

### SURVEILLANCE

# Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents

#### Participating Agencies:

National Center for Infectious Diseases and Epidemiology Program Office, Centers for Disease Control and Prevention, Atlanta, Georgia

Division of Preventive Medicine, Walter Reed Army Institute of Research, Silver Spring, Maryland Emergency Medical Associates of New Jersey Research Foundation, Livingston, New Jersey Bureau of Epidemiology Services, New York City Department of Health and Mental Hygiene, New York City, New York

Harvard Medical School and Harvard Pilgrim Health Care, Boston, Massachusetts

#### Introduction

Recent events, including the emergence of severe acute respiratory syndrome (SARS), West Nile virus, and monkeypox, have resulted in the implementation of alternate methods of disease surveillance that can potentially identify clusters of cases before traditional methods. Some surveillance systems utilize International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) coded health information from physician visit records or emergency department discharge data (1). Other systems abstract data from emergency department logs, 911 calls, or nurse call line data through analysis of text or other developed coding systems (2). Such surveillance methods are often referred to as syndromic surveillance since they typically monitor the non-specific clinical information that may indicate a bioterrorism-associated disease before specific diagnoses are made. Syndromic surveillance systems often utilize data sources that already exist but have not been designed specifically for public health surveillance purposes. Two data sources that may be available to augment a public health agency's surveillance activities are ICD-9-CM-coded discharge diagnoses for outpatient visits and emergency department visits.

ICD-9-CM codes were developed to allow assignment of codes to diagnoses and procedures associated with hospital utilization in the United States and are often used for third-party insurance reimbursement purposes. ICD-9-CM codes have been monitored in several settings to support public health surveillance (3-6). Syndromic surveillance using ICD-9-CM-coded health information may be considered because the codes are readily available for use by health care systems, are used in multiple clinical settings (e.g., outpatient, inpatient, emergency departments), are often available electronically, and can be shared easily between different information systems. However, prior to implementing surveillance based on the use of ICD-9-CM-coded health information, public health agencies should evaluate their usefulness with regard to the goals of the surveillance system (7, 8). For example, there may be a substantial delay in ICD-9-CM code assignment or the availability of that information in an electronic health information system. Since timeliness is a critical requirement, use of ICD-9-CM-coded information that is not timely may not be appropriate. Additionally, nonspecific ICD-9-CM codes may be used in an outpatient setting yielding low specificity for the outcome of interest. There may be bias in the use of the codes by some data providers (e.g., using codes for greater severity of illness to justify patient treatment). Use of a limited number of ICD-9-CM codes to describe a clinical encounter may limit appropriate interpretation. However, given the widespread availability and use of ICD-9-CM codes, it is prudent to provide some guidance regarding their use and to encourage the evaluation of their use for syndromic surveillance.

October 23, 2003

Page 1 of 29

Beginning in 1999 to support several enhanced syndromic surveillance activities associated with high-profile community events (e.g., national political conventions), the Centers for Disease Control and Prevention (CDC) identified syndrome categories to be monitored that were indicative of the clinical presentations of several critical bioterrorism-associated conditions. The Department of Defense's ESSENCE program also developed broad syndrome groups using ICD-9-CM codes that approximate natural infectious disease outbreaks or bioterrorism. These syndrome groups are currently under routine surveillance at military medical treatment facilities (9). Other public health agencies have also developed syndrome-based definitions and code groupings specific to their data sources and surveillance goals. By combining our experiences, Department of Defense, CDC, and other investigators developed a suggested list of syndrome groups, definitions, and corresponding ICD-9-CM codes that can be used in syndromic surveillance programs.

A multi-agency working group was established to identify and define candidate syndrome groups. Eleven syndromes and corresponding code sets were selected based on a systematic selection process (Table). Definitions for each syndrome group were created by consensus. Individual ICD-9-CM codes were selected as candidates for inclusion in defined syndrome groups after an exhaustive search through all possible codes (Appendix). The codes were divided into three categories based on overall association with a syndrome or specific disease and by observed frequency of code usage in three clinical data sources (representing discharge diagnoses for outpatient visits and emergency department visits). The following categories within syndrome groups were defined:

- **Category 1** Consists of codes that reflect general symptoms of the syndrome group and also include codes for the bioterrorism diseases of highest concern or those diseases highly approximating them.
- **Category 2** Consists of codes that might normally be placed in the syndrome group, but daily volume could overwhelm or otherwise detract from the signal generated from the Category 1 code set alone.
- **Category 3** Consists of specific diagnoses that fit into the syndrome category but occur infrequently or have very few counts. These codes may be excluded to simplify syndrome category code sets.

The working group also assessed the trends over time, frequency of code use, and subsequent contribution of selected codes to background 'noise' of the ICD-9-CM-coded syndrome groups using two large medical data sets: DoD outpatient visits and civilian emergency department visits. This analysis is ongoing but emphasized the need to evaluate the performance of the code sets in each data source.

These syndrome definitions and associated ICD-9-CM-coded syndrome groups can be used in syndromic surveillance systems to allow for comparability and evaluation among programs. However, analysis of the syndrome groups and subcategory distributions in individual data sources must be done as the frequency of code usage may vary by data source and will dictate which codes are best included for a particular surveillance program. Additional guidance from the working group will be forthcoming regarding statistical analysis methods that can be used to systematically choose ideal combinations of codes for syndrome groups. At this time, the working group wanted to share the syndrome groupings so that other public health agencies can have access to the results of their deliberations regarding defined syndrome groupings.

October 23, 2003

Page 2 of 29

#### References:

- 1. Lewis MD, Pavlin JA, Mansfield JL, et al. Disease outbreak detection system using syndromic data in the Washington, DC area. Am J Prev Med 2002; 23:180-186.
- 2. Pavlin JA, Mostashari F, Kortepeter MG, et al. Innovative surveillance methods for rapid detection of disease outbreaks and bioterrorism: results of an interagency workshop on health indicator surveillance. Am J Public Health. 2003; 93:1230-1235.
- 3. Danel I, Berg C, Johnson CH, Atrash H. Magnitude of maternal morbidity during labor and delivery, United States, 1993-1997. Am J Public Health. 2003;93:631-634.
- 4. Fleishman JA, Hellinger FH. Recent trends in HIV-related inpatient admissions 1996-2000: a 7-state study. J Acquir Immune Defic Syndr. 2003; 34:102-110.
- 5. San Gabriel P, Saiman L, Kaye K, Silin M, Onorato I, Schulte J. Completeness of pediatric TB reporting in New York City. Public Health Reports. 2003;118:144-153.
- 6. Zhan C, Miller MR. Excess length of stay, charges, and mortality attributable to medical injuries during hospitalization. JAMA. 2003;290:1868-1874.
- 7. Buehler JL, Berkelman RL, Hartley DM, Peters CJ. Syndromic surveillance and bioterrorism-related epidemics. Emerging Infectious Diseases. 2003;9:1197-1204.
- 8. Centers for Disease Control and Prevention. Draft Framework for Evaluating Syndromic Surveillance Systems for Bioterrorism Preparedness. Available at <a href="http://www.cdc.gov/epo/dphsi/syndromic/">http://www.cdc.gov/epo/dphsi/syndromic/</a>.
- 9. Department of Defense, Global Emerging Infections System. ESSENCE: Electronic Surveillance System for the Early Notification of Community-based Epidemics. Available at <a href="http://www.geis.ha.osd.mil/geis/surveillanceactivities/essence/essence.asp">http://www.geis.ha.osd.mil/geis/surveillanceactivities/essence/essence.asp</a>.

