Healthcare Cost and Utilization Project – HCUP
A Federal-State-Industry Partnership in Health Data
Sponsored by the Agency for Healthcare Research and Quality

CLINICAL CLASSIFICATIONS SOFTWARE (CCS) 2009

Issued December 2008

Table of Contents

HCUP CONTACT INFORMATION

For AHRQ:

<div align="center">

Agency for Healthcare Research and Quality
Healthcare Cost and Utilization Project (HCUP)
540 Gaither Road, 5th Floor
Rockville, Maryland 20850

Phone: (301) 427-1410
Fax: (301) 427-1430
E-mail: hcup@ahrq.gov
Website: http://www.ahrq.gov/data/hcup/

</div>

For Technical Assistance:

<div align="center">

Visit the AHRQ-sponsored HCUP User Support Website at:

http://www.hcup-us.ahrq.gov

Or send an e-mail to HCUP User Support at:

hcup@ahrq.gov

</div>

Suggested Citation:

Elixhauser A, Steiner C, Palmer L. *Clinical Classifications Software (CCS), 2008*. U.S. Agency for Healthcare Research and Quality. Available: http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp

ABSTRACT

Developed at the Agency for Healthcare Research and Quality (AHRQ), the Clinical Classifications Software (CCS) is a tool for clustering patient diagnoses and procedures into a manageable number of clinically meaningful categories. CCS offers researchers the ability to group conditions and procedures without having to sort through thousands of codes. This "clinical grouper" makes it easier to quickly understand patterns of diagnoses and procedures so that health plans, policy makers, and researchers can analyze costs, utilization, and outcomes associated with particular illnesses and procedures.

CCS collapses diagnosis and procedure codes from the *International Classification of Diseases, 9th Revision, Clinical Modification* (IDC-9-CM), which contains more than 13,600 diagnosis codes and 3,700 procedure codes. Without the CCS tool, the large number of ICD-9-CM codes makes statistical analysis and reporting difficult and time-consuming.

CCS consists of two related classification systems, single-level and multi-level, which are designed to meet different needs. *Single-level* CCS is most useful for ranking of diagnoses and procedures and for direct integration into risk adjustment and other software. *Multi-level* CCS is ideal for evaluating larger aggregations of conditions and procedures or exploring these groupings in greater detail.

INTRODUCTION TO THE CLINICAL CLASSIFCIATIONS SOFTWARE (CCS) 2009 User's Guide

Overview

Clinical Classifications Software provides a way to classify diagnoses and procedures into a limited number of categories by aggregating individual ICD-9-CM codes into broad diagnosis and procedure groups to facilitate statistical analysis and reporting. This document provides a description of the CCS categorization scheme. Electronic files containing the translation of ICD-9-CM diagnosis and procedure codes into CCS categories can be downloaded from this site. (CCS was formally called CCHPR, Clinical Classifications for Health Policy Research.)

The CCS tool is continually updated. The current version is based on ICD-9-CM codes that are valid for January 1980 through September 2009. CCS consists of two related classification systems. The first system, called the *single-level CCS*, groups diagnoses into mutually exclusive categories. The single-level *diagnosis CCS* aggregates illnesses and conditions into 285 mutually exclusive categories. Similarly, the single-level *procedure CCS* aggregates procedures into 231 mutually exclusive categories, most of which are homogeneous.

The second system expands the single-level CCS into a hierarchical structure referred to as the *multi-level CCS*. This system groups single-level CCS categories into broader categories (e.g., Infectious Diseases, Mental Disorders, and Injury). It also splits single-level CCS categories to provide more detail about particular groupings of codes.

The CCS documentation provides researchers with a listing of the ICD-9-CM codes that are included in each CCS diagnosis and procedure category.

Purpose

CCS categories can be employed in many types of projects analyzing data on diagnoses and procedures. For example, they can be used to:

♦ Identify cases for disease-specific or procedure-specific studies
♦ Gain a better understanding of an institution's or health plan's distribution of patients across disease or procedure groupings
♦ Provide statistical information on characteristics, such as charges and length of stay, about relatively specific conditions
♦ Cross-classify procedures by diagnoses to provide insight into the variety of procedures performed for particular diagnoses.

Diagnoses and procedures for hospital inpatient stays are coded using the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM, Fifth Edition). ICD-9-CM consists of about 13,600 diagnosis codes and 3,700 procedure codes. Although it is possible to present descriptive statistics for individual ICD-9-CM codes, it is often useful to aggregate codes into clinically meaningful categories that group similar conditions or procedures. Examples of the use of CCS categories can be found at

. These reports aggregate individual hospital stays into larger diagnosis and procedure groups for statistical analysis and reporting. CCS is unique as a grouping approach because it does not mix diagnoses with treatment; rather, it separates diagnoses and procedures into two different classifications.

History of Development

Clinical Classifications for Health Policy Research (CCHPR) Version 1 represented AHRQ's initial effort to construct clinically meaningful categories of diagnoses and procedures. The key factor in creating these categories was the extent to which conditions and procedures could be grouped into relatively homogeneous clusters of interest to public policy researchers. CCHPR Version 1 consisted of 185 summary diagnosis categories and 172 summary procedure categories (Elixhauser, Andrews, and Fox, 1993).

CCHPR Version 2 was derived from the Version 1 summary diagnosis and procedure categories. Version 1 categories were modified on the basis of clinical homogeneity, frequency of occurrence in inpatient discharge data, and ICD-9-CM coding changes. The number of discharges in all categories was computed using 1991 California hospital inpatient data on all-listed diagnoses and all-listed procedures from the Healthcare Cost and Utilization Project State Inpatient Databases (SID).

The modified CCHPR schemes were reviewed by technical specialists who evaluated the categories and ICD-9-CM code assignments for accuracy and clinical significance. The reviews consisted of trained medical records personnel and a physician with experience in medical classification. During the review process, additional categories were created, other categories were collapsed, and codes were reassigned when appropriate.

Version 2 contained more categories than Version 1. Some conglomerate categories (e.g., "Other gastrointestinal procedures") and high-frequency categories (e.g., "Pregnancy-related conditions") were divided into smaller, more clinically homogeneous groups.

Beginning with the 1999 update, three important changes were introduced: an additional classification scheme (the multi-level CCS) was introduced; E codes (external causes of injury) received special treatment; and the name was changed to Clinical Classification Software (CCS), to reflect the broader use of the classifications beyond health policy research.

Beginning with the 2008 update, the mental health section of the CCS was replaced with the mental health categories from the CCS-Mental Health and Substance Abuse (MHSA). The CCS-MHSA is a stand-alone algorithm that was developed as an alternative to the mental health section of the CCS. While the CCS mental health categories were formed using the ICD-9-CM coding scheme as an organizing framework, the CCS-MHSA tool began with DSM-IV as the organizing framework and as such it better reflects psychiatric nosology. For more information, see the section below, entitled, "Notes About Integration with the CCS-MHSA Tool."

DESCRIPTION

Single-Level CCS

Diagnosis Codes
The single-level diagnosis classification scheme aggregates illnesses and conditions into 285 mutually exclusive categories, most of which are clinically homogeneous. Some heterogeneous categories were necessary; these combine several less common individual conditions within a body system.

All codes in the diagnosis section of ICD-9-CM are classified. In previous versions of the system, E codes (External Causes of Injury and Poisoning) were not classified because they are used sporadically in inpatient data. Hence, they were aggregated into a single category (CCS 260). Beginning with the 1999 version of the CCS, a classification system for E codes was incorporated. The E code classification was developed by staff at the Centers for Disease and Control and Prevention (Centers for Disease Control, 1997). Examples of single-level CCS diagnosis categories are shown in Table 1.

Table 1: Examples of single-level CCS diagnosis categories		
Description	ICD-9-CM[1] diagnosis Codes used to map	CCS category
Essential Hypertension	4011 4019	98
Hypertension with complications and secondary hypertension	4010 40200 40201 40210 40211 40290 40291 4030 40300 40301 4031 40310 40311 4039 40390 40391 4040 40400 40401 40402 40403 4041 40410 40411 40412 40413 4049 40490 40491 40492 40493 40501 40509 40511 40519 40591 40599 4372	99

ICD-9-CM codes for the single-level diagnosis CCS categories are presented in Appendix A. The ICD-9-CM code assignments to each category are viewable in the accompanying executable file that provides the crosswalk from ICD-9-CM diagnosis codes to single-level CCS categories.

Labels for the single-level CCS diagnoses are available in Appendix A1.

Procedure Codes
The single-level procedure classification scheme contains 231 mutually exclusive categories. Many of the categories represent single procedures; however, some procedures that occur infrequently are grouped according to three dimensions: 1) the

---

[1]Additional information about the application of ICD-9-CM diagnosis and procedure codes is presented later in this document.

relevant body system; 2) whether they are used for diagnostic or therapeutic purposes; and 3) whether they are considered operating room or non-operating room procedures, according to diagnosis related groups (DRG) definitions. Examples of single-level CCS procedure categories are illustrated in Table 2.

Table 2: Examples of single-level CCS procedure categories		
Description	ICD-9-CM procedure Codes used to map	CCS category
Heart valve procedures	3500 3501 3502 3503 3504 3510 3511 3512 3513 3514 3520 3521 3522 3523 3524 3525 3526 3527 3528 3596 3599	43
Coronary artery bypass graft (CABG)	3610 3611 3612 3613 3614 3615 3616 3617 3619 362 363 3631 3632 3639	44

ICD-9-CM codes for the single-level procedure CCS categories are presented in Appendix B. The ICD-9-CM code assignments to each category can be viewed in the accompanying executable files that provide the crosswalk from ICD-9-CM procedure codes to single-level CCS categories.

Labels for the single-level CCS procedures are available in Appendix B1.

Multi-level CCS

The multi-level CCS is a hierarchical system that is defined using both single-level CCS groupings and ICD-9-CM codes. Four levels exist in the multi-level *diagnosis CCS*, while three levels exist in the multi-level *procedure CCS*. The first of the four levels in the multi-level diagnosis CCS is broken into 18 categories. The first of the three levels in the multi-level procedure CCS is divided into 16 categories. These categories broadly group the single-level CCS and ICD-9-CM codes into 17 diagnosis and 16 procedure body systems (e.g., "Diseases of the Circulatory System"). *Note that multi-level CCS categories are comprised of single-level CCS categories or ICD-9-CM codes. Construction of multi-level CCS requires that ICD-9-CM codes first be assigned to single-level CCS.*

Diagnosis Codes

The specificity of categories increases with the higher levels, such that second-level categories are more specific than first-level categories, third-level categories are more specific than second-level categories, and fourth-level categories are more specific than third-level categories.

The first-level categories are identified by one whole digit (1-18), second-level categories include one decimal point, third-level categories have two decimal places and fourth-level categories have three decimal places.

Table 3 provides an example of multi-level CCS for diagnoses, revealing how single-level CCS category 99 (from single-level CCS example in Table 1) is further subdivided into the more specific levels in the multi-level system.

Table 3: Examples of multi-level CCS diagnosis categories			
Multi-level CCS category	Description	ICD-9-CM diagnoses used to map	Single-level CCS used to map
7	Diseases of the circulatory system	--	96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121
7.1	Hypertension	--	98 99
7.1.1	Essential hypertension	--	98
7.1.2	Hypertension with complications and secondary hypertension	--	99
7.1.2.1	Hypertensive heart and/or renal disease	40200 40201 40210 40211 40290 40291 4030 40300 40301 4031 40310 40311 4039 40390 40391 4040 40400 40401 40402 40403 4041 40410 40411 40412 40413 4049 40490 40491 40492 40493	--
7.1.2.2	Other hypertensive complications	4010 40501 40509 40511 40519 40591 40599 4372	--

ICD-9-CM codes for the multi-level diagnosis CCS categories are presented in Appendix C.

Labels for the multi-level CCS diagnoses are available in Appendix C1.

Procedure Codes

Only three levels exist in the multi-level procedure CCS. The specificity of the procedure categories increases with the higher levels, such that second-level categories are more specific than first-level categories and third-level categories are more specific than second-level categories.

The first-level categories are identified by one whole digit (1-16), second-level categories include one decimal point, and third-level categories have two decimal places.

Table 4 provides an example of multi-level CCS for procedures, revealing how single-level CCS category 44 (from single-level CCS example in Table 2) is further subdivided into the more specific levels in the multi-level system.

Table 4: Examples of multi-level CCS procedure categories			
Multi-level CCS category	Description	ICD-9-CM diagnoses used to map	Single-level CCS used to map
7	Operations on the cardiovascular system	--	43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
7.1	Heart valve procedures	--	43
7.2	Coronary artery bypass graft (CABG)	--	44
7.2.1	Bypass of one coronary artery	3611	--
7.2.2	Bypass of two coronary arteries	3612	--
7.2.3	Bypass of three coronary arteries	3613	--
7.2.4	Bypass of four coronary arteries	3614	--
7.2.5	Other bypass of coronary arteries	3610 3615 3616 3617 3619 362 363 3631 3632 3639	--

ICD-9-CM codes for the multi-level procedure CCS categories are presented in Appendix D.

Labels for the multi-level CCS procedures are available in Appendix D1. In addition to the appendices, the CCS User's Guide contains two tables (Table A and Table B) that researchers may find useful. These tables group the CCS categories into body systems. Another system for grouping CCS categories can be found at http://www.meps.ahrq.gov/mepsweb/data_stats/conditions.shtml. This system groups the diagnosis categories into 61 broader categories.

