hepatitis B	Hepatitis A virus Hepatitis B virus
070.2	with heptic coma	
070.3	without heptic come	
070.4	Other specified viral hepatitis, with hepatic coma	Unknown
070.5	without mention of hepatic coma	
071	Rabies	Rabies Virus
073.9	Ornithosis	Chlamydia psittaci
082.0	Rocky Mountain Spotted Fever	Rickettsia rickettsii
100.8	Other specified, Leptospirosis	Leptospira

115.90	Histoplasmosis	Histoplasma capsulation
117.1	Sporotrichosis	Sporothrix schenkii
147	Malignant neoplasm, of nasopharynx	Chlorophenols
155	Hemangiosarcoma of the liver	Vinyl chloride monomer
158	Mesothelioma of peritoneum & pleura	Arsenical pesticides, Asbestos
160.0	Malignant neoplasm of nasal cavities	Hardwood dusts Radium Unknown
161.9	Malignant neoplasm of larynx	Chlorophenols ; Asbestos
162.8	Malignant neoplasm of trachea, bronchus and lung	Asbestos Coke oven emissions Radon daughters Chromates Nicke Arsenic, trioxide Mustard Gas Bis(chloromethy) ether, chloromethyl methyl ether
162.8	Malignant neoplasm of trachea, bronchus and lung	Radon ; daughters Pesticides, herbicides, fungicides, insecticides Chromium dust Lead chromate, zinc, chromate Zinc chromate dust Unknown
170.9	Malignant neoplasm of bone	Radium Unknown
187.7	Malignant neoplasm of scrotum	Mineral/cutting oils Soots/tars/tar distillates
188.9	Malignant neoplasm of bladder	Benzidine, alpha, and beta- naphtylamine, magenta,; auramine; 4-amimobiphenyl 4-nitrophenyl
189.0	Malignant neoplasm of kidney, other, unspecified urinary organs	Coke oven emissions
204.00	Lymphoid leukemia, acute without mention of remission	Ionizing Radiation Unknown
205.00	Myeloid leukemia, acute, without mention of remission	Benzene
207.00	Erythro-leukemia, acute, without mention of remission	Ionizing Radiation Benzene
283.1	Hemolytic anemia, nonautoimmune	Copper sulfate Arsine

284.8	Aplastic anemia, other specified	Trinitrotoluene Benzene
		Ionizing Radiation
288.0	Agranulocytosis or neutropenia	Benzene
		Phosphorus
		Inorganic arsenic
289.7	Methemoglobinemia	Aromatic amino and nitro compounds (e.g., aniline, trinitrotoluene, nitroglycerin) Aniline, O-toluidine, nitrobenzene
2227	Tania an anglalitia	Land
323.7	Toxic encephalitis	Lead
		Inorganic and organic mercury
332.1	Parkinson's disease (secondary)	Manganese
		Carbon monoxide
224.2		
334.3	Cerebellar ataxia	Toluene
		Organic mercury
354	Carpal Tunnel Syndrome	Cumulative trauma
354.0	Mononeuritis of Upper limb unspecified	Methyl methacrylate monomer
		Cumulative trauma
354.3	Mononeuritis multiplex	Cumulative trauma
357.7	Inflammatory and toxic neuropathy	Aresenic/arsemic compounds
		Hexane
		Methyl n-butyl ketone
		Trinitrotoluene
		Carbon Disulfide
		Tri-o-cresyl phosphate
		Inorganic mercury
		Acrylamide
		Ethylene Oxide
366.4	Cataract, associated with other disorders	Microwaves
		Trinitrotoluene
		Ionizing radiation
		Infrared radiation
		Naphthalene
		Dinitrophenol dinitro-o-cresol
		Ethylene oxide
388.1	Noise effects on inner ear	Excessive noise
		-
443.0	Raynaud's phenomenon(secondary)	Whole body or segmental vibration
		Vinyl chloride

493.00	Extrinsic asthma, without mention of status asthmaticus	Platinum Isocyanates Chromium, cobalt Aluminum soldering flux Phthalic anhydride Formaldehyde Gum arabic Nickel sulfate Flour Trimellitic anhydride Red cedar (plicatic acid) and other wood dusts <i>Bacillus</i> -derived exoenzymes Unknown
495.4	Maltworker's lung	Aspergillus clavatus
495.5	Mushroom worker's lung	Pasteurized compost
495.8	Grain handler's lung	Erwinia herbicola (Enterobacter agglomerans)
495.8	Sequoiosis	Redwood sawdust Thuja plicata
495.9	Unspecified allergic alveolitis	Cinnamon dust Cinnamaldehyde Aspergillus fumigatus Alternaria, wood dust Unknown
500	Coal worker's pneumoconiosis	Coal dust
501	Asbestos	Asbestos
502	Silicosis	Silica Cryolite (Na ₃ ,AIF ₆), quartz dust
502	Talcosis	Talc
503	Chronic beryllium disease of the lung	Beryllium
504	Byssinosis	Cotton, flax, hemp, and cotton-synthetic dusts
506.0	Acute bronchitis, pneumonitis, and pulmonary edema due to fumes and vapors	Ammonia Chlorine Nitrogen oxides Sulfur dioxide Cadmium Trimellitic anhydride Vanadium pentoxide
506.1	Acute pulmonary edema due to due to fumes and vapors	Ammonia Chlorine

573.3	Toxic hepatitis	Carbon tetrachloride Chloroform, tetrachloroethane Trichloroethylene tetrachloroethylene Phosphorus Trinitrotoluene Chloronaphthalenes Methylenedianiline Methyl bromide Ethylene dibromide Cresol
584.9	Acute renal failure, unspecified	Inorganic lead Arsine Inorganic mercury Carbon tetrachloride Ethylene glycol
585	Chronic renal failure	Inorganic lead Arsine Inorganic mercury Carbon tetrachloride Ethylene glycol Kepone Dibromochlorpropane
606	Infertility, male	Kepone Dibromochlorpropane
692	Contact and allergic dermatitis	
692.0	due to detergents	Detergents
692.1	due to oils and grease	Cutting Oils Phenol
692.2	due to solvents	Solvents, ketone Hydrocarbon, ester Rubber, plastic, nylon
692.4	due to other chemical products(acids/alkalis/rubber)	Acid, alkalis
692.89	due to dyes	Dyes
733.9	Skeletal fluorosis	Cryolite (Na ₃ ,AIF ₆)

Appendix D

DA Form 2028

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RECOMMENDED CHANGES TO PUBLICATIO BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC					Use Part II <i>(reverse)</i> for Repair Parts and DATE Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).			DATE		
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PART III - REMARKS/Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.) TYPED NAME, GRADE OR TITLE TELEPHONE EXCHANGE/AUTOVON, SIGNATURE														
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