### Table: Text-based Syndrome Case Definitions and Associated Category A Conditions

Syndrome	Definition	Category A Condition
Botulism-like	ACUTE condition that may represent exposure to botulinum toxin  ACUTE paralytic conditions consistent with botulism: cranial nerve VI (lateral rectus) palsy, ptosis, dilated pupils, decreased gag reflex, media rectus palsy.  ACUTE descending motor paralysis (including muscles of respiration)  ACUTE symptoms consistent with botulism: diplopia, dry mouth, dysphagia, difficulty focusing to a near point.	Botulism
Hemorrhagic Illness	SPECIFIC diagnosis of any virus that causes viral hemorrhagic fever (VHF): yellow fever, dengue, Rift Valley fever, Crimean-Congo HF, Kyasanur Forest disease, Omsk HF, Hantaan, Junin, Machupo, Lassa, Marburg, Ebola ACUTE condition with multiple organ involvement that may be consistent with exposure to any virus that causes VHF  ACUTE blood abnormalities consistent with VHF: leukopenia, neutropenia, thrombocytopenia, decreased clotting factors, albuminuria	VHF
Lymphadenitis	ACUTE regional lymph node swelling and/ or infection (painful bubo- particularly in groin, axilla or neck)	Plague (Bubonic)
Localized Cutaneous Lesion	SPECIFIC diagnosis of localized cutaneous lesion/ ulcer consistent with cutaneous anthrax or tularemia ACUTE localized edema and/ or cutaneous lesion/ vesicle, ulcer, eschar that may be consistent with cutaneous anthrax or tularemia INCLUDES insect bites EXCLUDES any lesion disseminated over the body or generalized rash EXCLUDES diabetic ulcer and ulcer associated with peripheral vascular disease	Anthrax (cutaneous) Tularemia
Gastrointestinal	ACUTE infection of the upper and/ or lower gastrointestinal (GI) tract SPECIFIC diagnosis of acute GI distress such as Salmonella gastroenteritis ACUTE non-specific symptoms of GI distress such as nausea, vomiting, or diarrhea EXCLUDES any chronic conditions such as inflammatory bowel syndrome	Anthrax (gastrointes tinal)

Syndrome	Definition	Category A
Respiratory	ACUTE infection of the upper and/ or lower respiratory tract (from the oropharynx to the lungs, includes otitis media) SPECIFIC diagnosis of acute respiratory tract infection (RTI) such as pneumonia due to parainfluenza virus ACUTE non-specific diagnosis of RTI such as sinusitis, pharyngitis, laryngitis ACUTE non-specific symptoms of RTI such as cough, stridor, shortness of breath, throat pain EXCLUDES chronic conditions such as chronic bronchitis, asthma without acute exacerbation, chronic sinusitis, allergic conditions (Note: INCLUDE acute exacerbation of chronic illnesses.)	Anthrax (inhalationa I) Tularemia Plague (pneumonic )
Neurological	ACUTE neurological infection of the central nervous system (CNS)  SPECIFIC diagnosis of acute CNS infection such as pneumoccocal meningitis, viral encephailitis  ACUTE non-specific diagnosis of CNS infection such as meningitis not otherwise specified (NOS), encephailitis NOS, encephalopathy NOS  ACUTE non-specific symptoms of CNS infection such as meningismus, delerium  EXCLUDES any chronic, hereditary or degenerative conditions of the CNS such as obstructive hydrocephalus, Parkinson's, Alzheimer's	Not applicable
Rash	ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs)  SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox  ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheaic dermatitis, rosacea EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema	Smallpox
Specific Infection	ACUTE infection of known cause not covered in other syndrome groups, usually has more generalized symptoms (i.e., not just respiratory or gastrointestinal) INCLUDES septicemia from known bacteria INCLUDES other febrile illnesses such as scarlet fever	Not applicable

Syndrome	Definition	Category A Condition
Fever	ACUTE potentially febrile illness of origin not specified INCLUDES fever and septicemia not otherwise specified INCLUDES unspecified viral illness even though unknown if fever is present  EXCLUDE entry in this syndrome category if more specific diagnostic code is present allowing same patient visit to be categorized as respiratory,	Not applicable
	neurological or gastrointestinal illness syndrome	
Severe Illness or Death potentially due	ACUTE onset of shock or coma from potentially infectious causes EXCLUDES shock from trauma	Not applicable
to infectious disease	INCLUDES SUDDEN death, death in emergency room, intrauterine deaths, fetal death, spontaneous abortion, and still births EXCLUDES induced fetal abortions, deaths of unknown cause, and unattended deaths	

#### **APPENDIX: ICD-9-CM CODES**

#### Fever ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
020.2	PLAGUE, SEPTICEMIC	1
020.8	OTHER TYPES OF PLAGUE	1
020.9	PLAGUE NOS	1
021.8	TULAREMIA NEC	1
021.9	TULAREMIA NOS	1
022.3	ANTHRAX, SEPTICEMIA	1
022.8	ANTHRAX, OTHER SPECIFIED	1
022.9	ANTHRAX, UNSPECIFIED	1
038.3	ANAEROBES SEPTICEMIA	1
038.40	GRAM-NEGATIVE ORGANISM UN	1
038.49	SEPTICEMIA,OTHER GRAM-NEG	1
038.8	SEPTICEMIAS, OTHER SPECIF	1
038.9	SEPTICEMIA, NOS	1
079.89	VIRAL INFECTION OTHER S	1
079.99	VIRAL INFECTIONS UNSPECIFIED	1
780.31	FEBRILE CONVULSIONS	1
780.6	FEVER	1
790.7	BACTEREMIA	1
790.8	VIREMIA NOS	1
770.0	, incamination	1
002.0	TYPHOID FEVER	3
002.1	PARATYPHOID FEVER A	3
002.1	PARATYPHOID FEVER B	3
002.3	PARATYPHOID FEVER C	3
002.9	PARATYPHOID FEVER NOS	3
003.1	Salmonella septicemia	3
023.0	BRUCELLA MELITENSIS	3
023.1	BRUCELLA ABORTUS	3
023.1	BRUCELLA SUIS	3
023.3	BRUCELLA CANIS	3
023.8	BRUCELLOSIS NEC	3
023.9	BRUCELLOSIS, UNSPECIFIED	3
024	GLANDERS	3
025	MELOIDOSIS	3
027.0	LISTERIOSIS	3
034.1	SCARLET FEVER	3
038.0	SEPTICEMIA STAPHYLOCOCCAL	3
038.10	SEPTICEMIA STAPHYLOCOCCAL	3
038.10	SEPTICEMIA STAPHYLOC. AUR	3
038.11	SEPTICEMIA STAPHYLOCOCCAL	3
038.19	PNEUMOCOCCAL SEPTICEMIA	3
038.41	SEPTICEMIA, HEMOPHILUS INFLUENZAE	3
038.42	SEPTICEMIA, HEMOPHILUS INFLUENZAE SEPTICEMIA, E. COLI	3
038.42	PSEUDOMONAS	3
030.43	FBEUDUMUNAS	3

#### Fever ICD-9-CM Code List, Cont'd

038.44	SEPTICEMIA SERRATIA	3
054.5	HERPETIC SEPTICEMIA	3
060.0	YELLOW FEVER, SYLVATIC	3
060.1	YELLOW FEVER, URBAN	3
060.9	YELLOW FEVER, UNSPEC	3
066.0	PHLEBOTOMUS FEVER	3
066.1	TICK-BORNE FEVER	3
066.2	VENEZUELAN EQUINE FEVER	3
066.3	MOSQUITO-BORNE FEVER NEC	3
066.8	ARTHROPOD VIRUS NEC	3
066.9	ARTHROPOD VIRUS NOS	3
078.2	SWEATING FEVER	3
080	LOUSE-BORNE TYPHUS	3
081.0	MURINE TYPHUS	3
081.1	BRILL'S DISEASE	3
081.2	SCRUB TYPHUS	3
081.9	TYPHUS NOS	3
082.8	TICK-BORNE RICKETTS NEC	3
082.9	TICK-BORNE RICKETTS NOS	3
083.0	Q FEVER	3
083.1	TRENCH FEVER	3
083.2	RICKETTSIALPOX	3
083.8	RICKETTSIOSES NEC	3
083.9	RICKETTSIOSIS	3
084.0	MALARIA, FALCIPARUM	3
084.1	VIVAX MALARIA	3
084.2	QUARTAN MALARIA	3
084.3	OVALE MALARIA	3
084.5	MIXED MALARIA	3
084.6	MALARIA UNSPECIFIED	3
086.2	CHAGA'S DISEASE WITHOUT MENTION OF ORG	3
086.3	TRYPANOSOMIASIS, GAMBIAN	3
086.4	TRYPANOSOMIASIS, RHODESIAN	3
086.5	TRYPANOSOMIASIS, AFRICAN	3
086.9	TRYPANOSOMIASIS, UNSPEC	3
087.0	LOUSE-BORNE RELAPS FEVER	3
087.1	TICK-BORNE RELAPS FEVER	3
087.9	RELAPSING FEVER NOS	3
088.0	BARTONELLOSIS	3
088.81	LYME DISEASE	3
088.82	BABESIOSIS	3
088.89	OTHER ARTHROPOD-BORNE	3
088.9	ARTHROPOD-BORNE DIS NOS	3
100.82	LEPTOSPIROSIS, OTHER	3