NOTES ABOUT INTEGRATION WITH THE CCS-MHSA TOOL

In 2008 the Mental Health Substance Abuse Clinical Classification Software (CCS-MHSA) tool was integrated into the CCS. As a starting point for development of the CCS-MHSA, we used the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (APA, 1994). In addition, we consulted the ICD-9-CM code lists and classifications used in discussions with staff at the National Institutes for Mental Health (personal communication, NIMH, 2002), the Substance Abuse and Mental Health Services Administration (personal communication, SAMHSA, 2005), a peer-reviewed journal article (Pottick et al., 2000) and an algorithm developed by Billings (2004). A complete review of ICD-9-CM diagnosis codes was conducted in order to identify any diagnosis code that reflects a mental health or substance abuse condition.

In general, we followed the categorization of mental health and substance abuse conditions and code assignments outlined in the DSM-IV. Additional codes, such as mental disorders in pregnancy (64840-64844), drug dependency in pregnancy (64830-64834), and additional V codes, were included as a result of communications with NIMH and SAMHSA and a review of the Billings algorithm. External cause of injury codes (E codes) that indicated the injury was self-inflicted or related to a suicide attempt were also incorporated in accordance with the Billings algorithm.

The integration affected both the single-level and multi-level CCS tools for diagnoses. The CCS-MHSA general tool consists of 15 categories numbered 650-663 and 670. These categories replaced the original CCS single-level categories 65-75. See Appendix A1 below for more information on the single-level integration. The CCS-MHSA specific tool consists of 27 classifications which replaced the old CCS multi-level categories found under "5" (mental health). Refer to Appendix C1 for more details on the multi-level integration. The CCS-MHSA categories function in the same way as the CCS; they can be used with any data that include ICD-9-CM diagnosis information concerned with mental health and/or substance abuse conditions.

Incorporation of the CCS-MHSA into the original CCS required reassignment of several codes not originally found in the CCS mental health categories. For example, maternal codes for mental health and substance abuse were originally included in CCS categories for pregnancy complications; however, with the revised CCS, these codes have been placed into mental health and substance categories. Similarly, E codes for suicide and self-inflicted injury were originally placed into the E code categories at the end of the CCS based on the mechanism of injury. With the revised CCS, suicide and self-inflicted injury E codes are grouped into a separate category in the mental health series of CCS categories.

NOTES ABOUT OPTIONAL SUICIDE E CODE CATEGORIES

Suicide E Codes (external cause of injury codes) are assigned to CCS category 662, "Suicide and Self-Inflicted Injury". However, for users who wish to assign these E codes to a mechanism of injury CCS, an optional CCS category has been provided in the single-level diagnosis tool ($dxref 2009.csv) for each code. These optional CCS categories follow the CDC's classification of E codes into mechanism of injury categories such as firearm or poisoning, Interested users should simply reassign suicide codes from category 662 to the optional secondary CCS categories as detailed in column five of $DXREF 2009.csv. The code below gives an example of the reassignment process. Similar code can be used to reassign the CCS label:

```
Filename inraw    "c:\tools\ccs\$DXREF 2009.csv" ;
/****************************************/
/* Make a SAS format Using the Optional  */
/* Suicide Mechansism CCS Category.      */
/****************************************/
data new;
   infile inraw  dsd dlm=',' end = eof firstobs=3 missover;
       input start :  $char5.
             Oldccs : $char4.
             Value1 : $char70.
             Value2 : $char70.
             Label  : $char4.
             Value3 : $char70.
              ;
        retain hlo " ";
   fmtname = "$ccs" ;
   type    = " " ;
   output;

   if eof then do ;
      start = " " ;
      label = " " ;
      hlo   = "o";
      output ;
   end ;
run;
proc format cntlin = new ;
run;
/****************************************/
/* Reassign CCS to the Optional CCS for  */
/* Suicide mechanism using SAS format.   */
/****************************************/
data test;
   Set ecodedata;
   Ccs = put(ecode,$ccs.)
run;
```

NOTES ABOUT ICD-9-CM CODING CHANGES

Time period covered by CCS

In order to keep abreast of yearly changes in the ICD-9-CM codes, the CCS categories are updated annually. This occurs after code assignments are reviewed and agreement is reached among the developers and medical records personnel.

The ICD-9-CM codes are revised every October. New codes are added, existing codes are deleted, and definitions of current codes are changed. CCS categories are revised in response to ICD-9-CM changes. *The 2009 version of the CCS is valid for the time period January 1980 through September 2009.* Using these CCS categories with data outside this time frame will result in misclassification of ICD-9-CM codes.

ICD-9-CM codes requiring special treatment

CCS accounts for all changes in ICD-9-CM coding definitions during this time period, with the exception of several codes whose meaning changed to such an extent that the

CCS category assignment changed, as well. These codes must be explicitly assigned by the user when working with older data. If you use more recent data (as described below), no special treatment is necessary because the codes are correctly assigned in the CCS program.

Assignment of these codes requires information on the year and quarter of service. When using data that span the time periods described below, these ICD-9-CM codes must be explicitly assigned to CCS categories according to the year and quarter of the data.

♦ Special treatment is required for the following diagnosis code:

From January 1980 to September 1993, ICD-9-CM diagnosis code '2510 ' should appear in CCS diagnosis category 50 (Diabetes mellitus with complications).

Beginning in October 1993, ICD-9-CM diagnosis code '2510 ' appears in CCS diagnosis category 51 (Other endocrine disorders). The current CCS program assigns this code to category 51.

♦ Special treatment is required for the following procedure codes:

From January 1980 to September 1989, ICD-9-CM procedure code '8159' should appear in CCS procedure category 153 (Hip replacement, total and partial).

Beginning in October 1989, ICD-9-CM procedure code '8159' appears in CCS procedure category 154 (Arthroplasty, other than hip or knee). The current CCS program assigns this code to category 154.

From January 1980 to September 1989, ICD-9-CM procedure codes '8162,' '8163,' and '8164' should appear in CCS procedure category 153 (Hip replacement, total and partial).

Beginning in October 2003, ICD-9-CM procedure codes '8162,' '8163,' and '8164' appear in CCS procedure category 158 (Spinal Fusion). The current CCS program assigns these codes to category 158.

DESCRIPTION OF DOWNLOADABLE FILES

System requirements

In order to use the CCS files, you will need a program (such as WinZip®) that will allow you to decompress or "unzip" files. You will also need approximately 1.5 megabytes of disk space available on your hard drive to accommodate all the single-level CCS files. You will need approximately 1.1 megabytes available to accommodate all the multi-level CCS files after they are unzipped.

"Unzipping" files

There are two downloadable files, both self-extracting zipped files, called Single_Level_CCS_2009.zip (for the single-level CCS) and Multi_Level_CCS_2009.zip (for the multi-level CCS).

Single-level CCS

Single_Level_CCS_2009.zip contains two comma delimited files (.csv) (Microsoft Excel text) that translate ICD-9-CM codes into single-level CCS categories and two comma delimited files (.csv) (Microsoft Excel text) that provide descriptive labels for the single-level CCS categories. To use these zipped files, you must do the following:

> 1. Create a subdirectory (or folder) called CCS on your hard drive (e.g., MD C:\CCS). You will need a total of approximately 1.5 megabytes to accommodate all the files after they are unzipped.

> 2. Download and save Single_Level_CCS_2009.zip to this subdirectory.

> 3. Using WinZip (or comparable program), double click on Single_Level_CCS_2009.zip to expand the files.

The zipped file will unzip (expand for normal use) the files listed below. Note that the original file (Single_Level_CCS_2009.zip) will remain intact.

Filename	Purpose
Diagnosis CCS	
$DXREF 2009.csv	Translation file that maps ICD-9-CM diagnosis codes into single-level CCS diagnosis categories, with complete information about each ICD-9-CM code and brief CCS labels.
DXLABEL 2009.csv	Label file contains the complete descriptive single-level CCS diagnosis category names to use when reporting the diagnosis categories.
Procedure CCS	
$PRREF 2009.csv	Translation file that maps ICD-9-CM procedure codes into single-level CCS procedure categories, with complete information about each ICD-9-CM code and brief CCS labels.

PRLABEL 2009.csv	Label file contains the complete descriptive single-level CCS procedure category names to use when reporting the procedure categories.

Multi-level CCS

Multi_Level_CCS_2009.zip contains two comma delimited files (.csv) (Microsoft Excel text) that translate ICD-9-CM codes into multi-level CCS categories, and two comma delimited files (.csv) (Microsoft Excel text) that provide descriptive labels for the multilevel CCS categories. *Multi_Level_CCS_2009.zip also contains two SAS programs: Multi_CCS_Load_Program.sas allows users to load the multi-level CCS categories for both diagnosis and procedures. Multi_CCS_Summary_Program.sas generates a frequency report of multi-level CCS categories for either the primary diagnosis or primary procedure.* To use this zipped file, you must do the following:

1. Create a new subdirectory (or folder) on your hard drive. You will need a total of approximately 1.1 megabytes free to accommodate all the files after they are unzipped.

2. Download and save Multi_Level_CCS_2009.zip to this subdirectory.

3. Using WinZip (or comparable program), double click on Multi_Level_CCS_2009.zip to expand the files.

The self-extracting zipped file will unzip (expand for normal use) the files described below. Note that the original file (Multi_Level_CCS_2009.zip) will remain intact.

Filename	Purpose
Multi-level Diagnosis CCS	
CCS_MULTI_DX_TOOL.csv	Translation file that maps diagnosis codes into level 1-4 multi-level CCS categories.
DXMLABEL-08.csv	Label file that contains the complete descriptive multi-level CCS diagnosis category names to use when reporting the diagnosis categories.
Multi-level Procedure CCS	
CCS_MULTI_PR_TOOL.csv	Translation file that maps procedure codes into level 1-3 multi-level procedure CCS categories.
PRMLABEL-02.csv	Label file that contains the complete descriptive multi-level CCS procedure category names to use when reporting the procedure categories.
SAS Utility Programs	

Multi_CCS_Load_Program.sas	SAS program file that loads the multi-level CCS categories for diagnosis and procedures.
Multi_CCS_Summary_Program.sas	SAS program file that produces a frequency report of the multi-level CCS categories for either the primary diagnosis or primary procedure.

Using translation files

For the single-level CCS, the translation files translate specific ICD-9-CM codes into CCS categories. The new multi-level CCS translation files map ICD-9-CM codes directly into CCS Level 1, 2, 3, or 4 categories.

The program called "Multi_CCS_Load_Program.sas" can be used to create the multi-level CCS categories. This is recommended for users who have not already developed custom SAS code to load the multi-level categories.

How you use these files will depend on the software system being utilized. For example, if you are using SAS, you can adapt these translations to create a SAS PROC FORMAT. If you are working with SPSS, you can adapt these translations into VALUE LABELS or into a series of recodes.

Representation of ICD-9-CM diagnosis codes

In practice, ICD-9-CM diagnoses are represented by 3- to 5-character codes with explicit decimals. In the files you downloaded and in the vast majority of data files, ICD-9-CM diagnoses are represented as 5-character alphanumeric codes with implicit decimals. (Alphanumeric codes are always enclosed in quotation marks.) Examples are given below.

Condition	ICD-9-CM diagnosis code	Alphanumeric code (with implicit decimals)
Pneumococcal pneumonia	481	'481 '
Pneumonia due to Klebsiella pneumoniae	482.0	'4820 '
Pneumonia due to Escherichia coli	482.82	'48282'
Single liveborn infant, born in hospital, delivered by cesarean delivery	V30.01	'V3001'

For proper handling of diagnosis codes:

♦ Alphanumeric diagnosis codes must be left-justified so that there are 2 spaces following a 3-character diagnosis code and 1 space following a 4-character diagnosis code. For example – '481 '.

♦ Trailing blanks should never be zero-padded (filled with zeroes so that all 5 characters are filled for codes that should be 3 or 4 characters long). For example – '481 ' should not be changed to '48100'.

♦ Leading zeroes must be preserved; they are significant.

Representation of ICD-9-CM procedure codes

In practice, ICD-9-CM procedures are represented by 3- or 4-character codes with explicit decimals. In the accompanying files and in the vast majority of data files, ICD-9-CM procedures are represented as 4-character alphanumeric codes with implicit decimals. (Alphanumeric codes are always enclosed in quotation marks.) Examples are provided below.

Condition	ICD-9-CM procedure code	Alphanumeric code (with implicit decimals)
Incision of prostate	60.0	'600 '
Closed biopsy of prostate	60.11	'6011'

For proper handling of procedure codes:

♦ Alphanumeric procedure codes must be left-justified, so that there is always 1 space following a 3-character procedure code. For example – '600 '

♦ Trailing blanks should never be zero-padded (filled with zeroes so that all 4 characters are filled for codes that should be 3 characters long). For example – '600 ' should not be changed to '6000'.

♦ Leading zeroes must be preserved; they are significant.

REFERENCES

Centers for Disease Control and Prevention. Recommended framework for presenting injury mortality data. *Morbidity and Mortality Weekly Report*, 1997, Aug 29; 46(no. RR14): 1-30.

DRGs: Diagnosis related groups definitions manual, version 12.0. Wallingford, CT: 3M Health Information Systems; 1994.

Elixhauser A, Andrews RM, Fox, S. *Clinical classifications for health policy research: Discharge statistics by principal diagnosis and procedure*. Provider Studies Research Note 17. Rockville, MD: Agency for Health Care Policy and Research; 1993. AHCPR Pub. No. 93-0043.

Public Health Service and Health Care Financing Administration. *International classification of diseases, 9th revision, clinical modification.* Vols. 1, 2, and 3; fifth edition. Washington, DC: Public Health Service; 1994. DHHS Publication No. (PHS) 94-1260.