### Hemr\_ill ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
287.1	PLATELET DISORDER	1
287.2	NONTHROMBOCYTOPENIC PURPU	1
287.8	HEMORRHAGIC COND NEC	1
287.9	HEMORRHAGIC CONDITIONS UN	1
511.8	HEMOTHORAX	1
790.01	HEMATOCRIT, PRECIPITOUS D	1
790.92	ABNORMAL COAGULATION PROF	1
286.9	COAGULATION DEFECTS-UNSPE	2
287.3	THROMBOCYTOPENIA	2
287.4	THROMBOCYTOPENIA SECONDAR	2
287.5	THROMBOCYTOPENIA UNSPEC.	2
459.0	HEMORRHAGE NOS	2
578.0	HEMATEMESIS	2
578.1	MELENA	2
578.9	GASTROINTESTINAL HEMORRHA	2
782.7	ECCHYMOSIS,SPONTANEOUS,NO	2
784.7	EPISTAXIS	2
784.8	HEMORRHAGE FROM THROAT	2
786.3	HEMOPTYSIS	2
061	DENGUE	3
065.0	CRIMEAN HEMORRHAGIC FEV	3
065.1	OMSK HEMORRHAGIC FEVER	3
065.2	KYASANUR FOREST DISEASE	3
065.3	TICK-BORNE HEM FEVER NEC	3
065.4	MOSQUITO-BORNE HEM FEVER	3
065.8	ARTHROPOD HEM FEVER NEC	3
065.9	ARTHROPOD HEM FEVER NOS	3
077.4	EPIDEM HEM CONJUNCTIVIT	3
078.6	HEM NEPHROSONEPHRITIS	3
078.7	ARENAVIRAL HEM FEVER	3
084.8	BLACKWATER FEVER	3
100.0	LEPTOSPIROSIS, ICTOHEMORRHAGICA	3
283.11	HEMOLYTIC-UREMIC SYNDROME	3

#### Lesion ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
020.0	PLAGUE, BUBONIC	1
020.1	CELLULOCUTANEOUS PLAGUE	1
021.0	ULCEROGLANDUL TULAREMIA	1
022.0	CUTANEOUS ANTHRAX	1
680.0	CARBUNCLE FACE	1
680.1	CARBUNCLE NECK	1
680.2	CARBUNCLE TRUNK	1
680.3	CARBUNCLE ARM	1
680.4	CARBUNCLE HAND	1
680.5	CARBUNCLE BUTTOCK	1
680.6	CARBUNCLE LEG	1
680.7	FURUNCLE FOOT, HEEL, TOE	1
680.8	FURUNCLE HEAD/SCALP EXCEP	1
707.11	ULCER OF THIGH	1
707.12	ULCER OF CALF	1
707.13	ULCER OF ANKLE	1
707.14	ULCER OF HEEL AND MIDFOOT	1
707.19	ULCER OF LOWER LIMB, OTHER	1
	,	
680.9	BOIL NOS	2
681.00	CELLULITIS FINGER, NOS	2
681.01	FELON	2
681.02	ONYCHIA/PARONYCHIA OF FIN	2
681.11	ONYCHIA/PARONYCHIA OF TOE	2
681.9	CELLULITIS DIGIT, NOS	2
682.0	CELLULITIS FACE	2
682.1	CELLULITIS NECK	2
682.2	CELLUL/ABSCESS-TRUNK/ABDO	2
682.3	CELLULITIS/ABSCESS ARM	2
682.4	CELLULITIS/ABSCESS HAND/W	2
682.5	CELLULITIS BUTTOCK	2
682.6	CELLULITIS LEG	2
682.7	CELLULITIS FOOT	2
682.8	ABSCESS/CELLULITIS-HEAD/S	2
682.9	CELLULITIS NOS	2
707.10	ULCER OF LOWER LIMB, UNSP	2
707.15	ULCER OF FOOT, OTHER PART	2
027.1	ERYSIPELOTHRIX INFECTION	3
054.6	HERPETIC WHITLOW	3
081.2	SCRUB TYPHUS	3
082.1	BOUTONNEUSE FEVER	3
082.2	NORTH ASIAN TICK FEVER	3
082.3	QUEENSLAND TICK TYPHUS	3
085.1	LEISHMANIASIS, CUTANEOUS, URBAN	3

#### Lesion ICD-9-CM Code List, Cont'd

085.2	LEISHMANIASIS, CUTANEOUS, ASIAN DESERT	3
085.3	LEISHMANIASIS, ETHIOPIAN	3
085.4	LEISHMANIASIS, CUTANEOUS AMERICAN	3
085.5	LEISHMANIASIS, MUCOCUTANEOUS, AMERICAN	3
086.2	CHAGA'S DISEASE WITHOUT MENTION OF ORG	3
086.3	TRYPANOSOMIASIS, GAMBIAN	3
086.5	TRYPANOSOMIASIS, AFRICAN	3
091.2	SYPHILIS (PRIMARY NEC)	3
103.0	PINTA, PRIMARY LESIONS	3
103.9	PINTA, UNSPEC	3
114.0	PRIMARY COCCIDIOIDOMYCOS	3
117.1	SPOROTRICHOSIS	3
911.4	Superficial inj/trunk, insect bite non-veno, no infect	3
911.5	Superficial inj/trunk, insect bite non-veno, infection	3
912.4	Superficial inj/shoulder/upper arm, insect bite non-veno, no infect	3
912.5	Superficial inj/shoulder/upper arm, insect bite non-veno, infection	3
913.4	Superficial inj/elbow,forearm,wrist, insect bite non-veno, no infect	3
913.5	Superficial inj/elbow,forearm,wrist, insect bite non-veno, infection	3
915.4	Superficial inj/finger(s), insect bite non-veno, no infect	3
915.5	Superficial inj/finger(s) insect bite non-veno, infection	3
916.4	Superficial inj/hip,thigh,leg,ankle, insect bite non-veno, no infect	3
916.5	Superficial inj/hip,thigh,leg,ankle insect bite non-veno, infection	3
917.4	Superficial inj/foot, toe(s), insect bite non-veno, no infect	3
917.5	Superficial inj/foot, toe(s), insect bite non-veno, infection	3
918	Superficial inj/eyelids, periocular area, insect bite	3
919.4	Superficial inj/other,multiple,unspec insect bite non-veno, no infect	3
919.5	Superficial inj/other, multiple, unspec insect bite non-veno, infection	3
E906.4	Bite of non-venomous arthropod/insect bite NOS	3

Lymph ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
020.0	PLAGUE, BUBONIC	1
021.0	ULCEROGLANDUL TULAREMIA	1
021.3	TULAREMIA, OCULOGLANDULAR	1
075	MONONUCLEOSIS, INFECTIOUS	1
289.3	LYMPHADENITIS NOS	1
683	ADENITIS, GANGRENOUS, ACU	1
785.6	LYMPH NODE ENLARGEMENT	1
026.0	SPIRILLARY FEVER	3
027.2	PASTEURELLOSIS	3
078.3	CAT-SCRATCH DISEASE	3
081.2	SCRUB TYPHUS	3
082.1	BOUTONNEUSE FEVER	3
082.2	NORTH ASIAN TICK FEVER	3
082.3	QUEENSLAND TICK TYPHUS	3
083.2	RICKETTSIALPOX	3
085.0	LEISHMANIASIS, VISCERAL	3
086.2	CHAGA'S DISEASE WITHOUT MENTION OF ORG	3
086.3	TRYPANOSOMIASIS, GAMBIAN	3
086.5	TRYPANOSOMIASIS, AFRICAN	3
088.0	BARTONELLOSIS	3
091.4	SYPHILITIC ADENOPATHY	3
099.0	CHANCROIOD	3
099.1	LYMPHOGRANULOMA VENEREUM	3
117.1	SPOROTRICHOSIS	3
125.0	BANCROFTIAN FILARIASIS	3
125.1	MALAYAN FILARIASIS	3