American Psychiatric Association (APA). *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition. Washington, DC, American Psychiatric Association, 1994.

Billings J. Software for Use of the Emergency Department Classification Algorithm. In *Tools for Monitoring the Health Care Safety Net*. (Ed. R. Weinick, J. Billings) AHRQ Publication No. 03-0027, September 2003. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/data/safetynet/tools.htm, and http://www.ahrq.gov/data/safetynet/toolsoft.htm for a SAS program that includes ICD-9-CM codes for mental health and drug- or alcohol-related conditions).

Personal communication with staff at NIMH. In context of interagency collaboration on children's hospitalizations for mental health and substance abuse conditions. August, 2002.

Personal communication with staff at SAMHSA. In context of interagency collaboration on emergency department events for mental health and substance abuse conditions. Spring, 2005.

Pottick KJ, McAlpine DD, Andelman RB. *Changing patterns of psychiatric inpatient care for children and adolescents in general hospitals*, 1988-1995. Am J Psychiatry, 2000: 157(8): 1267-1273.

Appendix A1

Single-Level CCS – Diagnoses

CATEGORY LABELS

1 Tuberculosis
2 Septicemia (except in labor)
3 Bacterial infection; unspecified site
4 Mycoses
5 HIV infection
6 Hepatitis
7 Viral infection
8 Other infections; including parasitic
9 Sexually transmitted infections (not HIV or hepatitis)
10 Immunizations and screening for infectious disease
11 Cancer of head and neck
12 Cancer of esophagus
13 Cancer of stomach
14 Cancer of colon
15 Cancer of rectum and anus
16 Cancer of liver and intrahepatic bile duct
17 Cancer of pancreas
18 Cancer of other GI organs; peritoneum
19 Cancer of bronchus; lung
20 Cancer; other respiratory and intrathoracic
21 Cancer of bone and connective tissue
22 Melanomas of skin
23 Other non-epithelial cancer of skin
24 Cancer of breast
25 Cancer of uterus
26 Cancer of cervix
27 Cancer of ovary
28 Cancer of other female genital organs
29 Cancer of prostate
30 Cancer of testis
31 Cancer of other male genital organs
32 Cancer of bladder
33 Cancer of kidney and renal pelvis
34 Cancer of other urinary organs
35 Cancer of brain and nervous system
36 Cancer of thyroid
37 Hodgkin`s disease
38 Non-Hodgkin`s lymphoma
39 Leukemias
40 Multiple myeloma
41 Cancer; other and unspecified primary
42 Secondary malignancies
43 Malignant neoplasm without specification of site
44 Neoplasms of unspecified nature or uncertain behavior
45 Maintenance chemotherapy; radiotherapy
46 Benign neoplasm of uterus
47 Other and unspecified benign neoplasm
48 Thyroid disorders
49 Diabetes mellitus without complication

50 Diabetes mellitus with complications
51 Other endocrine disorders
52 Nutritional deficiencies
53 Disorders of lipid metabolism
54 Gout and other crystal arthropathies
55 Fluid and electrolyte disorders
56 Cystic fibrosis
57 Immunity disorders
58 Other nutritional; endocrine; and metabolic disorders
59 Deficiency and other anemia
60 Acute posthemorrhagic anemia
61 Sickle cell anemia
62 Coagulation and hemorrhagic disorders
63 Diseases of white blood cells
64 Other hematologic conditions
650 MHSA: Adjustment disorders
651 MHSA: Anxiety disorders
652 MHSA: Attention-deficit, conduct, and disruptive behavior disorders
653 MHSA: Delirium, dementia, and amnestic and other cognitive disorders
654 MHSA: Developmental disorders
655 MHSA: Disorders usually diagnosed in infancy, childhood, or adolescence
656 MHSA: Impulse control disorders, NEC
657 MHSA: Mood disorders
658 MHSA: Personality disorders
659 MHSA: Schizophrenia and other psychotic disorders
660 MHSA: Alcohol-related disorders
661 MHSA: Substance-related disorders
662 MHSA: Suicide and intentional self-inflicted injury
663 MHSA: Screening and history of mental health and substance abuse codes
670 MHSA: Miscellaneous mental disorders
76 Meningitis (except that caused by tuberculosis or sexually transmitted disease)
77 Encephalitis (except that caused by tuberculosis or sexually transmitted disease)
78 Other CNS infection and poliomyelitis
79 Parkinson`s disease
80 Multiple sclerosis
81 Other hereditary and degenerative nervous system conditions
82 Paralysis
83 Epilepsy; convulsions
84 Headache; including migraine
85 Coma; stupor; and brain damage
86 Cataract
87 Retinal detachments; defects; vascular occlusion; and retinopathy
88 Glaucoma
89 Blindness and vision defects
90Inflammation; infection of eye (except that caused by tuberculosis or sexually
transmitted disease)
91 Other eye disorders
92 Otitis media and related conditions
93 Conditions associated with dizziness or vertigo
94 Other ear and sense organ disorders
95 Other nervous system disorders
96 Heart valve disorders
97Peri-; endo-; and myocarditis; cardiomyopathy (except that caused by tuberculosis or
sexually transmitted disease)
98 Essential hypertension
99 Hypertension with complications and secondary hypertension

100 Acute myocardial infarction
101 Coronary atherosclerosis and other heart disease
102 Nonspecific chest pain
103 Pulmonary heart disease
104 Other and ill-defined heart disease
105 Conduction disorders
106 Cardiac dysrhythmias
107 Cardiac arrest and ventricular fibrillation
108 Congestive heart failure; nonhypertensive
109 Acute cerebrovascular disease
110 Occlusion or stenosis of precerebral arteries
111 Other and ill-defined cerebrovascular disease
112 Transient cerebral ischemia
113 Late effects of cerebrovascular disease
114 Peripheral and visceral atherosclerosis
115 Aortic; peripheral; and visceral artery aneurysms
116 Aortic and peripheral arterial embolism or thrombosis
117 Other circulatory disease
118 Phlebitis; thrombophlebitis and thromboembolism
119 Varicose veins of lower extremity
120 Hemorrhoids
121 Other diseases of veins and lymphatics
122 Pneumonia (except that caused by tuberculosis or sexually transmitted disease)
123 Influenza
124 Acute and chronic tonsillitis
125 Acute bronchitis
126 Other upper respiratory infections
127 Chronic obstructive pulmonary disease and bronchiectasis
128 Asthma
129 Aspiration pneumonitis; food/vomitus
130 Pleurisy; pneumothorax; pulmonary collapse
131 Respiratory failure; insufficiency; arrest (adult)
132 Lung disease due to external agents
133 Other lower respiratory disease
134 Other upper respiratory disease
135 Intestinal infection
136 Disorders of teeth and jaw
137 Diseases of mouth; excluding dental
138 Esophageal disorders
139 Gastroduodenal ulcer (except hemorrhage)
140 Gastritis and duodenitis
141 Other disorders of stomach and duodenum
142 Appendicitis and other appendiceal conditions
143 Abdominal hernia
144 Regional enteritis and ulcerative colitis
145 Intestinal obstruction without hernia
146 Diverticulosis and diverticulitis
147 Anal and rectal conditions
148 Peritonitis and intestinal abscess
149 Biliary tract disease
150 Liver disease; alcohol-related
151 Other liver diseases
152 Pancreatic disorders (not diabetes)
153 Gastrointestinal hemorrhage
154 Noninfectious gastroenteritis
155 Other gastrointestinal disorders

156 Nephritis; nephrosis; renal sclerosis
157 Acute and unspecified renal failure
158 Chronic renal failure
159 Urinary tract infections
160 Calculus of urinary tract
161 Other diseases of kidney and ureters
162 Other diseases of bladder and urethra
163 Genitourinary symptoms and ill-defined conditions
164 Hyperplasia of prostate
165 Inflammatory conditions of male genital organs
166 Other male genital disorders
167 Nonmalignant breast conditions
168 Inflammatory diseases of female pelvic organs
169 Endometriosis
170 Prolapse of female genital organs
171 Menstrual disorders
172 Ovarian cyst
173 Menopausal disorders
174 Female infertility
175 Other female genital disorders
176 Contraceptive and procreative management
177 Spontaneous abortion
178 Induced abortion
179 Postabortion complications
180 Ectopic pregnancy
181 Other complications of pregnancy
182 Hemorrhage during pregnancy; abruptio placenta; placenta previa
183 Hypertension complicating pregnancy; childbirth and the puerperium
184 Early or threatened labor
185 Prolonged pregnancy
186Diabetes or abnormal glucose tolerance complicating pregnancy; childbirth; or the
puerperium
187 Malposition; malpresentation
188 Fetopelvic disproportion; obstruction
189 Previous C-section
190 Fetal distress and abnormal forces of labor
191 Polyhydramnios and other problems of amniotic cavity
192 Umbilical cord complication
193 OB-related trauma to perineum and vulva
194 Forceps delivery
195 Other complications of birth; puerperium affecting management of mother
196 Normal pregnancy and/or delivery
197 Skin and subcutaneous tissue infections
198 Other inflammatory condition of skin
199 Chronic ulcer of skin
200 Other skin disorders
201Infective arthritis and osteomyelitis (except that caused by tuberculosis or sexually
transmitted disease)
202 Rheumatoid arthritis and related disease
203 Osteoarthritis
204 Other non-traumatic joint disorders
205 Spondylosis; intervertebral disc disorders; other back problems
206 Osteoporosis
207 Pathological fracture
208 Acquired foot deformities
209 Other acquired deformities

210 Systemic lupus erythematosus and connective tissue disorders
211 Other connective tissue disease
212 Other bone disease and musculoskeletal deformities
213 Cardiac and circulatory congenital anomalies
214 Digestive congenital anomalies
215 Genitourinary congenital anomalies
216 Nervous system congenital anomalies
217 Other congenital anomalies
218 Liveborn
219 Short gestation; low birth weight; and fetal growth retardation
220 Intrauterine hypoxia and birth asphyxia
221 Respiratory distress syndrome
222 Hemolytic jaundice and perinatal jaundice
223 Birth trauma
224 Other perinatal conditions
225 Joint disorders and dislocations; trauma-related
226 Fracture of neck of femur (hip)
227 Spinal cord injury
228 Skull and face fractures
229 Fracture of upper limb
230 Fracture of lower limb
231 Other fractures
232 Sprains and strains
233 Intracranial injury
234 Crushing injury or internal injury
235 Open wounds of head; neck; and trunk
236 Open wounds of extremities
237 Complication of device; implant or graft
238 Complications of surgical procedures or medical care
239 Superficial injury; contusion
240 Burns
241 Poisoning by psychotropic agents
242 Poisoning by other medications and drugs
243 Poisoning by nonmedicinal substances
244 Other injuries and conditions due to external causes
245 Syncope
246 Fever of unknown origin
247 Lymphadenitis
248 Gangrene
249 Shock
250 Nausea and vomiting
251 Abdominal pain
252 Malaise and fatigue
253 Allergic reactions
254 Rehabilitation care; fitting of prostheses; and adjustment of devices
255 Administrative/social admission
256 Medical examination/evaluation
257 Other aftercare
258 Other screening for suspected conditions (not mental disorders or infectious disease)
259 Residual codes; unclassified
260 E Codes: All (external causes of injury and poisoning)
2601 E Codes: Cut/pierceb
2602 E Codes: Drowning/submersion
2603 E Codes: Fall
2604 E Codes: Fire/burn
2605 E Codes: Firearm

2606 E Codes: Machinery
2607 E Codes: Motor vehicle traffic (MVT)
2608 E Codes: Pedal cyclist; not MVT
2609 E Codes: Pedestrian; not MVT
2610 E Codes: Transport; not MVT
2611 E Codes: Natural/environment
2612 E Codes: Overexertion
2613 E Codes: Poisoning
2614 E Codes: Struck by; against
2615 E Codes: Suffocation
2616 E Codes: Adverse effects of medical care
2617 E Codes: Adverse effects of medical drugs
2618 E Codes: Other specified and classifiable
2619 E Codes: Other specified; NEC
2620 E Codes: Unspecified
2621 E Codes: Place of occurrence

Appendix B1

Single-Level CCS - Procedures

CATEGORY LABELS

1 Incision and excision of CNS
2 Insertion; replacement; or removal of extracranial ventricular shunt
3 Laminectomy; excision intervertebral disc
4 Diagnostic spinal tap
5 Insertion of catheter or spinal stimulator and injection into spinal canal
6 Decompression peripheral nerve
7 Other diagnostic nervous system procedures
8 Other non-OR or closed therapeutic nervous system procedures
9 Other OR therapeutic nervous system procedures
10 Thyroidectomy; partial or complete
11 Diagnostic endocrine procedures
12 Other therapeutic endocrine procedures
13 Corneal transplant
14 Glaucoma procedures
15 Lens and cataract procedures
16 Repair of retinal tear; detachment
17 Destruction of lesion of retina and choroid
18 Diagnostic procedures on eye
19 Other therapeutic procedures on eyelids; conjunctiva; cornea
20 Other intraocular therapeutic procedures
21 Other extraocular muscle and orbit therapeutic procedures
22 Tympanoplasty
23 Myringotomy
24 Mastoidectomy
25 Diagnostic procedures on ear
26 Other therapeutic ear procedures
27 Control of epistaxis
28 Plastic procedures on nose
29 Dental procedures
30 Tonsillectomy and/or adenoidectomy
31 Diagnostic procedures on nose; mouth and pharynx
32 Other non-OR therapeutic procedures on nose; mouth and pharynx
33 Other OR therapeutic procedures on nose; mouth and pharynx
34 Tracheostomy; temporary and permanent
35 Tracheoscopy and laryngoscopy with biopsy
36 Lobectomy or pneumonectomy
37 Diagnostic bronchoscopy and biopsy of bronchus
38 Other diagnostic procedures on lung and bronchus
39 Incision of pleura; thoracentesis; chest drainage
40 Other diagnostic procedures of respiratory tract and mediastinum
41 Other non-OR therapeutic procedures on respiratory system
42 Other OR therapeutic procedures on respiratory system and mediastinum
43 Heart valve procedures
44 Coronary artery bypass graft (CABG)
45 Percutaneous transluminal coronary angioplasty (PTCA)
46 Coronary thrombolysis
47 Diagnostic cardiac catheterization; coronary arteriography
48 Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/defibrillator
49 Other OR heart procedures