### Bot\_Like ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
005.1	BOTULISM	1
344.04	QUADRIPLE/QUADRIPA.C5-C7	1
344.09	QUADRIPLEGIA/QUADRIPARESI	1
344.2	DIPLEGIA OF UPPER LIMBS	1
344.89	PARALYTIC SYNDROME, OTHR	1
344.9	PARALYSIS	1
351.9	FACIAL NERVE DISORDER UNS	1
352.6	CRANIAL NERVE PALSIES,MUL	1
352.9	CRANIAL NERVE DISORDER, U	1
357.0	GUILLAIN-BARRE SYNDROME	1
368.2	DIPLOPIA	1
374.30	PTOSIS OF EYELID, UNSPECI	1
378.51	NERV PALSY 3RD OR OCULOMO, PARTIAL	1
378.52	NERV PALSY 3RD OR OCULOMO, TOTAL	1
378.53	NERV PALSY 4TH OR TROCHLEAR	1
378.54	SIXTH OR ABDUCENS NERVE P	1
378.55	RECTUS PALSY (MEDIAL)	1
	, ,	
342.90	HEMIPLEGIA/HEMIPARESIS UN	2
344.00	QUADRIPLEGIA, UNSPECIFIED	2
344.1	PARAPLEGIA	2
351.0	BELL'S PALSY	2
351.8	NEURALGIA FACIAL	2
358.0	MYASTHENIA GRAVIS	2
368.8	VISUAL DISTURBANCES ;SPEC	2
368.9	VISUAL DISTURBANCE UNSPEC	2
784.3	APHASIA	2
784.5	SPEECH DISTURBANCE	2
787.2	DYSPHAGIA	2
037	TETANUS	3
350.8	TRIGEMINAL NERVE DISORDER, OTHER SPECIFIED	3
350.9	TRIGEMINAL NERVE DISORDER, UNSPECIFIED	3
352.0	OLFACTORY (1ST) CN DISORDERS	3
352.1	GLOSSOPHARYNGEAL NEURALGI	3
352.2	GLOSSOPHARYNGEAL, OTHER DISORDERS	3
352.3	DISORD. PNEUMOGASTRIC 10T	3
352.4	ACCESSORY (11TH) DISORDERS	3
352.5	HYPOGLOSSAL NERVE (12TH) DISORDERS	3
374.31	PARALYTIC PTOSIS	3
378.50	PARALYTIC STRABISMUS, UNSPEC	3
378.56	EXTERNAL OPTHALMOPLEGIA	3
527.7	XEROSTOMIA (DRY MOUTH)	3

#### GI-Total ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus	U or L
005.89	FOOD POISONING, OTHER BAC	1	L
005.9	FOOD POISONING NOS	1	L
008.49	INTEST. INFECT BY OTHER B	1	L
008.5	BACTERIAL ENTERITIS NOS	1	L
008.69	ENTERITIS VIRAL OTHER	1	L
008.8	ENTERITIS VIRAL NOS	1	L
009.0	ENTERITIS/COLITIS/GASTRO.	1	L
009.1	COLITIS ENTERIT,GASTRO,IN	1	L
009.2	DIARRHEA, INFECTIOUS NOS	1	L
009.3	DIARRHEA OF INFECT ORIG	1	L
022.2	GASTROINTESTINAL ANTHRAX	1	L
078.82	EPIDEMIC VOMITING SYND	1	U
535.00	GASTRITIS, ACUTE	1	U
535.01	GASTRITIS, WITH HEMORRHAG	1	U
535.40	GASTRITIS,W/O HEM. OTHER	1	U
535.41	GASTRITIS,OTH SPEC. W/HEM	1	U
535.50	GASTRITIS/GASTRODUOD. W/O	1	U
535.51	ASTRITIS/DUODEN W/O HEMO	1	U
535.60	DUODENITIS W/O HEMORRHAGE	1	U
535.61	DUODENITIS W/ HEMORRHAGE	1	U
536.2	VOMITING PERSISTENT	1	U
555.0	ENTERITIS SMALL INTESTINE	1	L
555.1	REG ENTERITIS, LG INTEST	1	L
555.2	REG ENTERIT SM/LG INTEST	1	L
558.2	GASTROENTERITIS/COLITIS,	1	L
558.9	GASTROENTERITIS/COLITIS N	1	L
569.9	INTESTINAL DISORDER NOS	1	L
787.01	NAUSEA WITH VOMITING	1	U
787.02	NAUSEA ALONE	1	U
787.03	VOMITING ALONE	1	U
787.3	FLATUL/ERUCTAT/GAS PAIN	1	L
787.91	DIARRHEA	1	L
567.1	PNEUMOCOCCAL PERITONITIS	2	L
567.2	PERITONITIS SUPPURATIVE	2	L
567.8	PERITONITIS, OTHER SPECIF	2	L
567.9	PERITONITIS NOS	2	L
568.9	PERITONEAL DISORDER NOS	2	L
578.0	HEMATEMESIS	2	U
787.1	HEARTBURN/PYROSIS	2	U
787.2	DYSPHAGIA	2	U
789.00	ABDOMINAL PAIN, UNSPECIF.	2	L
789.01	ABDOMINAL PAIN,RIGHT UPPE	2	L
789.02	ABDOMINAL PAIN,LEFT UPPER	2	L
789.03	ABDOMINAL PAIN,RIGHT LOW	2	L
789.04	ABDOMINAL PAIN,LEFT LOWER	2	L

#### GI-Total ICD-9-CM Code List, Cont'd

789.05	ABDOMINAL PAIN,PERIUMBILI	2	L
789.06	ABDOMINAL PAIN,EPIGASTRIC	2	L
789.07	ABDOMINAL PAIN,GENERALIZE	2	L
789.09	ABDOMINAL PAIN,OTHER SPEC	2	L
789.60	ABDOMINAL TENDERNESS, UNS	2	L
789.61	ABDOMINAL TENDERNESS,RUQ	2	L
789.62	ABDOMINAL TENDERNESS,LUQ	2	L
789.63	ABDOMINAL TENDERNESS.RLQ	2	L
789.64	ABDOMINAL TENDERNESS,LLQ	2	L
789.65	ABDOMINAL TENDERNESS PERI	2	L
789.66	ABDOMINAL TENDERNESS EPIG	2	L
789.67	ABDOMINAL TENDERNESS GENE	2	L
789.69	ABDOMINAL TENDERNESS,OT S	2	
789.9	ABDOMEN/PELVIS SYMPTOMS O	2	L
, 0,,,	THE CHIEF THE STIME TOTALS O	_	
001.0	CHOLERA D/T VIB CHOLERAE	3	L
001.0	CHOLERA D/T VIB EL TOR	3	L
001.9	CHOLERA NOS	3	L
003.0	SALMONELLA GASTROENTERITI	3	L
003.20	LOCAL SALMONELLA INF NOS	3	L
003.29	LOCAL SALMONELLA INF NEC	3	L
003.8	SALMONELLA INFECTION NEC	3	L
003.9	SALMONELLA INFECTION UNSP	3	L
004.0	SHIGELLA DYSENTERIAE	3	L
004.1	SHIGELLA FLEXNERI	3	L
004.2	SHIGELLA BOYDII	3	L
004.3	SHIGELLA SONNEI	3	L
004.8	SHIGELLA INFECTIONS OTHER	3	
004.9	SHIGELLOSIS, UNSPECIFIED	3	
005.0	STAPH FOOD POISONING	3	U
005.2	FOOD POIS D/T C. PERFRIN	3	L
005.3	FOOD POIS: CLOSTRID NEC	3	
005.4	FOOD POIS: V. PARAHAEM	3	
005.81	FOOD POISON-VIBRIO VULNIF	3	
006.0	AC AMEBIASIS W/O ABSCESS	3	L
006.8	AMEBIC INFECTION NEC	3	L
006.9	AMEBIASIS UNSPECIFIED	3	L
007.0	BALANTIDIASIS	3	L
007.1	GIARDIASIS	3	L
007.2	COCCIDIOSIS	3	L
007.3	INTEST TRICHOMONIASIS	3	L
007.4	CRYPTOSPORIDOSIS	3	L
007.5	CYCLOSPORIASIS	3	L
007.8	PROTOZOAL INTEST DIS NEC	3	L
007.9	PROTOZOAL INTEST DIS NOS	3	L
008.00	E.COLI,UNSP.(ESCHERICHIA	3	L
008.00	ENTRPATHOGENIC E COLI	3	L
008.02	ENTEROTOXIGENIC E COLI	3	L
000.02	LITEROTORIOLITIC E COLI		

#### GI-Total ICD-9-CM Code List, Cont'd

008.03	ENTEROINVASIVE E COLI	3	L
008.04	ENTEROHEMORRAGIE E COLI	3	L
008.09	OTHER E COLI ENTERITIS	3	L
008.1	ARIZONA ENTERITIS	3	L
008.2	AEROBACTER ENTERITIS	3	L
008.3	PROTEUS ENTERITIS	3	L
008.41	STAPHYLOCOCC ENTERITIS	3	L
008.43	CAMPYLOBACTER ENTERITIS	3	L
008.44	YERSINIA ENTEROCOLITICA	3	L
008.45	CLOSTRIDIUM DIFFICILE	3	L
008.46	INTESTINAL INF.DUE TO ANA	3	L
008.47	GRAM-NEG ENTERITIS NEC	3	L
008.61	ENTERITIS D/T ROTAVIRUS	3	L
008.62	ENTERITIS D/T ADENOVIRUS	3	L
008.63	ENTERITIS D/T NORWALK VIRUS	3	L
008.64	ENTERITIS D/T SMALL ROUND VIRUS NEC	3	L
008.65	ENTERITIS D/T CALCIVIRUS	3	L
008.66	ENTERITIS D/T ASTROVIRUS	3	L
	ENTERITIS DUE TO ENTEROVIRUS NOT	3	L
008.67	ELSEWHERE CLASSIFIED	3	L
021.1	TULAREMIA, ENTERIC	3	L
127.0	ASCARIASIS	3	L
127.1	ANISAKIASIS	3	L
127.2	STRONGYLOIDIASIS	3	L
127.3	TRICHURIASIS	3	L
127.4	ENTEROBIASIS	3	L
127.5	CAPILLARIASIS	3	L
127.6	TRICHOSTRONGYLIASIS	3	L
127.7	INTEST HELMINTHIASIS NEC	3	L
127.8	MIXED INTESTINE HELMINTH	3	L
127.9	INTESTINAL HELMINTHIASIS,	3	L
129	INTESTINAL PARASITISM UNS	3	L
567.0	PERITONITIS IN INFEC DIS	3	L
787.4	PERISTALSIS, VISIBLE	3	L

#### GI-Lower ICD-9-CM Code List

005.9 008.49 008.5 008.69 008.8 009.0 009.1 009.2	FOOD POISONING, OTHER BAC FOOD POISONING NOS INTEST. INFECT BY OTHER B BACTERIAL ENTERITIS NOS ENTERITIS VIRAL OTHER ENTERITIS VIRAL NOS ENTERITIS/COLITIS/GASTRO. COLITIS ENTERIT,GASTRO,IN DIARRHEA, INFECTIOUS NOS	1 1 1 1 1 1 1 1	L L L L L L
005.9 008.49 008.5 008.69 008.8 009.0 009.1 009.2	FOOD POISONING NOS INTEST. INFECT BY OTHER B BACTERIAL ENTERITIS NOS ENTERITIS VIRAL OTHER ENTERITIS VIRAL NOS ENTERITIS/COLITIS/GASTRO. COLITIS ENTERIT,GASTRO,IN DIARRHEA, INFECTIOUS NOS	1 1 1 1 1 1	L L L L
008.5 008.69 008.8 009.0 009.1 009.2	BACTERIAL ENTERITIS NOS ENTERITIS VIRAL OTHER ENTERITIS VIRAL NOS ENTERITIS/COLITIS/GASTRO. COLITIS ENTERIT,GASTRO,IN DIARRHEA, INFECTIOUS NOS	1 1 1 1 1	L L L
008.5 008.69 008.8 009.0 009.1 009.2	BACTERIAL ENTERITIS NOS ENTERITIS VIRAL OTHER ENTERITIS VIRAL NOS ENTERITIS/COLITIS/GASTRO. COLITIS ENTERIT,GASTRO,IN DIARRHEA, INFECTIOUS NOS	1 1 1 1	L L
008.69 008.8 009.0 009.1 009.2	ENTERITIS VIRAL OTHER ENTERITIS VIRAL NOS ENTERITIS/COLITIS/GASTRO. COLITIS ENTERIT,GASTRO,IN DIARRHEA, INFECTIOUS NOS	1 1 1	L L
008.8 009.0 009.1 009.2	ENTERITIS VIRAL NOS ENTERITIS/COLITIS/GASTRO. COLITIS ENTERIT,GASTRO,IN DIARRHEA, INFECTIOUS NOS	1 1 1	L
009.0 009.1 009.2	ENTERITIS/COLITIS/GASTRO. COLITIS ENTERIT,GASTRO,IN DIARRHEA, INFECTIOUS NOS	1 1	
009.1 009.2	COLITIS ENTERIT,GASTRO,IN DIARRHEA, INFECTIOUS NOS	1	
009.2	DIARRHEA, INFECTIOUS NOS		L
	•	1	L
002.3	DIARRHEA OF INFECT ORIG	1	L
	GASTROINTESTINAL ANTHRAX	1	L
	ENTERITIS SMALL INTESTINE	1	L
	REG ENTERITIS, LG INTEST	1	L
	REG ENTERIT SM/LG INTEST	1	L
	GASTROENTERITIS/COLITIS,	1	L
	GASTROENTERITIS/COLITIS N	1	L
	INTESTINAL DISORDER NOS	1	L
	FLATUL/ERUCTAT/GAS PAIN	1	L
	DIARRHEA	1	L
707.51	2 11 11 11 11 11 11 11 11 11 11 11 11 11	_	
567.1	PNEUMOCOCCAL PERITONITIS	2	L
	PERITONITIS SUPPURATIVE	2	L
	PERITONITIS, OTHER SPECIF	2	L
	PERITONITIS NOS	2	L
	PERITONEAL DISORDER NOS	2	L
	ABDOMINAL PAIN,UNSPECIF.	2	L
	ABDOMINAL PAIN,RIGHT UPPE	2	L
	ABDOMINAL PAIN,LEFT UPPER	2	L
	ABDOMINAL PAIN,RIGHT LOW	2	L
	ABDOMINAL PAIN,LEFT LOWER	2	L
	ABDOMINAL PAIN,PERIUMBILI	2	L
	ABDOMINAL PAIN,EPIGASTRIC	2	L
	ABDOMINAL PAIN,GENERALIZE	2	L
	ABDOMINAL PAIN,OTHER SPEC	2	L
	ABDOMINAL TENDERNESS, UNS	2	L
	ABDOMINAL TENDERNESS,RUQ	2	L
	ABDOMINAL TENDERNESS,LUQ	2	L
	ABDOMINAL TENDERNESS.RLQ	2	L
	ABDOMINAL TENDERNESS,LLQ	2	L
	ABDOMINAL TENDERNESS PERI	2	L
	ABDOMINAL TENDERNESS EPIG	2	L
	ABDOMINAL TENDERNESS GENE	2	L
	ABDOMINAL TENDERNESS,OT S	2	L
	ABDOMEN/PELVIS SYMPTOMS O	2	L
	THE CALLET HE THE DITTE OF THE C		
001.0	CHOLERA D/T VIB CHOLERAE	3	L