50 Extracorporeal circulation auxiliary to open heart procedures
51 Endarterectomy; vessel of head and neck
52 Aortic resection; replacement or anastomosis
53 Varicose vein stripping; lower limb
54 Other vascular catheterization; not heart
55 Peripheral vascular bypass
56 Other vascular bypass and shunt; not heart
57 Creation; revision and removal of arteriovenous fistula or vessel-to-vessel cannula for dialysis
58 Hemodialysis
59 Other OR procedures on vessels of head and neck
60 Embolectomy and endarterectomy of lower limbs
61 Other OR procedures on vessels other than head and neck
62 Other diagnostic cardiovascular procedures
63 Other non-OR therapeutic cardiovascular procedures
64 Bone marrow transplant
65 Bone marrow biopsy
66 Procedures on spleen
67 Other therapeutic procedures; hemic and lymphatic system
68 Injection or ligation of esophageal varices
69 Esophageal dilatation
70 Upper gastrointestinal endoscopy; biopsy
71 Gastrostomy; temporary and permanent
72 Colostomy; temporary and permanent
73 Ileostomy and other enterostomy
74 Gastrectomy; partial and total
75 Small bowel resection
76 Colonoscopy and biopsy
77 Proctoscopy and anorectal biopsy
78 Colorectal resection
79 Local excision of large intestine lesion (not endoscopic)
80 Appendectomy
81 Hemorrhoid procedures
82 Endoscopic retrograde cannulation of pancreas (ERCP)
83 Biopsy of liver
84 Cholecystectomy and common duct exploration
85 Inguinal and femoral hernia repair
86 Other hernia repair
87 Laparoscopy (GI only)
88 Abdominal paracentesis
89 Exploratory laparotomy
90 Excision; lysis peritoneal adhesions
91 Peritoneal dialysis
92 Other bowel diagnostic procedures
93 Other non-OR upper GI therapeutic procedures
94 Other OR upper GI therapeutic procedures
95 Other non-OR lower GI therapeutic procedures
96 Other OR lower GI therapeutic procedures
97 Other gastrointestinal diagnostic procedures
98 Other non-OR gastrointestinal therapeutic procedures
99 Other OR gastrointestinal therapeutic procedures
100 Endoscopy and endoscopic biopsy of the urinary tract
101 Transurethral excision; drainage; or removal urinary obstruction
102 Ureteral catheterization
103 Nephrotomy and nephrostomy
104 Nephrectomy; partial or complete

105 Kidney transplant
106 Genitourinary incontinence procedures
107 Extracorporeal lithotripsy; urinary
108 Indwelling catheter
109 Procedures on the urethra
110 Other diagnostic procedures of urinary tract
111 Other non-OR therapeutic procedures of urinary tract
112 Other OR therapeutic procedures of urinary tract
113 Transurethral resection of prostate (TURP)
114 Open prostatectomy
115 Circumcision
116 Diagnostic procedures; male genital
117 Other non-OR therapeutic procedures; male genital
118 Other OR therapeutic procedures; male genital
119 Oophorectomy; unilateral and bilateral
120 Other operations on ovary
121 Ligation or occlusion of fallopian tubes
122 Removal of ectopic pregnancy
123 Other operations on fallopian tubes
124 Hysterectomy; abdominal and vaginal
125 Other excision of cervix and uterus
126 Abortion (termination of pregnancy)
127 Dilatation and curettage (D&C); aspiration after delivery or abortion
128 Diagnostic dilatation and curettage (D&C)
129 Repair of cystocele and rectocele; obliteration of vaginal vault
130 Other diagnostic procedures; female organs
131 Other non-OR therapeutic procedures; female organs
132 Other OR therapeutic procedures; female organs
133 Episiotomy
134 Cesarean section
135 Forceps; vacuum; and breech delivery
136 Artificial rupture of membranes to assist delivery
137 Other procedures to assist delivery
138 Diagnostic amniocentesis
139 Fetal monitoring
140 Repair of current obstetric laceration
141 Other therapeutic obstetrical procedures
142 Partial excision bone
143 Bunionectomy or repair of toe deformities
144 Treatment; facial fracture or dislocation
145 Treatment; fracture or dislocation of radius and ulna
146 Treatment; fracture or dislocation of hip and femur
147 Treatment; fracture or dislocation of lower extremity (other than hip or femur)
148 Other fracture and dislocation procedure
149 Arthroscopy
150 Division of joint capsule; ligament or cartilage
151 Excision of semilunar cartilage of knee
152 Arthroplasty knee
153 Hip replacement; total and partial
154 Arthroplasty other than hip or knee
155 Arthrocentesis
156 Injections and aspirations of muscles; tendons; bursa; joints and soft tissue
157 Amputation of lower extremity
158 Spinal fusion
159 Other diagnostic procedures on musculoskeletal system
160 Other therapeutic procedures on muscles and tendons

161 Other OR therapeutic procedures on bone
162 Other OR therapeutic procedures on joints
163 Other non-OR therapeutic procedures on musculoskeletal system
164 Other OR therapeutic procedures on musculoskeletal system
165 Breast biopsy and other diagnostic procedures on breast
166 Lumpectomy; quadrantectomy of breast
167 Mastectomy
168 Incision and drainage; skin and subcutaneous tissue
169 Debridement of wound; infection or burn
170 Excision of skin lesion
171 Suture of skin and subcutaneous tissue
172 Skin graft
173 Other diagnostic procedures on skin and subcutaneous tissue
174 Other non-OR therapeutic procedures on skin and breast
175 Other OR therapeutic procedures on skin and breast
176 Other organ transplantation
177 Computerized axial tomography (CT) scan head
178 CT scan chest
179 CT scan abdomen
180 Other CT scan
181 Myelogram
182 Mammography
183 Routine chest X-ray
184 Intraoperative cholangiogram
185 Upper gastrointestinal X-ray
186 Lower gastrointestinal X-ray
187 Intravenous pyelogram
188 Cerebral arteriogram
189 Contrast aortogram
190 Contrast arteriogram of femoral and lower extremity arteries
191 Arterio- or venogram (not heart and head)
192 Diagnostic ultrasound of head and neck
193 Diagnostic ultrasound of heart (echocardiogram)
194 Diagnostic ultrasound of gastrointestinal tract
195 Diagnostic ultrasound of urinary tract
196 Diagnostic ultrasound of abdomen or retroperitoneum
197 Other diagnostic ultrasound
198 Magnetic resonance imaging
199 Electroencephalogram (EEG)
200 Nonoperative urinary system measurements
201 Cardiac stress tests
202 Electrocardiogram
203 Electrographic cardiac monitoring
204 Swan-Ganz catheterization for monitoring
205 Arterial blood gases
206 Microscopic examination (bacterial smear; culture; toxicology)
207 Radioisotope bone scan
208 Radioisotope pulmonary scan
209 Radioisotope scan and function studies
210 Other radioisotope scan
211 Therapeutic radiology for cancer treatment
212 Diagnostic physical therapy
213 Physical therapy exercises; manipulation; and other procedures
214 Traction; splints; and other wound care
215 Other physical therapy and rehabilitation
216 Respiratory intubation and mechanical ventilation

217 Other respiratory therapy
218 Psychological and psychiatric evaluation and therapy
219 Alcohol and drug rehabilitation/detoxification
220 Ophthalmologic and otologic diagnosis and treatment
221 Nasogastric tube
222 Blood transfusion
223 Enteral and parenteral nutrition
224 Cancer chemotherapy
225 Conversion of cardiac rhythm
226 Other diagnostic radiology and related techniques
227 Other diagnostic procedures (interview; evaluation; consultation)
228 Prophylactic vaccinations and inoculations
229 Nonoperative removal of foreign body
230 Extracorporeal shock wave, other than urinary
231 Other therapeutic procedures

Appendix C1

Multi-Level CCS – Diagnoses

MULTI-LEVEL
CATEGORY LABELS [Single-Level CCS Diagnosis Category]

1 Infectious and parasitic diseases
1.1 Bacterial infection
1.1.1 Tuberculosis [1]
1.1.2 Septicemia (except in labor) [2]
1.1.2.1 Streptococcal septicemia
1.1.2.2 Staphylococcal septicemia
1.1.2.3 E Coli septicemia
1.1.2.4 Other gram negative septicemia
1.1.2.5 Other specified septicemia
1.1.2.6 Unspecified septicemia
1.1.3 Sexually transmitted infections (not HIV or hepatitis) [9]
1.1.4 Other bacterial infections [3]
1.2 Mycoses [4]
1.2.1 Candidiasis of the mouth (thrush)
1.2.2 Other mycoses
1.3 Viral infection
1.3.1 HIV infection [5]
1.3.2 Hepatitis [6]
1.3.3 Other viral infections [7]
1.3.3.1 Herpes zoster infection
1.3.3.2 Herpes simplex infection
1.3.3.3 Other and unspecified viral infection
1.4 Other infections; including parasitic [8]
1.5 Immunizations and screening for infectious disease [10]
2 Neoplasms
2.1 Colorectal cancer
2.1.1 Cancer of colon [14]
2.1.2 Cancer of rectum and anus [15]
2.2 Other gastrointestinal cancer
2.2.1 Cancer of esophagus [12]
2.2.2 Cancer of stomach [13]
2.2.3 Cancer of liver and intrahepatic bile duct [16]
2.2.4 Cancer of pancreas [17]
2.2.5 Cancer of other GI organs; peritoneum [18]
2.3 Cancer of bronchus; lung [19]
2.4 Cancer of skin
2.4.1 Melanomas of skin [22]
2.4.2 Other non-epithelial cancer of skin [23]
2.5 Cancer of breast [24]
2.6 Cancer of uterus and cervix
2.6.1 Cancer of uterus [25]
2.6.2 Cancer of cervix [26]
2.7 Cancer of ovary and other female genital organs
2.7.1 Cancer of ovary [27]
2.7.2 Cancer of other female genital organs [28]
2.8 Cancer of male genital organs
2.8.1 Cancer of prostate [29]
2.8.2 Cancer of testis [30]

2.8.3 Cancer of other male genital organs [31]
2.9 Cancer of urinary organs
2.9.1 Cancer of bladder [32]
2.9.2 Cancer of kidney and renal pelvis [33]
2.9.3 Cancer of other urinary organs [34]
2.1 Cancer of lymphatic and hematopoietic tissue
2.10.1 Hodgkins disease [37]
2.10.2 Non-Hodgkins lymphoma [38]
2.10.3 Leukemias [39]
2.10.4 Multiple myeloma [40]
2.11 Cancer; other primary
2.11.1 Cancer of head and neck [11]
2.11.2 Cancer; other respiratory and intrathoracic [20]
2.11.3 Cancer of bone and connective tissue [21]
2.11.4 Cancer of brain and nervous system [35]
2.11.5 Cancer of thyroid [36]
2.11.6 Cancer; other and unspecified primary [41]
2.12 Secondary malignancies [42]
2.12.1 Secondary malignancy of lymph nodes
2.12.2 Secondary malignancy of lung
2.12.3 Secondary malignancy of liver
2.12.4 Secondary malignancy of brain/spine
2.12.5 Secondary malignancy of bone
2.12.6 Other secondary malignancy
2.13 Malignant neoplasm without specification of site [43]
2.14 Neoplasms of unspecified nature or uncertain behavior [44]
2.15 Maintenance chemotherapy; radiotherapy [45]
2.15.1 Radiotherapy
2.15.2 Chemotherapy
2.16 Benign neoplasms
2.16.1 Benign neoplasm of uterus [46]
2.16.2 Other and unspecified benign neoplasm [47]
2.16.2.1 Benign neoplasm of ovary
2.16.2.2 Benign neoplasm of colon
2.16.2.3 Benign neoplasm of the thyroid
2.16.2.4 Benign neoplasm of cerebral meninges
2.16.2.5 Other and unspecified benign neoplasms
3 Endocrine; nutritional; and metabolic diseases and immunity disorders
3.1 Thyroid disorders [48]
3.1.1 Thyrotoxicosis with or without goiter
3.1.2 Other thyroid disorders
3.2 Diabetes mellitus without complication [49]
3.3 Diabetes mellitus with complications [50]
3.3.1 Diabetes with ketoacidosis or uncontrolled diabetes
3.3.2 Diabetes with renal manifestations
3.3.3 Diabetes with ophthalmic manifestations
3.3.4 Diabetes with neurological manifestations
3.3.5 Diabetes with circulatory manifestations
3.3.6 Diabetes with unspecified complications
3.3.7 Diabetes with other manifestations
3.4 Other endocrine disorders [51]
3.5 Nutritional deficiencies [52]
3.5.1 Unspecified protein-calorie malnutrition
3.5.2 Other malnutrition
3.6 Disorders of lipid metabolism [53]
3.7 Gout and other crystal arthropathies [54]