#### GI-Lower ICD-9-CM Code List, Cont'd

001.1	CHOLERA D/T VIB EL TOR	3	L
001.9	CHOLERA NOS	3	L
003.0	SALMONELLA GASTROENTERITI	3	L
003.20	LOCAL SALMONELLA INF NOS	3	L
003.29	LOCAL SALMONELLA INF NEC	3	L
003.8	SALMONELLA INFECTION NEC	3	L
003.9	SALMONELLA INFECTION UNSP	3	L
004.0	SHIGELLA DYSENTERIAE	3	L
004.1	SHIGELLA FLEXNERI	3	L
004.2	SHIGELLA BOYDII	3	L
004.3	SHIGELLA SONNEI	3	L
004.8	SHIGELLA INFECTIONS OTHER	3	L
004.9	SHIGELLOSIS, UNSPECIFIED	3	L
005.2	FOOD POIS D/T C. PERFRIN	3	L
005.3	FOOD POIS: CLOSTRID NEC	3	L
005.4	FOOD POIS: V. PARAHAEM	3	L
005.81	FOOD POISON-VIBRIO VULNIF	3	L
006.0	AC AMEBIASIS W/O ABSCESS	3	L
006.8	AMEBIC INFECTION NEC	3	L
006.9	AMEBIASIS UNSPECIFIED	3	L
007.0	BALANTIDIASIS	3	L
007.1	GIARDIASIS	3	L
007.2	COCCIDIOSIS	3	L
007.3	INTEST TRICHOMONIASIS	3	L
007.4	CRYPTOSPORIDOSIS	3	L
007.5	CYCLOSPORIASIS	3	L
007.8	PROTOZOAL INTEST DIS NEC	3	L
007.9	PROTOZOAL INTEST DIS NOS	3	L
008.00	E.COLI,UNSP.(ESCHERICHIA	3	L
008.01	ENTRPATHOGENIC E COLI	3	L
008.02	ENTEROTOXIGENIC E COLI	3	L
008.03	ENTEROINVASIVE E COLI	3	L
008.04	ENTEROHEMORRAGIE E COLI	3	L
008.09	OTHER E COLI ENTERITIS	3	L
008.1	ARIZONA ENTERITIS	3	L
008.2	AEROBACTER ENTERITIS	3	L
008.3	PROTEUS ENTERITIS	3	L
008.41	STAPHYLOCOCC ENTERITIS	3	L
008.43	CAMPYLOBACTER ENTERITIS	3	L
008.44	YERSINIA ENTEROCOLITICA	3	L
008.45	CLOSTRIDIUM DIFFICILE	3	L
008.46	INTESTINAL INF.DUE TO ANA	3	L
008.47	GRAM-NEG ENTERITIS NEC	3	L
008.61	ENTERITIS D/T ROTAVIRUS	3	L
008.62	ENTERITIS D/T ADENOVIRUS	3	L
008.63	ENTERITIS D/T NORWALK VIRUS	3	L
008.64	ENTERITIS D/T SMALL ROUND VIRUS NEC	3	L
008.65	ENTERITIS D/T CALCIVIRUS	3	L

#### GI-Lower ICD-9-CM Code List, Cont'd

008.66	ENTERITIS D/T ASTROVIRUS	3	L
	ENTERITIS DUE TO ENTEROVIRUS NOT	3	L
008.67	ELSEWHERE CLASSIFIED	3	L
021.1	TULAREMIA, ENTERIC	3	L
127.0	ASCARIASIS	3	L
127.1	ANISAKIASIS	3	L
127.2	STRONGYLOIDIASIS	3	L
127.3	TRICHURIASIS	3	L
127.4	ENTEROBIASIS	3	L
127.5	CAPILLARIASIS	3	L
127.6	TRICHOSTRONGYLIASIS	3	L
127.7	INTEST HELMINTHIASIS NEC	3	L
127.8	MIXED INTESTINE HELMINTH	3	L
127.9	INTESTINAL HELMINTHIASIS,	3	L
129	INTESTINAL PARASITISM UNS	3	L
567.0	PERITONITIS IN INFEC DIS	3	L
787.4	PERISTALSIS, VISIBLE	3	L

### GI-Upper ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus	Upper GI
078.82	EPIDEMIC VOMITING SYND	1	U
535.00	GASTRITIS, ACUTE	1	U
535.01	GASTRITIS, WITH HEMORRHAG	1	U
535.40	GASTRITIS,W/O HEM OTHER	1	U
535.41	GASTRITIS,OTH SPEC W/HEM	1	U
535.50	GASTRITIS/GASTRODUOD. W/O	1	U
535.51	.ASTRITIS/DUODEN W/O HEMO	1	U
535.60	DUODENITIS W/O HEMORRHAGE	1	U
535.61	DUODENITIS W/ HEMORRHAGE	1	U
536.2	VOMITING PERSISTENT	1	U
787.01	NAUSEA WITH VOMITING	1	U
787.02	NAUSEA ALONE	1	U
787.03	VOMITING ALONE	1	U
578.0	HEMATEMESIS	2	U
787.1	HEARTBURN/PYROSIS	2	U
787.2	DYSPHAGIA	2	U
005.0	STAPH FOOD POISONING	3	U

#### Neuro ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
047.8	MENINGITIS, VIRAL NEC	1
047.9	MENINGITIS, VIRAL NOS	1
048	DIS ENTEROVIRAL OF CNS, NEC	1
049.0	CHORIOMENINGITIS, LYMPHOCYTIC	1
049.9	ENCEPHALITIS VIRAL NOS	1
320.9	BACTERIAL MENINGITIS NOS	1
321.2	MENINGITIS D/T VIRAL DISEASES NEC	1
322.0	MENINGITIS, NONPYOGENIC	1
322.1	MENINGITIS, EOSINOPHILIC	1
322.9	MENINGITIS NOS	1
323.8	OTHER CAUSES OF ENCEPHALI	1
323.9	ENCEPHALITIS NOS	1
348.3	ENCEPHALOPATHY NOS	1
781.6	MENINGISMUS	1
293.0	DELIRIUM, ACUTE	2
293.1	CONFUSIONAL STATE(DEL SUBACUTE)	2
307.81	TENSION HEADACHE	2
780.02	ALTERATION OF AWARENESS/T	2
780.09	ALTERATION OF AWARENESS	2
780.39	CONVULSIONS, OTHER	2
784.0	HEADACHE	2
784.3	APHASIA	2
003.21	SALMONELLA MENINGITIS	3
	MENINGITIS (MENINGOCOCCAL)	3
036.0 036.1	ENCEPHALITIS, MENINGOCCAL	3
036.1	MENINGOCOCCEMIA INFECTION	3
036.89	INFECTION, MENINGOCCAL NEC	3
036.89	INFECTION, MENINGOCCAL NOS	3
047.0	COXSACKIE DUE TO MENINGIT	3
047.0	MENINGITIS D/T ECHO VIRUS	3
047.1	MENINGITIS D/T ECHO VIRUS  MENINGITIS, ADENOVIRUS	3
047.1	OTHER SPECIFIED NON-ARTHORPOD-BORNE	
049.8	VIRAL DIS	3
052.0	POSTVARICELLA ENCEPHALIT	3
053.0	HERPES ZOSTER WITH MENINGITIS	3
053.10	HERPES ZOSTER W UNSPED NER S	3
054.3	HERPETIC MENINGOENCEPHALI	3
054.72	HSV, MENINGITIS	3
055.0	POSTMEASLES ENCEPHALITIS	3
056.00	RUBELLA, UNSPEC NEURO COMPLIC	3
056.00	RUBELLA, ENCEPHALOMYELITIS	3
056.09	RUBELLA, OTHER NEURO COMPLI	3
061	DENGUE	3
062.0	ENCEPHALITIS, JAPANESE	3
062.0	ENCEPHALITIS, WESTERN EOUINE	3