3.8 Fluid and electrolyte disorders [55]
3.8.1 Hyposmolality
3.8.2 Hypovolemia
3.8.3 Hyperpotassemia
3.8.4 Hypopotassemia
3.8.5 Other fluid and electrolyte disorders
3.9 Cystic fibrosis [56]
3.1 Immunity disorders [57]
3.11 Other nutritional; endocrine; and metabolic disorders [58]
3.11.1 Disorders of mineral metabolism
3.11.2 Obesity
3.11.3 Other and unspecified metabolic; nutritional; and endocrine disorders
4 Diseases of the blood and blood-forming organs
4.1 Anemia
4.1.1 Acute posthemorrhagic anemia [60]
4.1.2 Sickle cell anemia [61]
4.1.3 Deficiency and other anemia [59]
4.1.3.1 Iron deficiency anemia
4.1.3.2 Other deficiency anemia
4.1.3.3 Aplastic anemia
4.1.3.4 Chronic blood loss anemia
4.1.3.5 Acquired hemolytic anemia
4.1.3.6 Other specified anemia
4.1.3.7 Anemia; unspecified
4.2 Coagulation and hemorrhagic disorders [62]
4.2.1 Coagulation defects
4.2.2 Thrombocytopenia
4.2.3 Other coagulation and hemorrhagic disorders
4.3 Diseases of white blood cells [63]
4.4 Other hematologic conditions [64]
5 Mental Illness
5.1 Adjustment disorders [650]
5.2 Anxiety disorders [651]
5.3 Attention deficit conduct and disruptive behavior disorders [652]
5.3.1 Conduct disorder [6521]
5.3.2 Oppositional defiant disorder [6522]
5.3.3 Attention deficit disorder and Attention deficit hyperactivity disorder [6523]
5.4 Delirium dementia and amnestic and other cognitive disorders [653]
5.5 Developmental disorders [654]
5.5.1 Communication disorders [6541]
5.5.2 Developmental disabilities [6542]
5.5.3 Intellectual disabilities [6543]
5.5.4 Learning disorders [6544]
5.5.5 Motor skill disorders [6545]
5.6 Disorders usually diagnosed in infancy childhood or adolescence [655]
5.6.1 Elimination disorders [6551]
5.6.2 Other disorders of infancy childhood or adolescence [6552]
5.6.3 Pervasive developmental disorders [6553]
5.6.4 Tic disorders [6554]
5.7 Impulse control disorders not elsewhere classified [656]
5.8 Mood disorders [657]
5.8.1 Bipolar disorders [6571]
5.8.2 Depressive disorders [6572]
5.9 Personality disorders [658]
5.10 Schizophrenia and other psychotic disorders [659]
5.11 Alcohol-related disorders [660]

5.12 Substance-related disorders [661]
5.13 Suicide and intentional self-inflicted injury [662]
5.14 Screening and history of mental health and substance abuse codes [663]
5.14.1 Codes related to mental health disorders [6631]
5.14.2 Codes related to substance-related disorders [6632]
5.15 Miscellaneous mental disorders [670]
5.15.1 Dissociative disorders [6701]
5.15.2 Eating disorders [6702]
5.15.3 Factitious disorders [6703]
5.15.4 Psychogenic disorders [6704]
5.15.5 Sexual and gender identity disorders [6705]
5.15.6 Sleep disorders [6706]
5.15.7 Somatoform disorders [6707]
5.15.8 Mental disorders due to general medical conditions not elsewhere classified [6708]
5.15.9 Other miscellaneous mental conditions [6709]
6 Diseases of the nervous system and sense organs
6.1 Central nervous system infection
6.1.1 Meningitis (except that caused by TB or STD) [76]
6.1.2 Encephalitis (except that caused by TB or STD) [77]
6.1.3 Other CNS infection and poliomyelitis [78]
6.2 Hereditary and degenerative nervous system conditions
6.2.1 Parkinsons disease [79]
6.2.2 Multiple sclerosis [80]
6.2.3 Other hereditary and degenerative nervous system conditions [81]
6.2.3.1 Disorders of the autonomic nervous system
6.2.3.2 Other and unspecified hereditary and degenerative nervous conditions
6.3 Paralysis [82]
6.3.1 Hemiplegia
6.3.2 Other paralysis
6.4 Epilepsy; convulsions [83]
6.4.1 Epilepsy
6.4.2 Convulsions
6.5 Headache; including migraine [84]
6.5.1 Migraine
6.5.2 Other headache
6.6 Coma; stupor; and brain damage [85]
6.7 Eye disorders
6.7.1 Cataract [86]
6.7.2 Retinal detachments; defects; vascular occlusion; and retinopathy [87]
6.7.2.1 Retinal detachment with defect
6.7.2.2 Other retinal detachment or defect
6.7.2.3 Other retinal disorders
6.7.3 Glaucoma [88]
6.7.4 Blindness and vision defects [89]
6.7.5 Inflammation; infection of eye (except that caused by TB or STD) [90]
6.7.6 Other eye disorders [91]
6.8 Ear conditions
6.8.1 Otitis media and related conditions [92]
6.8.1.1 Suppurative and unspecified otitis media
6.8.1.2 Other otitis media and related conditions
6.8.2 Conditions associated with dizziness or vertigo [93]
6.8.3 Other ear and sense organ disorders [94]
6.9 Other nervous system disorders [95]
6.9.1 Disorders of the peripheral nervous system
6.9.2 Other central nervous system disorders
6.9.3 Other nervous system symptoms and disorders

7 Diseases of the circulatory system
7.1 Hypertension
7.1.1 Essential hypertension [98]
7.1.2 Hypertension with complications and secondary hypertension [99]
7.1.2.1 Hypertensive heart and/or renal disease
7.1.2.2 Other hypertensive complications
7.2 Diseases of the heart
7.2.1 Heart valve disorders [96]
7.2.1.1 Chronic rheumatic disease of the heart valves
7.2.1.2 Nonrheumatic mitral valve disorders
7.2.1.3 Nonrheumatic aortic valve disorders
7.2.1.4 Other heart valve disorders
7.2.2 Peri-; endo-; and myocarditis; cardiomyopathy (except that caused by TB or STD) [97]
7.2.2.1 Cardiomyopathy
7.2.2.2 Other peri-; endo-; and myocarditis
7.2.3 Acute myocardial infarction [100]
7.2.4 Coronary atherosclerosis and other heart disease [101]
7.2.4.1 Angina pectoris
7.2.4.2 Unstable angina (intermediate coronary syndrome)
7.2.4.3 Other acute and subacute forms of ischemic heart disease
7.2.4.4 Coronary atherosclerosis
7.2.4.5 Other forms of chronic heart disease
7.2.5 Nonspecific chest pain [102]
7.2.6 Pulmonary heart disease [103]
7.2.7 Other and ill-defined heart disease [104]
7.2.8 Conduction disorders [105]
7.2.8.1 Atrioventricular block
7.2.8.2 Bundle branch block
7.2.8.3 Anomalous atrioventricular excitation
7.2.8.4 Other conduction disorders
7.2.9 Cardiac dysrhythmias [106]
7.2.9.1 Paroxysmal supraventricular tachycardia
7.2.9.2 Paroxysmal ventricular tachycardia
7.2.9.3 Atrial fibrillation
7.2.9.4 Atrial flutter
7.2.9.5 Premature beats
7.2.9.6 Sinoatrial node dysfunction
7.2.9.7 Other cardiac dysrhythmias
7.2.10 Cardiac arrest and ventricular fibrillation [107]
7.2.11 Congestive heart failure; nonhypertensive [108]
7.2.11.1 Congestive heart failure
7.2.11.2 Heart failure
7.3 Cerebrovascular disease
7.3.1 Acute cerebrovascular disease [109]
7.3.1.1 Intracranial hemorrhage
7.3.1.2 Occlusion of cerebral arteries
7.3.1.3 Acute but ill-defined cerebrovascular accident
7.3.2 Occlusion or stenosis of precerebral arteries [110]
7.3.3 Other and ill-defined cerebrovascular disease [111]
7.3.4 Transient cerebral ischemia [112]
7.3.5 Late effects of cerebrovascular disease [113]
7.4 Diseases of arteries; arterioles; and capillaries
7.4.1 Peripheral and visceral atherosclerosis [114]
7.4.1.1 Atherosclerosis of arteries of extremities
7.4.1.2 Peripheral vascular disease unspecified
7.4.1.3 Other peripheral and visceral atherosclerosis

7.4.2 Aortic; peripheral; and visceral artery aneurysms [115]
7.4.2.1 Abdominal aortic aneurysm; without rupture
7.4.2.2 Other aneurysm
7.4.3 Aortic and peripheral arterial embolism or thrombosis [116]
7.4.3.1 Arterial embolism and thrombosis of lower extremity artery
7.4.3.2 Other arterial embolism and thrombosis
7.4.4 Other circulatory disease [117]
7.4.4.1 Hypotension
7.4.4.2 Other and unspecified circulatory disease
7.5 Diseases of veins and lymphatics
7.5.1 Phlebitis; thrombophlebitis and thromboembolism [118]
7.5.1.1 Phlebitis and thrombophlebitis
7.5.1.2 Other venous embolism and thrombosis
7.5.2 Varicose veins of lower extremity [119]
7.5.3 Hemorrhoids [120]
7.5.4 Other diseases of veins and lymphatics [121]
8 Diseases of the respiratory system
8.1 Respiratory infections
8.1.1 Pneumonia (except that caused by TB or STD) [122]
8.1.1.1 Pneumococcal pneumonia
8.1.1.2 Other bacterial pneumonia
8.1.1.3 Pneumonia; organism unspecified
8.1.1.4 Other pneumonia
8.1.2 Influenza [123]
8.1.3 Acute and chronic tonsillitis [124]
8.1.4 Acute bronchitis [125]
8.1.5 Other upper respiratory infections [126]
8.1.5.1 Acute upper respiratory infections of multiple or unspecified sites
8.1.5.2 Chronic sinusitis
8.1.5.3 Croup
8.1.5.4 Other and unspecified upper respiratory infections
8.2 Chronic obstructive pulmonary disease and bronchiectasis [127]
8.2.1 Emphysema
8.2.2 Chronic airway obstruction; not otherwise specified
8.2.3 Obstructive chronic bronchitis
8.2.4 Other chronic pulmonary disease
8.3 Asthma [128]
8.3.1 Chronic obstructive asthma
8.3.1.1 Chronic obstructive asthma without status asthmaticus or exacerbation
8.3.1.2 Chronic obstructive asthma with status asthmaticus
8.3.1.3 Chronic obstructive asthma with acute exacerbation
8.3.2 Other and unspecified asthma
8.3.2.1 Other asthma without status asthmaticus or exacerbation
8.3.2.2 Other asthma with status asthmaticus
8.3.2.3 Other asthma with acute exacerbation
8.4 Aspiration pneumonitis; food/vomitus [129]
8.5 Pleurisy; pneumothorax; pulmonary collapse [130]
8.5.1 Pleurisy; pleural effusion
8.5.2 Pulmonary collapse; interstitial and compensatory emphysema
8.5.3 Empyema and pneumothorax
8.6 Respiratory failure; insufficiency; arrest (adult) [131]
8.6.1 Respiratory failure
8.6.2 Other respiratory insufficiency
8.7 Lung disease due to external agents [132]
8.8 Other lower respiratory disease [133]
8.8.1 Postinflammatory pulmonary fibrosis

8.8.2 Painful respiration
8.8.3 Other and unspecified lower respiratory disease
8.9 Other upper respiratory disease [134]
9 Diseases of the digestive system
9.1 Intestinal infection [135]
9.2 Disorders of teeth and jaw [136]
9.3 Diseases of mouth; excluding dental [137]
9.4 Upper gastrointestinal disorders
9.4.1 Esophageal disorders [138]
9.4.1.1 Esophagitis
9.4.1.2 Other esophageal disorders
9.4.2 Gastroduodenal ulcer (except hemorrhage) [139]
9.4.2.1 Gastric ulcer
9.4.2.2 Duodenal ulcer
9.4.2.3 Peptic ulcer; site unspecified
9.4.2.4 Gastrojejunal ulcer
9.4.3 Gastritis and duodenitis [140]
9.4.3.1 Acute gastritis
9.4.3.2 Other specified gastritis
9.4.3.3 Unspecified gastritis and gastroduodenitis
9.4.3.4 Duodenitis
9.4.4 Other disorders of stomach and duodenum [141]
9.5 Abdominal hernia [143]
9.5.1 Inguinal hernia
9.5.1.1 Inguinal hernia with obstruction or gangrene
9.5.1.2 Inguinal hernia without obstruction or gangrene
9.5.2 Diaphragmatic hernia
9.5.3 Other abdominal hernia
9.5.3.1 Femoral hernia with obstruction/gangrene
9.5.3.2 Femoral hernia without obstruction/gangrene
9.5.3.3 Umbilical hernia with obstruction/gangrene
9.5.3.4 Umbilical hernia without obstruction/gangrene
9.5.3.5 Ventral hernia with obstruction/gangrene
9.5.3.6 Ventral hernia without obstruction/gangrene
9.5.3.7 Incisional hernia with obstruction/gangrene
9.5.3.8 Incisional hernia without obstruction/gangrene
9.5.3.9 Other and unspecified hernia
9.6 Lower gastrointestinal disorders
9.6.1 Appendicitis and other appendiceal conditions [142]
9.6.1.1 Acute appendicitis with abscess or peritonitis
9.6.1.2 Acute appendicitis without abscess or peritonitis
9.6.1.3 Acute appendicitis; not otherwise specified
9.6.1.4 Other appendiceal conditions
9.6.2 Regional enteritis and ulcerative colitis [144]
9.6.3 Intestinal obstruction without hernia [145]
9.6.3.1 Paralytic ileus
9.6.3.2 Impaction of intestine
9.6.3.3 Peritoneal or intestinal adhesions
9.6.3.4 Other intestinal obstruction
9.6.4 Diverticulosis and diverticulitis [146]
9.6.4.1 Diverticulosis
9.6.4.2 Diverticulitis
9.6.5 Anal and rectal conditions [147]
9.6.6 Peritonitis and intestinal abscess [148]
9.7 Biliary tract disease [149]
9.7.1 Cholelithiasis with acute cholecystitis

9.7.2 Cholelithiasis with other cholecystitis
9.7.3 Cholelithiasis without mention of cholecystitis
9.7.4 Calculus of bile duct
9.7.5 Cholecystitis without cholelithiasis
9.7.6 Other biliary tract disease
9.8 Liver disease
9.8.1 Liver disease; alcohol-related [150]
9.8.2 Other liver diseases [151]
9.8.2.1 Cirrhosis of liver without mention of alcohol
9.8.2.2 Liver abscess and sequelae of chronic liver disease
9.8.2.3 Ascites
9.8.2.4 Other and unspecified liver disorders
9.9 Pancreatic disorders (not diabetes) [152]
9.9.1 Acute pancreatitis
9.9.2 Chronic pancreatitis
9.9.3 Other pancreatic disorders
9.1 Gastrointestinal hemorrhage [153]
9.10.1 Hemorrhage from gastrointestinal ulcer
9.10.2 Melena
9.10.3 Gastroesophageal laceration syndrome
9.10.4 Other esophageal bleeding
9.10.5 Hemorrhage of rectum and anus
9.10.6 Hematemesis
9.10.7 Hemorrhage of gastrointestinal tract
9.11 Noninfectious gastroenteritis [154]
9.12 Other gastrointestinal disorders [155]
9.12.1 Constipation
9.12.2 Dysphagia
9.12.3 Other and unspecified gastrointestinal disorders
10 Diseases of the genitourinary system
10.1 Diseases of the urinary system
10.1.1 Nephritis; nephrosis; renal sclerosis [156]
10.1.2 Acute and unspecified renal failure [157]
10.1.2.1 Acute renal failure
10.1.2.2 Unspecified renal failure
10.1.3 Chronic renal failure [158]
10.1.4 Urinary tract infections [159]
10.1.4.1 Infections of kidney
10.1.4.2 Cystitis and urethritis
10.1.4.3 Urinary tract infection; site not specified
10.1.5 Calculus of urinary tract [160]
10.1.5.1 Calculus of kidney
10.1.5.2 Calculus of ureter
10.1.5.3 Other and unspecified urinary calculus
10.1.6 Other diseases of kidney and ureters [161]
10.1.6.1 Hydronephrosis
10.1.6.2 Other and unspecified diseases of kidney and ureters
10.1.7 Other diseases of bladder and urethra [162]
10.1.7.1 Bladder neck obstruction
10.1.7.2 Other and unspecified diseases of bladder and urethra
10.1.8 Genitourinary symptoms and ill-defined conditions [163]
10.1.8.1 Hematuria
10.1.8.2 Retention of urine
10.1.8.3 Other and unspecified genitourinary symptoms
10.2 Diseases of male genital organs
10.2.1 Hyperplasia of prostate [164]

10.2.2 Inflammatory conditions of male genital organs [165]
10.2.3 Other male genital disorders [166]
10.3 Diseases of female genital organs
10.3.1 Nonmalignant breast conditions [167]
10.3.2 Inflammatory diseases of female pelvic organs [168]
10.3.2.1 Pelvic peritoneal adhesions
10.3.2.2 Cervicitis and endocervicitis
10.3.2.3 Pelvic inflammatory disease (PID)
10.3.2.4 Other inflammatory diseases of female pelvic organs
10.3.3 Endometriosis [169]
10.3.4 Prolapse of female genital organs [170]
10.3.5 Menstrual disorders [171]
10.3.6 Ovarian cyst [172]
10.3.7 Menopausal disorders [173]
10.3.8 Female infertility [174]
10.3.9 Other female genital disorders [175]
10.3.9.1 Female genital pain and other symptoms
10.3.9.2 Other and unspecified female genital disorders
11 Complications of pregnancy; childbirth; and the puerperium
11.1 Contraceptive and procreative management [176]
11.1.1 Sterilization
11.1.2 Other contraceptive and procreation management
11.2 Abortion-related disorders
11.2.1 Spontaneous abortion [177]
11.2.2 Induced abortion [178]
11.2.3 Postabortion complications [179]
11.3 Complications mainly related to pregnancy
11.3.1 Ectopic pregnancy [180]
11.3.2 Hemorrhage during pregnancy; abruptio placenta; placenta previa [182]
11.3.2.1 Placenta previa
11.3.2.2 Abruptio placenta
11.3.2.3 Other hemorrhage during pregnancy; childbirth and the puerperium
11.3.3 Hypertension complicating pregnancy; childbirth and the puerperium [183]
11.3.3.1 Preeclampsia and eclampsia
11.3.3.2 Other hypertension in pregnancy
11.3.4 Early or threatened labor [184]
11.3.4.1 Threatened premature labor
11.3.4.2 Early onset of delivery
11.3.4.3 Other early or threatened labor
11.3.5 Prolonged pregnancy [185]
11.3.6Diabetes or abnormal glucose tolerance complicating pregnancy; childbirth; or the puerperium [186]
11.3.7 Other complications of pregnancy [181]
11.3.7.1 Infections of genitourinary tract during pregnancy
11.3.7.2 Anemia during pregnancy
11.3.7.3 Mental disorders during pregnancy
11.3.7.4 Missed abortion
11.3.7.5 Hyperemesis gravidarum
11.3.7.6 Infectious and parasitic complications in mother affecting pregnancy
11.3.7.7 Other and unspecified complications of pregnancy
11.4 Indications for care in pregnancy; labor; and delivery
11.4.1 Malposition; malpresentation [187]
11.4.1.1 Breech presentation
11.4.1.2 Other malposition; malpresentation
11.4.2 Fetopelvic disproportion; obstruction [188]
11.4.2.1 Fetopelvic disproportion

11.4.2.2 Other disproportion or obstruction
11.4.3 Previous cesarean section [189]
11.4.4 Fetal distress and abnormal forces of labor [190]
11.4.4.1 Fetal distress
11.4.4.2 Uterine inertia
11.4.4.3 Precipitate labor
11.4.4.4 Other abnormal forces of labor
11.4.5 Polyhydramnios and other problems of amniotic cavity [191]
11.4.5.1 Premature rupture of membranes
11.4.5.2 Infection of amniotic cavity
11.4.5.3 Other problems of amniotic cavity
11.5 Complications during labor
11.5.1 Umbilical cord complication [192]
11.5.1.1 Cord around neck with compression
11.5.1.2 Other and unspecified cord entanglement with or without compression
11.5.1.3 Other umbilical cord complications
11.5.2 Trauma to perineum and vulva [193]
11.5.2.1 First degree perineal laceration
11.5.2.2 Second degree perineal laceration
11.5.2.3 Third degree perineal laceration
11.5.2.4 Fourth degree perineal laceration
11.5.2.5 Other perineal laceration and trauma
11.5.3 Forceps delivery [194]
11.6 Other complications of birth; puerperium affecting management of mother [195]
11.6.1 Postpartum hemorrhage
11.6.2 Complications of the puerperium
11.6.3 Cervical incompetence
11.6.4 Rhesus isoimmunization
11.6.5 Intrauterine death
11.6.6 Failed induction
11.6.7 Other obstetrical trauma
11.6.8 Other and unspecified complications of birth; puerperium affecting management of mother
11.7 Normal pregnancy and/or delivery [196]
11.7.1 Normal delivery
11.7.2 Multiple gestation
11.7.3 Outcome of delivery (V codes)
12 Diseases of the skin and subcutaneous tissue
12.1 Skin and subcutaneous tissue infections [197]
12.1.1 Cellulitis and abscess
12.1.1.1 Cellulitis and abscess of fingers and toes
12.1.1.2 Cellulitis and abscess of face
12.1.1.3 Cellulitis and abscess of arm
12.1.1.4 Cellulitis and abscess of hand
12.1.1.5 Cellulitis and abscess of leg
12.1.1.6 Cellulitis and abscess of foot
12.1.1.7 Other cellulitis and abscess
12.1.2 Other skin and subcutaneous infections
12.2 Other inflammatory condition of skin [198]
12.3 Chronic ulcer of skin [199]
12.3.1 Decubitus ulcer
12.3.2 Chronic ulcer of leg or foot
12.3.3 Other chronic skin ulcer
12.4 Other skin disorders [200]
13 Diseases of the musculoskeletal system and connective tissue
13.1 Infective arthritis and osteomyelitis (except that caused by TB or STD) [201]
13.2 Non-traumatic joint disorders

13.2.1 Rheumatoid arthritis and related disease [202]
13.2.2 Osteoarthritis [203]
13.2.2.1 Osteoarthritis; localized
13.2.2.2 Osteoarthritis; generalized and unspecified
13.2.3 Other non-traumatic joint disorders [204]
13.3 Spondylosis; intervertebral disc disorders; other back problems [205]
13.3.1 Spondylosis and allied disorders
13.3.2 Intervertebral disc disorders
13.3.3 Other back problems
13.3.3.1 Cervical radiculitis
13.3.3.2 Spinal stenosis; lumbar region
13.3.3.3 Lumbago
13.3.3.4 Sciatica
13.3.3.5 Thoracic or lumbosacral neuritis or radiculitis; unspecified
13.3.3.6 Backache; unspecified
13.3.3.7 Other back pain and disorders
13.4 Osteoporosis [206]
13.5 Pathological fracture [207]
13.6 Acquired deformities
13.6.1 Acquired foot deformities [208]
13.6.2 Other acquired deformities [209]
13.7 Systemic lupus erythematosus and connective tissue disorders [210]
13.8 Other connective tissue disease [211]
13.9 Other bone disease and musculoskeletal deformities [212]
14 Congenital anomalies
14.1 Cardiac and circulatory congenital anomalies [213.]
14.1.1 Transposition of great vessels
14.1.2 Tetralogy of Fallot
14.1.3 Ventricular septal defect
14.1.4 Atrial septal defect
14.1.5 Endocardial cushion defects
14.1.6 Pulmonary valve atresia and stenosis
14.1.7 Aortic valve stenosis
14.1.8 Patent ductus arteriosus
14.1.9 Coarctation of aorta
14.1.10 Pulmonary artery anomalies
14.1.11 Cerebrovascular anomalies
14.1.12 Double outlet right ventricle
14.1.13 Common ventricle
14.1.14 Congenital insufficiency of aortic valve
14.1.15 Hypoplastic left heart syndrome
14.1.16 Gastrointestinal vessel congenital anomaly
14.1.17 Persistent fetal circulation
14.1.18 Other anomalies of bulbus cordis and cardiac septal closure
14.1.19 Other heart valve congenital anomalies
14.1.20 Other congenital anomalies of the heart
14.1.21 Other congenital anomalies of aorta
14.1.22 Other circulatory congenital anomalies
14.2 Digestive congenital anomalies [214.]
14.2.1 Esophageal atresia/tracheoesophageal fistula
14.2.2 Pyloric stenosis
14.2.3 Rectal and large intestine atresia/stenosis
14.2.4 Hirshsprungs disease
14.2.5 Meckels diverticulum
14.2.6 Atresia and stenosis of small intestine
14.2.7 Anomalies of intestinal fixation

14.2.8 Other upper gastrointestinal congenital anomalies
14.2.9 Other lower gastrointestinal congenital anomalies
14.3 Genitourinary congenital anomalies [215.]
14.3.1 Undescended testicle
14.3.2 Hypospadias and epispadias
14.3.3 Obstructive genitourinary defect
14.3.4 Polycystic kidney
14.3.5 Other cystic kidney disease
14.3.6 Embyronic cyst of fallopian tubes and broad ligaments
14.3.7 Other congenital anomalies of genitalia
14.3.8 Other congenital anomalies of urinary system
14.4 Nervous system congenital anomalies [216.]
14.4.1 Spina bifida
14.4.2 Congenital hydrocephalus
14.4.3 Other spinal cord congenital anomalies
14.4.4 Microcephalus
14.4.5 Other nervous system congenital anomalies
14.5 Other congenital anomalies [217.]
14.5.1 Cleft palate without cleft lip
14.5.2 Cleft lip with or without cleft palate
14.5.3 Congenital anomalies of the eye
14.5.4 Microtia (incomplete development of external ear)
14.5.5 Branchial cleft cyst or fistula
14.5.6 Other face and neck congenital anomalies
14.5.7 Congenital anomalies of larynx trachea and bronchus
14.5.8 Other respiratory congenital anomalies
14.5.9 Foot deformities
14.5.10 Congenital hip dislocation
14.5.11 Polydactyly (extra digits) and syndactyly (webbing between digits)
14.5.12 Congenital absence of lower limb
14.5.13 Congenital hip deformity
14.5.14 Other congenital anomalies of limbs
14.5.15 Congenital anomalies of skull and facial bones
14.5.16 Lumbosacral spondylolysis
14.5.17 Spondylolisthesis
14.5.18 Other spinal congenital anomalies
14.5.19 Osteogenesis imperfecta
14.5.20 Congenital anomalies of the diaphragm
14.5.21 Congenital anomalies of abdominal wall
14.5.22 Congenital pigmentary anomalies of skin
14.5.23 Other congenital anomalies of integument
14.5.24 Pectus excavatum
14.5.25 Downs Syndrome
14.5.26 All other congenital anomalies
15 Certain conditions originating in the perinatal period
15.1 Liveborn [218]
15.2 Short gestation; low birth weight; and fetal growth retardation [219]
15.3 Intrauterine hypoxia and birth asphyxia [220]
15.4 Respiratory distress syndrome [221]
15.5 Hemolytic jaundice and perinatal jaundice [222]
15.6 Birth trauma [223]
15.7 Other perinatal conditions [224]
15.7.1 Respiratory conditions of fetus and newborn; other than respiratory distress
15.7.2 Infections specific to the perinatal period
15.7.3 Endocrine and metabolic disturbances of fetus and newborn
15.7.4 Other and unspecified perinatal conditions