#### Neuro ICD-9-CM Code List, Cont'd

		1
062.2	ENCEPHALITIS, EASTERN EQUINE	3
062.3	ST. LOUIS ENCEPHALITIS	3
062.4	ENCEPHALITIS, AUSTRALIAN	3
062.5	ENCEPHALITIS, CALIFORNIA VIRUS	3
062.8	ENCEPHALITIS, MOSQUITO-BORNE NEC	3
062.9	ENCEPHALITIS, MOSQUITO-BORNE NOS	3
063.0	ENCEPHALITIS, RUSSIAN SPRING-SUMME	3
063.1	LOUPING ILL	3
063.2	ENCEPHALITIS, CENTRAL EUROPEAN	3
063.8	ENCEPHALITIS, VIRAL, TICK-BORNE NEC	3
063.9	ENCEPHALITIS, TICK-BORNE VIRAL NOS	3
064	ENCEPHALITIS, ARTHPD-BORNE VIRAL NE	3
066.4	WEST NILE FEVER	3
071	RABIES	3
072.1	MUMPS MENINGITIS	3
072.2	MUMPS ENCEPHALITIS	3
084.9	MALARIA COMPLICATED NEC	3
086.2	CHAGA'S DISEASE W/O MENTION OF ORG	3
086.3	TRYPANOSOMIASIS, GAMBIAN	3
086.4	TRYPANOSOMIASIS, RHODESIAN	3
086.5	TRYPANOSOMIASIS, AFRICAN	3
091.81	ACUTE SYPHIL MENINGITIS	3
098.82	GONOCCOCAL, MENINGITIS	3
100.81	LEPTOSPIRAL INFECTION, MENG(ASEPTIC)	3
114.2	COCCIDIODAL MENINGITIS	3
115.01	HISTOPLASMOSIS MENINGITIS	3
115.11	HISTOPLASMA DUBOISII, MENINGITIS	3
115.11	HISTOPLASMOSIS, UNSPEC, MENINGITIS	3
117.5	CRYPTOCOCCOSIS	3
-	TOXOPLASMOSIS, MENINGOENCEPHALITIS	3
130.0		3
136.2	SPECIFIC INF BY FREE LIVING AMOEBA	
320.0	HEMOPHILUS MENINGITIS	3
320.1	MENINGITIS, PNEUMOCOCCAL	3
320.2	MENINGITIS, STREPTOCOCCAL	3
320.3	MENINGITIS, STAPHYLOCCAL	3
320.7	MENG, IN OTH BCTRL DISEASE CE	3
320.81	MENINGITIS, D/T ANAEROBIC BACTERIA	3
320.82	MENINGITIS DUE TO GRAM-NE,	3
320.89	MENINGITIS DUE TO OTHER S	3
321	MENINGITIS, CRYPTOCCAL	3
321.1	MENINGITIS IN OTH FUNGAL,	3
321.3	MENINGITIS D/T TRYPANOSOMIASIS	3
321.4	MENINGITIS IN SARCOIDOSIS	3
321.8	MENG D/T OTH NONBACT ORGANISM CE	3
323.0	ENCEPHALITIS IN VIRAL DISEASE CE	3
323.1	ENCEPHALITIS IN RICKETTSIAL DIS CE	3
323.2	ENCEPHALITIS IN PROTOZOAL DIS CE	3

#### Neuro ICD-9-CM Code List, Cont'd

323.4	ENCEPHALITIS, OTH D/T INFECTION CE	3
323.5	ENCEPHALITIS, POSTIMMUNIZATION	3
323.6	ENCEPHALITIS POSTINFECTIO	3
323.7	ENCEPHALITIS, TOXIC	3

#### Rash ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
050.0	SMALL POX, VARIOLA MAJOR	1
050.1	SMALL POX, ALASTRIM	1
050.2	SMALL POX, MODIFIED	1
050.9	SMALLPOX NOS	1
051.0	COWPOX	1
051.1	PSEUDOCOWPOX	1
052.7	VARICELLA COMPLICAT NEC	1
052.8	VARICELLA W/UNSPECIFIED C	1
052.9	VARICELLA NOS	1
057.8	EXANTHEMATA VIRAL OTHER S	1
057.9	EXANTHEM VIRAL, UNSPECIFI	1
695.0	ERYTHEMA TOXIC	1
695.1	ERYTHEMA MULTIFORME	1
695.2	ERYTHEMA NODOSUM	1
695.89	ERYTHEMATOUS CONDITIONS O	1
695.9	ERYTHEMATOUS CONDITION N	1
602.0	DEDMA TITIC LINCRECIPIED CA	2
692.9	DERMATITIS UNSPECIFIED CA	2
782.1	RASH/OTHER NONSPEC SKIN E	2
026.0	SPIRILLARY FEVER	3
026.1	STREPTOBACILLARY FEVER	3
026.9	RAT-BITE FEVER UNSPECIFIED	3
051.2	DERMATITIS PUSTULAR, CONT	3
051.9	PARAVACCINIA NOS	3
053.20	HERPES ZOSTER DERMATITIS E	3
	HERPES ZOSTER WITH OTHER SPECIF	2
053.79	COMPLIC	3
053.8	H.Z. W/ UNSPEC. COMPLICATION	3
053.9	HERPES ZOSTER NOS W/O COM	3
054.0	ECZEMA HERPETICUM	3
054.79	HERPES SIMPLEX W/OTH.SPEC	3
054.8	HERPES SIMPLEX, W/UNS.COM	3
054.9	HERPES SIMPLEX NOS	3
055.79	MEASLES COMPLICATION NEC	3
055.8	MEASLES COMPLICATION NOS	3
055.9	MEASLES UNCOMPLICATED	3
056.79	RUBELLA COMPLICATION NEC	3
056.8	RUBELLA COMPLICATION NOS	3
056.9	RUBELLA UNCOMPLICATED	3
057.0	ERYTHEMIA INFECT.(5TH DIS	3
074.3	HAND/FOOT AND MOUTH DISEA	3
078.0	MOLLUSCUM CONTAGIOSUM	3
082.0	ROCKY MOUNTAIN SPOTTED FE	3
083.2	RICKETTSIALPOX	3
695.3	ROSACEA	3
695.4	LUPUS ERYTHEMATOSUS	3

### Resp ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
020.3	PRIMARY PNEUMONIC PLAGUE	1
020.4	SECONDARY PNEUMON PLAGUE	1
020.5	PNEUMONIC PLAGUE NOS	1
021.2	PULMONARY TULAREMIA	1
022.1	PULMONARY ANTHRAX	1
460	NASOPHARYNGITIS, ACUTE	1
462	PHARYNGITIS, ACUTE NOS	1
463	TONSILLITIS, ACUTE	1
464.00	LARYNGITIS, AC.W/O OBSTRU	1
464.01	LARYNGITIS, AC.W/OBSTRUCT	1
464.10	TRACHEITIS W/O OBSTRUCTIO	1
464.11	AC TRACHEITIS W OBSTRUCT	1
464.20	LARYNGOTRACHEITIS W/O OBS	1
464.21	AC LARYNGOTRACH W OBSTR	1
464.30	EPIGLOTTITIS ACUTE W/O OB	1
464.31	AC EPIGLOTTITIS W OBSTR	1
464.4	CROUP	1
464.50	SUPRAGLOTTIS,UNS.W/O OBST	1
464.51	SUPRAGLOTTIS,UNS.W/ OBST	1
465.0	LARYNGOPHARYNGITIS, ACUTE	1
465.8	URI, OTHER MULT. SITES	1
465.9	URI, ACUTE NOS	1
466.0	BRONCHITIS ACUTE	1
466.11	BRONCHIOLITIS ACUTE DUE T	1
466.19	BRONCHIOLITIS DUE TO OT/I	1
478.9	RESPIRATORY TRACT DISEASE	1
480.8	VIRAL PNEUMONIA NEC	1
480.9	PNEUMONIA, VIRAL	1
482.9	PNEUMONIA, BACTERIAL NOS	1
483.8	PNEUMONIA D/T ORGANISM NEC	1
484.5	PNEUMONIA IN ANTHRAX	1
484.8	PNEUM IN INFECT DIS NEC	1
485	BRONCHOPNEUMONIA ORGANISM	1
486	PNEUMONIA, ORGANISM NOS	1
490	BRONCHITIS NOS	1
511.0	PLEURISY W/O EFFUSION	1
511.1	PLEURAL EFFUSION-VIRAL(NO	1
511.8	HEMOTHORAX	1
513.0	ABSCESS LUNG	1
513.1	ABSCESS OF MEDIASTINUM	1
518.4	EDEMA LUNG ACUTE NOS	1
518.84	RESPIRATORY FAILURE,ACUTE	1
519.2	MEDIASTINITIS	1
519.3	MEDIASTINUM, DISEASES NEC	1
769	RESPIRATORY DISTRESS SYND	1
786.00	RESPIRATORY ABNORMALITY	1