16 Injury and poisoning
16.1 Joint disorders and dislocations; trauma-related [225]
16.2 Fractures
16.2.1 Fracture of neck of femur (hip) [226]
16.2.2 Skull and face fractures [228]
16.2.3 Fracture of upper limb [229]
16.2.3.1 Fracture of humerus
16.2.3.2 Fracture of radius and ulna
16.2.3.3 Other fracture of upper limb
16.2.4 Fracture of lower limb [230]
16.2.4.1 Fracture of tibia and fibula
16.2.4.2 Fracture of ankle
16.2.4.3 Other fracture of lower limb
16.2.5 Other fractures [231]
16.2.5.1 Fracture of vertebral column without mention of spinal cord injury
16.2.5.2 Fracture of ribs; closed
16.2.5.3 Fracture of pelvis
16.2.5.4 Other and unspecified fracture
16.3 Spinal cord injury [227]
16.4 Intracranial injury [233]
16.4.1 Concussion
16.4.2 Other intracranial injury
16.5 Crushing injury or internal injury [234]
16.6 Open wounds
16.6.1 Open wounds of head; neck; and trunk [235]
16.6.2 Open wounds of extremities [236]
16.7 Sprains and strains [232]
16.8 Superficial injury; contusion [239]
16.9 Burns [240]
16.1 Complications
16.10.1 Complication of device; implant or graft [237]
16.10.1.1 Malfunction of device; implant; and graft
16.10.1.2 Infection and inflammation--internal prosthetic device; implant; and graft
16.10.1.3 Other complications of internal prosthetic device; implant; and graft
16.10.1.4 Complications of transplants and reattached limbs
16.10.2 Complications of surgical procedures or medical care [238]
16.10.2.1 Cardiac complications
16.10.2.2 Respiratory complications
16.10.2.3 Gastrointestinal complications
16.10.2.4 Urinary complications
16.10.2.5 Hemorrhage or hematoma complicating a procedure
16.10.2.6 Postoperative infection
16.10.2.7 Other complications of surgical and medical procedures
16.11 Poisoning
16.11.1 Poisoning by psychotropic agents [241]
16.11.2 Poisoning by other medications and drugs [242]
16.11.3 Poisoning by nonmedicinal substances [243]
16.12 Other injuries and conditions due to external causes [244]
17 Symptoms; signs; and ill-defined conditions and factors influencing health status
17.1 Symptoms; signs; and ill-defined conditions
17.1.1 Syncope [245]
17.1.2 Fever of unknown origin [246]
17.1.3 Lymphadenitis [247]
17.1.4 Gangrene [248]
17.1.5 Shock [249]
17.1.6 Nausea and vomiting [250]

17.1.7 Abdominal pain [251]

17.1.8 Malaise and fatigue [252]

17.1.9 Allergic reactions [253]

17.2 Factors influencing health care

17.2.1 Rehabilitation care; fitting of prostheses; and adjustment of devices [254]

17.2.2 Administrative/social admission [255]

17.2.3 Medical examination/evaluation [256]

17.2.4 Other aftercare [257]

17.2.5 Other screening for suspected conditions (not mental disorders or infectious disease) [258]

18 Residual codes; unclassified; all E codes [259 and 260]

Appendix D1

Multi-Level CCS – Procedures

MULTI-LEVEL
CATEGORY LABELS [Single-Level CCS Procedure Category]

1 Operations on the nervous system
1.1 Incision and excision of CNS [1]
1.1.1 Craniotomy and craniectomy
1.1.2 Incision of cerebral meninges
1.1.3 Other incision and excision of CNS
1.2 Insertion; replacement; or removal of extracranial ventricular shunt [2]
1.3 Laminectomy; excision intervertebral disc [3]
1.3.1 Excision of intervertebral disc
1.3.2 Laminectomy
1.4 Diagnostic spinal tap [4]
1.5 Insertion of catheter or spinal stimulator and injection into spinal canal [5]
1.6 Decompression peripheral nerve [6]
1.6.1 Release of carpal tunnel
1.6.2 Other lysis of adhesion and decompression of peripheral nerves
1.7 Other diagnostic nervous system procedures [7]
1.8 Other non-OR or closed therapeutic nervous system procedures [8]
1.9 Other OR therapeutic nervous system procedures [9]
2 Operations on the endocrine system
2.1 Thyroidectomy; partial or complete [10]
2.2 Diagnostic endocrine procedures [11]
2.3 Other therapeutic endocrine procedures [12]
3 Operations on the eye
3.1 Corneal transplant [13]
3.2 Glaucoma procedures [14]
3.3 Lens and cataract procedures [15]
3.3.1 Insertion of prosthetic lens
3.3.2 Phacoemulsification and aspiration of cataract
3.3.3 Other extracapsular extraction of lens
3.3.4 Other lens and cataract procedures
3.4 Repair of retinal tear; detachment [16]
3.5 Destruction of lesion of retina and choroid [17]
3.6 Diagnostic procedures on eye [18]
3.7 Other therapeutic procedures on eyelids; conjunctiva; cornea [19]
3.8 Other intraocular therapeutic procedures [20]
3.9 Other extraocular muscle and orbit therapeutic procedures [21]
4 Operations on the ear
4.1 Tympanoplasty [22]
4.2 Myringotomy [23]
4.3 Mastoidectomy [24]
4.4 Diagnostic procedures on ear [25]
4.5 Other therapeutic ear procedures [26]
5 Operations on the nose; mouth; and pharynx
5.1 Control of epistaxis [27]
5.2 Plastic procedures on nose [28]
5.3 Dental procedures [29]
5.4 Tonsillectomy and/or adenoidectomy [30]
5.4.1 Tonsillectomy without adenoidectomy

5.4.2 Tonsillectomy with adenoidectomy
5.4.3 Adenoidectomy without tonsillectomy
5.4.4 Control of hemorrhage after tonsillectomy or adenoidectomy
5.5 Diagnostic procedures on nose; mouth and pharynx [31]
5.5.1 Diagnostic procedures on nasal sinuses
5.5.2 Other diagnostic procedures on nose; mouth and pharynx
5.6 Other non-OR therapeutic procedures on nose; mouth and pharynx [32]
5.6.1 Non-OR procedures on nasal sinuses
5.6.2 Other non-OR procedures on nasal sinuses
5.7 Other OR therapeutic procedures on nose; mouth and pharynx [33]
5.7.1 OR procedures on nasal sinuses
5.7.2 Excision salivary gland
5.7.3 Repair cleft lip
5.7.4 Correction cleft palate
5.7.5 Incision and drainage of tonsils
5.7.6 Other procedures on nose; mouth and pharynx
6 Operations on the respiratory system
6.1 Tracheostomy; temporary and permanent [34]
6.2 Tracheoscopy and laryngoscopy with biopsy [35]
6.3 Lobectomy or pneumonectomy [36]
6.4 Diagnostic bronchoscopy and biopsy of bronchus [37]
6.4.1 Bronchoscopy without biopsy
6.4.2 Endoscopic biopsy of bronchus
6.4.3 Needle biopsy of lung
6.4.4 Endoscopic biopsy of lung
6.5 Other diagnostic procedures on lung and bronchus [38]
6.6 Incision of pleura; thoracentesis; chest drainage [39]
6.6.1 Closed chest drainage
6.6.2 Open chest drainage
6.6.3 Thoracentesis
6.7 Other diagnostic procedures of respiratory tract and mediastinum [40]
6.8 Other non-OR therapeutic procedures on respiratory system [41]
6.9 Other OR therapeutic procedures on respiratory system [42]
7 Operations on the cardiovascular system
7.1 Heart valve procedures [43]
7.2 Coronary artery bypass graft (CABG) [44]
7.2.1 Bypass of one coronary artery
7.2.2 Bypass of two coronary arteries
7.2.3 Bypass of three coronary arteries
7.2.4 Bypass of four coronary arteries
7.2.5 Other bypass of coronary arteries
7.3 Percutaneous transluminal coronary angioplasty (PTCA) [45]
7.3.1 Single vessel PTCA
7.3.2 Multiple vessel PTCA
7.4 Coronary thrombolysis [46]
7.5 Diagnostic cardiac catheterization; coronary arteriography [47]
7.5.1 Coronary arteriography
7.5.2 Cardiac catheterization
7.6Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/defibrillator [48]
7.6.1 Insertion; revision; replacement; or removal of pacemaker leads
7.6.2 Insertion; revision; replacement; or removal of pacemaker device
7.6.3 Insertion; revision; replacement; or removal of cardioverter/defibrillator
7.7 Other OR heart procedures [49]
7.8 Extracorporeal circulation auxiliary to open heart procedures [50]
7.9 Endarterectomy; vessel of head and neck [51]

7.1 Aortic resection; replacement or anastomosis [52]
7.11 Varicose vein stripping; lower limb [53]
7.12 Other vascular catheterization; not heart [54]
7.12.1 Arterial catheterization
7.12.2 Umbilical vein catheterization
7.12.3 Venous catheterization
7.13 Peripheral vascular bypass [55]
7.14 Other vascular bypass and shunt; not heart [56]
7.15Creation; revision and removal of arteriovenous fistula or vessel-to-vessel cannula for dialysis [57]
7.16 Hemodialysis [58]
7.17 Other OR procedures on vessels of head and neck [59]
7.18 Embolectomy and endarterectomy of lower limbs [60]
7.19 Other OR procedures on vessels other than head and neck [61]
7.19.1 Interrupt vena cava
7.19.2 Other OR procedures on blood vessels
7.2 Other diagnostic cardiovascular procedures [62]
7.21 Other non-OR therapeutic cardiovascular procedures [63]
8 Operations on the hemic and lymphatic system
8.1 Bone marrow transplant [64]
8.2 Bone marrow biopsy [65]
8.3 Procedures on spleen [66]
8.4 Other therapeutic procedures; hemic and lymphatic system [67]
8.4.1 Biopsy of lymphatic structure
8.4.2 Simple excision of lymphatic structure
8.4.3 Regional lymph node excision
8.4.4 Radical excision lymph nodes
8.4.5 Other hemic and lymphatic procedures
9 Operations on the digestive system
9.1 Therapeutic procedures on the esophagus
9.1.1 Injection or ligation of esophageal varices [68]
9.1.2 Esophageal dilatation [69]
9.2 Upper gastrointestinal endoscopy; biopsy [70]
9.2.1 Esophagoscopy
9.2.2 Gastroscopy
9.2.3 Esophagogastroduodenoscopy (EGD) without biopsy
9.2.4 Esophagogastroduodenoscopy (EGD) with biopsy
9.2.5 Endoscopic biopsy small intestine
9.3 Gastrostomy; temporary and permanent [71]
9.4 Colostomy; temporary and permanent [72]
9.5 Ileostomy and other enterostomy [73]
9.6 Gastrectomy; partial and total [74]
9.7 Small bowel resection [75]
9.8 Colonoscopy and biopsy [76]
9.8.1 Closed endoscopic biopsy of large intestine
9.8.2 Other endoscopy of large intestine
9.9 Proctoscopy and anorectal biopsy [77]
9.1 Colorectal resection [78]
9.10.1 Right hemicolectomy
9.10.2 Left hemicolectomy
9.10.3 Sigmoidectomy
9.10.4 Resection of rectum
9.10.5 Other colorectal resections
9.11 Local excision of large intestine lesion (not endoscopic) [79]
9.12 Appendectomy [80]
9.13 Hemorrhoid procedures [81]

9.14 Endoscopic retrograde cannulation of pancreas (ERCP) [82]
9.15 iopsy of liver [83]
9.16 Cholecystectomy and common duct exploration [84]
9.16.1 Open cholecystectomy
9.16.2 Laparoscopic cholecystectomy
9.16.3 Incision of bile duct
9.17 Inguinal and femoral hernia repair [85]
9.17.1 Unilateral repair inguinal hernia
9.17.2 Bilateral repair inguinal hernia
9.17.3 Femoral hernia repair
9.18 Other hernia repair [86]
9.18.1 Umbilical hernia repair
9.18.2 Incisional hernia repair
9.18.3 Other abdominal wall hernia repair
9.18.4 Other hernia repair
9.19 Laparoscopy [87]
9.2 Abdominal paracentesis [88]
9.21 Exploratory laparotomy [89]
9.22 Excision; lysis peritoneal adhesions [90]
9.23 Peritoneal dialysis [91]
9.24 Other bowel diagnostic procedures [92]
9.25 Other non-OR upper GI therapeutic procedures [93]
9.26 Other OR upper GI therapeutic procedures [94]
9.27 Other non-OR lower GI therapeutic procedures [95]
9.28 Other OR lower GI therapeutic procedures [96]
9.28.1 Closure of stoma of large intestine
9.28.2 Local excision of rectal lesion
9.28.3 Incision of perirectal tissue
9.28.4 Incision of perianal abscess
9.28.5 Incision/excision of anal fistula
9.28.6 Other lower GI procedures
9.29 Other gastrointestinal diagnostic procedures [97]
9.3 Other non-OR gastrointestinal therapeutic procedures [98]
9.31 Other OR gastrointestinal therapeutic procedures [99]
9.31.1 Radical pancreaticoduodenectomy
9.31.2 Incision abdominal wall
9.31.3 Excision or destruction of peritoneal tissue
9.31.4 Creation of cutaneoperitoneal fistula
9.31.5 Other gastrointestinal therapeutic procedures
10 Operations on the urinary system
10.1 Cystoscopy and other transurethral procedures
10.1.1 Endoscopy and endoscopic biopsy of the urinary tract [100]
10.1.2 Transurethral excision; drainage; or removal of urinary obstruction [101]
10.1.3 Ureteral catheterization [102]
10.2 Nephrotomy and nephrostomy [103]
10.3 Nephrectomy; partial or complete [104]
10.4 Kidney transplant [105]
10.5 Genitourinary incontinence procedures [106]
10.6 Extracorporeal lithotripsy; urinary [107]
10.7 Indwelling catheter [108]
10.8 Procedures on the urethra [109]
10.9 Other diagnostic procedures of urinary tract [110]
10.1 Other non-OR therapeutic procedures of urinary tract [111]
10.11 Other OR therapeutic procedures of urinary tract [112]
11 Operations on the male genital organs
11.1 Transurethral resection of prostate (TURP) [113]

11.2 Open prostatectomy [114]
11.3 Circumcision [115]
11.4 Diagnostic procedures; male genital [116]
11.5 Other non-OR therapeutic procedures; male genital [117]
11.6 Other OR therapeutic procedures; male genital [118]
11.6.1 Unilateral orchiectomy
11.6.2 Bilateral orchiectomy
11.6.3 Orchiopexy
11.6.4 Insert or replace penile prosthesis
11.6.5 Other male genital procedures
12 Operations on the female genital organs
12.1 Oophorectomy; unilateral and bilateral [119]
12.2 Other operations on ovary [120]
12.3 Ligation of fallopian tubes [121]
12.4 Other operations on fallopian tubes [123]
12.5 Hysterectomy; abdominal and vaginal [124]
12.5.1 Total abdominal hysterectomy
12.5.2 Vaginal hysterectomy
12.5.3 Other hysterectomy
12.6 Other excision of cervix and uterus [125]
12.7 Abortion (termination of pregnancy) [126]
12.8 Dilatation and curettage (D&C); aspiration after delivery or abortion [127]
12.9 Diagnostic dilatation and curettage (D&C) [128]
12.1 Repair of cystocele and rectocele; obliteration of vaginal vault [129]
12.11 Other diagnostic procedures; female organs [130]
12.12 Other non-OR therapeutic procedures; female organs [131]
12.13 Other OR therapeutic procedures; female organs [132]
13 Obstetrical procedures
13.1 Episiotomy [133]
13.2 Cesarean section [134]
13.3 orceps; vacuum; and breech delivery [135]
13.3.1 Low forceps delivery with episiotomy
13.3.2 Vacuum extraction with episiotomy
13.3.3 Other vacuum extraction
13.3.4 Other forceps or breech delivery
13.4 Artificial rupture of membranes to assist delivery [136]
13.5 Other procedures to assist delivery [137]
13.5.1 Induction of labor by artificial rupture of membranes
13.5.2 Medical induction of labor
13.5.3 Other manually assisted labor
13.5.4 Other delivery procedures
13.6 Diagnostic amniocentesis [138]
13.7 Fetal monitoring [139]
13.8 Repair of current obstetric laceration [140]
13.8.1 Repair of obstetric laceration of uterus or cervix
13.8.2 Repair of obstetric laceration of bladder or urethra
13.8.3 Repair of obstetric laceration of rectum or sphincter
13.8.4 Repair of other obstetric laceration
13.9 Other therapeutic obstetrical procedures [141]
13.1 Removal of ectopic pregnancy [122]
14 Operations on the musculoskeletal system
14.1 Partial excision bone [142]
14.2 Bunionectomy or repair of toe deformities [143]
14.3 Treatment of fracture or dislocation
14.3.1 Treatment; facial fracture or dislocation [144]
14.3.2 Treatment; fracture or dislocation of radius and ulna [145]

14.3.3 Treatment; fracture or dislocation of hip and femur [146]
14.3.4 Treatment; fracture or dislocation of lower extremity (other than hip or femur) [147]
14.3.5 Other fracture and dislocation procedure [148]
14.4 Arthroscopy [149]
14.4.1 Arthroscopy of knee
14.4.2 Other arthroscopy
14.5 Division of joint capsule; ligament or cartilage [150]
14.6 Excision of semilunar cartilage of knee [151]
14.7 Arthroplasty
14.7.1 Arthroplasty knee [152]
14.7.2 Hip replacement; total and partial [153]
14.7.3 Arthroplasty other than hip or knee [154]
14.8 Arthrocentesis [155]
14.9 Injections and aspirations of muscles; tendons; bursa; joints and soft tissue [156]
14.1 Amputation of lower extremity [157]
14.10.1 Amputation of toe
14.10.2 Amputation through foot
14.10.3 Below knee amputation
14.10.4 Above knee amputation
14.10.5 Other lower extremity amputation
14.11 Spinal fusion [158]
14.12 Other diagnostic procedures on musculoskeletal system [159]
14.13 Other therapeutic procedures on muscles and tendons [160]
14.13.1 Rotator cuff repair
14.13.2 Other suture of muscle; tendon and fascia
14.13.3 Other muscle and tendon procedures
14.14 Other OR therapeutic procedures on bone [161]
14.15 Other OR therapeutic procedures on joints [162]
14.16 Other non-OR therapeutic procedures on musculoskeletal system [163]
14.17 Other OR therapeutic procedures on musculoskeletal system [164]
15 Operations on the integumentary system
15.1 Procedures on the breast
15.1.1 Breast biopsy and other diagnostic procedures on breast [165]
15.1.2 Lumpectomy; quadrantectomy of breast [166]
15.1.3 Mastectomy [167]
15.2 Incision and drainage; skin and subcutaneous tissue [168]
15.3 Debridement of wound; infection or burn [169]
15.4 Excision of skin lesion [170]
15.5 Suture of skin and subcutaneous tissue [171]
15.6 Skin graft [172]
15.7 Other diagnostic procedures on skin and subcutaneous tissue [173]
15.8 Other non-OR therapeutic procedures on skin and breast [174]
15.8.1 Aspiration of skin and subcutaneous tissue
15.8.2 Insertion of totally implantable vascular access device
15.8.3 Debridement of nail
15.8.4 Other skin and breast procedures; non-OR
15.9 Other OR therapeutic procedures on skin and breast [175]
15.9.1 Bilateral reduction mammoplasty
15.9.2 Excision pilonidal cyst or sinus
15.9.3 Other skin and breast procedures; OR
16 Miscellaneous diagnostic and therapeutic procedures
16.1 Other organ transplantation [176]
16.2 Computerized axial tomography (CT) scan
16.2.1 Computerized axial tomography (CT) scan head [177]
16.2.2 CT scan chest [178]
16.2.3 CT scan abdomen [179]

16.2.4 Other CT scan [180]
16.3 Myelogram [181]
16.4 Mammography [182]
16.5 Routine chest X-ray [183]
16.6 Intraoperative cholangiogram [184]
16.7 Upper gastrointestinal X-ray [185]
16.8 Lower gastrointestinal X-ray [186]
16.9 Intravenous pyelogram [187]
16.1 Cerebral arteriogram [188]
16.11 Contrast aortogram [189]
16.12 Contrast arteriogram of femoral and lower extremity arteries [190]
16.13 Arterio or venogram (not heart and head) [191]
16.14 Diagnostic ultrasound
16.14.1 Diagnostic ultrasound of head and neck [192]
16.14.2 Diagnostic ultrasound of heart (echocardiogram) [193]
16.14.3 Diagnostic ultrasound of gastrointestinal tract [194]
16.14.4 Diagnostic ultrasound of urinary tract [195]
16.14.5 Diagnostic ultrasound of abdomen or retroperitoneum [196]
16.14.6 Other diagnostic ultrasound [197]
16.15 Magnetic resonance imaging [198]
16.16 Electroencephalogram (EEG) [199]
16.17 Nonoperative urinary system measurements [200]
16.18 Cardiac stress tests [201]
16.19 Electrocardiogram [202]
16.2 Electrographic cardiac monitoring [203]
16.21 Swan-Ganz catheterization for monitoring [204]
16.22 Arterial blood gases [205]
16.23 Microscopic examination (bacterial smear; culture; toxicology) [206]
16.24 Radioisotope scan
16.24.1 Radioisotope bone scan [207]
16.24.2 Radioisotope pulmonary scan [208]
16.24.3 Radioisotope scan and function studies [209]
16.24.4 Other radioisotope scan [210]
16.25 Therapeutic radiology [211]
16.26 Physical therapy
16.26.1 Diagnostic physical therapy [212]
16.26.2 Physical therapy exercises; manipulation; and other procedures [213]
16.26.3 Traction; splints; and other wound care [214]
16.26.4 Other physical therapy and rehabilitation [215]
16.27 Respiratory intubation and mechanical ventilation [216]
16.27.1 Endotracheal intubation
16.27.2 Continuous mechanical ventilation less than 96 hours
16.27.3 Continuous mechanical ventilation 96 hours or more
16.27.4 Other respiratory intubation and mechanical ventilation
16.28 Other respiratory therapy [217]
16.28.1 Respiratory medication administered by nebulizer
16.28.2 Oxygen therapy
16.28.3 Other respiratory treatments
16.29 Psychological and psychiatric evaluation and therapy [218]
16.29.1 Psychiatric drug therapy
16.29.2 Electroconvulsive therapy
16.29.3 Individual psychotherapy
16.29.4 Other psychological and psychiatric evaluation and therapy
16.3 Alcohol and drug rehabilitation/ detoxification [219]
16.30.1 Alcohol rehabilitation
16.30.2 Alcohol detoxification

16.30.3 Alcohol rehabilitation and detoxification
16.30.4 Drug rehabilitation
16.30.5 Drug detoxification
16.30.6 Drug rehabilitation and detoxification
16.30.7 Alcohol and drug rehabilitation
16.30.8 Alcohol and drug detoxification
16.30.9 Alcohol and drug rehabilitation and detoxification
16.31 Ophthalmologic and otologic diagnosis and treatment [220]
16.32 Nasogastric tube [221]
16.33 Blood transfusion [222]
16.34 Enteral and parenteral nutrition [223]
16.35 Cancer chemotherapy [224]
16.36 Conversion of cardiac rhythm [225]
16.37 Other diagnostic radiology and related techniques [226]
16.38 Other diagnostic procedures (interview; evaluation; consultation) [227]
16.39 Prophylactic vaccinations and inoculations [228]
16.4 Nonoperative removal of foreign body [229]
16.41 Extracorporeal shock wave lithotripsy; other than urinary [230]
16.42 Other therapeutic procedures [231]
16.42.1 Inject antibiotic
16.42.2 Other phototherapy (newborn)
16.42.3 Injection of Thromobolytic Agent (not coronary)
16.42.4 Other therapies

Table A. Mapping CCS diagnosis categories into ICD-9-CM chapters

CCS diagnosis numbers	ICD-9-CM diagnosis chapters
1-10	1 - Infectious and parasitic diseases
11-47	2 - Neoplasms
48-58	3 - Endocrine, nutritional, and metabolic diseases and immunity disorders
59-64	4 - Diseases of the blood and blood-forming organs
650-663,670	5 - Mental illness
76-95	6 - Diseases of the nervous system and sense organs
96-121	7 - Diseases of the circulatory system
122-134	8 - Diseases of the respiratory system
135-155	9 - Diseases of the digestive system
156-175	10 - Diseases of the genitourinary system
176-196	11 - Complications of pregnancy, childbirth, and the puerperium
197-200	12 - Diseases of the skin and subcutaneous tissue
201-212	13 - Diseases of the musculoskeletal system and connective tissue
213-217	14 - Congenital anomalies
218-224	15 - Certain conditions originating in the perinatal period
225-244	16 - Injury and poisoning
245-260	17 - Other conditions

Note: CCS is Clinical Classifications for Health Policy Research. ICD-9-CM refers to the *International Classification of Diseases, 9th Revision, Clinical Modification.*

Table B. Mapping CCS procedure categories into ICD-9-CM chapters

CCS procedure numbers	ICD-9-CM procedure chapters
1-9	1- Operations on the nervous system
10-12	2 - Operations on the endocrine system
13-21	3 - Operations on the eye
22-26	4 - Operations on the ear
27-33	5 - Operations on the nose, mouth, and pharynx
34-42	6 - Operations on the respiratory system
43-63	7 - Operations on the cardiovascular system
64-67	8 - Operations on the hemic and lymphatic system
68-99	9 - Operations on the digestive system
100-112	10 - Operations on the urinary system
113-118	11 - Operations on the male genital organs
119-121, 123-132	12 - Operations on the female genital organs
122, 133-141	13 - Obstetrical procedures
142-164	14 - Operations on the musculoskeletal system
165-175	15 - Operations on the integumentary system
176-231	16 - Miscellaneous diagnostic and therapeutic procedures

Note: CCS is Clinical Classifications for Health Policy Research.   *ICD-9-CM is International Classification of Diseases, 9th Revision, Clinical Modification.*