#### Resp ICD-9-CM Code List, Cont'd

786.06	TACHYPNEA	1
786.1	STRIDOR	1
786.2	COUGH	1
786.3	HEMOPTYSIS	1
786.52	PAINFUL RESPIRAT./PLEUROD	1
799.1	RESPIRATORY ARREST	1
,,,,,,		
075	MONONUCLEOSIS, INFECTIOUS	2
381.00	OTITIS MEDIA NONSUP ACUTE	2
381.01	OTITIS MEDIA SEROUS ACUTE	2
381.03	OM, ACUTE SANGUINOS	2
381.04	OM, ACUTE ALLERGIC SEROUS	2
381.4	OTITIS MEDIA NONSUPPURATI	2
381.50	EUSTACHIAN SALPINGITIS, U	2
381.51	EUSTACHIAN SALPINGITIS AC	2
382	OM SUPPURATIVE & UNSPEC	2
382.0	OM, ACUTE SUPPURATIVE	2
382.00	OTITIS MEDIA SUPP. ACUTE	2
382.01	OTITIS MEDIA SUP.W/EARDRU	2
382.02	OTITIS MEDIA SUPP.ACUTE I	2
382.4	OM, SUPPURATIVE NOS	2
382.9	OTITIS MEDIA NOS	2
461.0	MAXILLARY SINUSITIS, ACUT	2
461.1	SINUSITIS, FRONTAL-ACUTE	2
461.2	SINUSITIS, ETHMOIDAL	2
461.3	SINUSITIS,ACUTE SPHENOIDA	2
461.8	SINUSITIS, ACUTE, OTHER	2
461.9	SINUSITIS, ACUTE NOS	2
493.00	ASTHMA EXTRINSIC W/O STAT	2
493.01	ASTHMA, EXTRINSIC W/ASTHM	2
493.02	ASTHMA,EXTRINSIC W/AC.EXA	2
493.10	ASTHMA, INTRINSIC W/O AST	2
493.11	ASTHMA, INTRINSIC W/ASTHM	2
493.12	ASTHMA INTRINSIC W/AC.EXA	2
493.90	ASTHMA W/O STATUS ASTHMAT	2
493.91	ASTHMA W/ STATUS ASTHMATI	2
493.92	ASTHMA UNSPEC.W/AC.EXACER	2
511.9	PLEURAL EFFUSION UNSPECIF	2
514	EDEMA PULMONARY	2
518.0	PULMONARY COLLAPSE	2
518.81	RESPIRATORY FAILURE, ACUT	2
518.82	PULMONARY INSUFFICIENCY	2
782.5	CYANOSIS	2
784.1	PAIN IN THROAT	2
786.05	SHORTNESS OF BREATH	2
786.07	WHEEZING	2
786.09	DYSPNEA/RESP.ABNORMALITIE	2
786.50	CHEST PAIN, UNSPECIFIED	2

#### Resp ICD-9-CM Code List, Cont'd

786.51	PRECORDIAL PAIN	2
786.59	CHEST PAIN, OTHER	2
786.7	ABNORMAL CHEST SOUNDS	2
786.9	RESP SYS/CHEST SYMP NEC	2
003.22	SALMONELLA PNEUMONIA	3
031.0	MYCOBACTERIA, PULMONARY	3
031.8	MYCOBACTERIAL DIS NEC	3
031.9	MYCOBACTERIA DISEASES/UNS	3
032.0	FAUCIAL DIPHTHERIA	3
032.1	NASOPHARYNX DIPHTHERIA	3
032.2	ANT NASAL DIPHTHERIA	3
032.3	LARYNGEAL DIPHTHERIA	3
032.89	DIPHTHERIA NEC	3
032.9	DIPHTHERIA NOS	3
033.0	BORDETELLA PERTUSSIS	3
033.1	BORDETELLA PARAPERTUSSIS	3
033.8	WHOOPING COUGH NEC	3
033.9	WHOOPING COUGH(UNSPE.ORGA	3
034.0	STREP SORE THROAT	3
052.1	VARICELLA WITH PNEUMONIA	3
055.1	POSTMEASLES PNEUMONIA	3
055.2	POSTMEASLES OTITIS MEDIA	3
073.0	ORNITHOSIS, WITH PNEUMONIA	3
073.7	ORNITHOSIS, OTHER SPECIF COMPLIC	3
073.8	ORNITHOSIS, UNSPECIFIED COMPLIC	3
073.9	ORNITHOSIS, UNSPECIFIED	3
079.0	ADENOVIRUS INFECT NOS	3
079.1	ECHO VIRUS INFECT NOS	3
079.2	COXSACKIE VIRUS	3
079.3	RHINOVIRUS INFECT NOS	3
079.6	RESPIRATORY SYNCYTIAL VIR	3
079.81	HANTAVIRUS INFECTION	3
098.6	GONOCCOCAL, INFECTION OF PHARYNX	3
114.5	PULM COCCIDIOIDOMYCOS,UN	3
114.9	COCCIDIOIDOMYCOSIS NOS	3
	HISTOPLASMOSIS, WITHOUT MENTION OF	3
115.00	MANIFESTATION	
115.05	HISTOPLASM CAPS PNEUMON	3
115.09	HISTOPLASMA CAPSULAT NEC	3
115.10	HISTOPLASMA DUBOISII NOS	3
115.15	HISTOPLASMA DUBOISII PNEUMONIA	3
115.90	HISTOPLASMOSIS,W/O MANIFE	3
115.95	HISTOPLASMOSIS PNEUMONIA	3
115.99	HISTOPLASMOSIS NEC	3
116.0	BLASTOMYCOSIS	3
116.1	PARACOCCIDIOIDOMYCOSIS	3
117.1	SPOROTRICHOSIS	3

#### Resp ICD-9-CM Code List, Cont'd

117.3	PULMONARY ASPERGILLOSIS	3
117.5	CRYPTOCOCCOSIS	3
130.4	TOXOPLASMA PNEUMONITIS	3
136.3	PNEUMOCYSTOSIS	3
480.0	ADENOVIRAL PNEUMONIA	3
480.1	PNEUMONIA,RESP.SYNCYTIAL	3
480.2	PARINFLUENZA VIRAL PNEUM	3
481	PNEUMOCOCCAL PNEUMONIA (L	3
482.0	PNEUMONIA-KLEBSIELLA PNEU	3
482.1	PNEUMONIA DUE TO PSEUDOMO	3
482.2	H.INFLUENZAE PNEUMONIA	3
482.30	STREPTOCOCCUS UNSPECIFIED	3
482.31	PNEUMONIA/STREPTOC GPA	3
482.32	PHEUMONIA/STREPTO GPB	3
482.39	PNEUMONIA/OTHER STREPTOC	3
482.40	STAPH PNEUMONIA NOS	3
482.41	PNEUMONIA, STAPHYLOCOC. A	3
482.49	OTH STAPH PNEUMONIA	3
482.81	PNEUMONIA/ANAEROBES	3
482.82	PNEUMONIA/E COLI	3
482.83	PNEUMONIA/OTHER GNEG BAC	3
482.84	LEGIONNAIRES' DISEASE	3
482.89	PNEUMONIA/OTHER SPEC BAC	3
483.0	PNEUMONIA MYCOPLASMA	3
483.1	PNEUMONIA DUE TO CHLAMYD	3
484.1	PNEUM W CYTOMEG INCL DIS	3
484.3	PNEUMONIA IN WHOOP COUGH	3
484.6	PNEUMONIA IN ASPERGILLOSI	3
484.7	PNEUM IN OTH SYS MYCOSES	3
487.0	INFLUENZA WITH PNEUMONIA	3
487.1	INFLUENZA W/OTH. RESP. MA	3
487.8	INFLUENZA W/OTHR MANIFEST	3

### Severe Illness\_Dth due to ID ICD-9-CM Code List

ICD9CM	ICD9DESCR	Consensus
780.01	COMA	1
785.50	SHOCK (UNSPECIFIED)	1
785.59	SHOCK, OTHER, W/O TRAUMA	1
798.1	DEATH INSTANTANEOUS	1
798.2	DEATH IN E.R.	1
798.9	DEATH UNATTENDED	1
799.9	MORTALITY, CAUSE UNKNOWN	1
656.40	INTRAUTERINE DEATH, UNSPE	3
656.41	INTRAUTERINE DEATH DEL.AN	3
656.43	FETAL DEATH, ANTEPARTUM	3
761.8	ABORTION OF FETUS, SPONTA	3
768.0	FETAL DEATH	3
779.9	STILLBIRTH	3
798.0	SUDDEN INFANT DEATH SYND	3