



USER GUIDE:
CLINICAL CLASSIFICATIONS SOFTWARE FOR
SERVICES AND PROCEDURES,
v2021.2

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TABLE OF CONTENTS

Introduction	1
Description of the CCS-Services and Procedures	2
Background on Category Development.....	2
Guidelines for Assigning CCS Categories to CPT and HCPCS Level II Codes	3
Using The Clinical Classifications Software-Services and Procedures With The Surgery Flags Software For Services and ProcedureS.....	5
Counting Major Therapeutic Surgeries Using the CCS-Services and Procedures and Surgery Flags Software-Services and Procedures	5
Using the Downloadable CCS-Services and Procedure Files	6
System Requirements	6
Downloadable Files	6
Running the SAS Program to Add CCS-Services and Procedures Categories to Data	8
Data Elements Required for Input Dataset.....	9
Representation of CPT Codes	9
CCS Data Elements in the Output File	9
Assigning CCS Categories to Different Data Years	10
Appendix A: Background on the Development of the CCS-Services and Procedures	12
Appendix B: Categories for the CCS-Services and Procedures	14
Appendix C: CCS-Services and Procedures categories for professional service and supply codes	24
Appendix D: Identification of Telehealth Services.....	26

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WHAT'S NEW IN v2021.2 OF THE CLINICAL CLASSIFICATIONS SOFTWARE (CCS) FOR SERVICES AND PROCEDURES?

- The CCS-Services and Procedures v2021.2 is based on Healthcare Common Procedure Coding System (HCPCS) Level I codes, also known as Current Procedural Terminology (CPT®) codes, and HCPCS Level II codes valid as of January 1, 2021, with the exception of codes related to COVID-19 vaccinations and potential therapies that became effective during 2021.
 - Added 147 codes that are valid on January 1, 2021, but previously overlooked in v2021.1
 - Added 28 codes related to COVID-19 vaccinations and potential therapies that became effective during 2021.

INTRODUCTION

This report provides technical documentation for the Healthcare Cost and Utilization Project (HCUP) Clinical Classifications Software for Services and Procedures (CCS-Services and Procedures).

CCS-Services and Procedures provides a method for classifying Healthcare Common Procedure Coding System (HCPCS) codes into clinically meaningful categories. HCPCS is comprised of two levels.

- HCPCS Level I, commonly referred to as Current Procedural Terminology (CPT®) codes, represent approximately 80 percent of the HCPCS codes and are copyrighted and published by the American Medical Association (AMA)¹. The services and procedures include but are not limited to evaluation and management services, diagnostic and therapeutic surgical and nonsurgical procedures, radiological procedures, laboratory tests, and rehabilitative procedures. CPT codes are updated on a calendar year basis with an extensive update effective on January 1 and a limited “early release” of codes effective on July 1.
- HCPCS Level II codes are developed and maintained by Centers for Medicare & Medicaid Services (CMS) to describe and identify products, supplies, and services not found in the HCPCS/CPT code set (with the exception of codes for dental services, which are maintained by the American Dental Association). HCPCS Level II codes include but are not limited to descriptions for ambulance services, dental service drugs, infusion additives, devices, durable medical equipment, prosthetics, orthotics, ancillary surgical supplies, nonphysician services, and health care supplies. HCPCS Level II codes are updated quarterly in January, April, July, and October.

The CCS-Services and Procedures provides a method for classifying CPT and HCPCS Level II codes into clinically meaningful procedure categories. The procedure categories are identical to the [Clinical Classifications Software for ICD-9-CM²](#) procedure classification with the addition of specific categories unique to the professional service and supply codes in CPT and HCPCS Level II codes. The CCS-Services and Procedures is updated annually to coincide with January updates to the HCPCS coding system.

More than 10,000 CPT codes and 6,000 HCPCS Level II codes are collapsed into over 240 clinically meaningful categories that may be more useful for presenting descriptive statistics than are individual CPT or HCPCS Level II codes. For example, CCS-Services and Procedures can be used to identify populations for procedure-specific studies or to develop statistical

¹ More information on CPTs is available at the American Medical Association web site at www.ama-assn.org/practice-management/cpt

² ICD-9-CM is the abbreviation for International Classification of Diseases, Ninth Revision, Clinical Modification

reports providing information (such as charges and length of stay) about relatively specific procedures. Background on the development of the CCS-Services and Procedures assignment is provided in [Appendix A](#). A complete list of the CCS-Services and Procedures categories is provided in [Appendix B](#).

The CCS-Service and Procedures v2021.2 is based on CPT and HCPCS Level II codes valid as of January 1, 2021, with the exception of codes related to COVID-19 vaccinations and potential therapies that became effective during 2021.

Files containing the mapping of CPT and HCPCS Level II codes into CCS categories can be downloaded from the [HCUP User Support \(HCUP-US\)](#) website.³

DESCRIPTION OF THE CCS-SERVICES AND PROCEDURES

Background on Category Development

The CCS-Services and Procedures includes over 240 clinical categories that generally align with the procedure categories in the [CCS for ICD-9-CM](#). Development of the categories is based on four general criteria:

1. Categories that represent unique procedure types.
 - a. For example, CCS 172 Skin Graft
2. Categories grouped by body system, which are further delineated as diagnostic or therapeutic and operating room (OR) or non-operating room (non-OR).
 - a. For example:
 - i. CCS 173 Other diagnostic procedures on skin and subcutaneous tissue
 - ii. CCS 174 Other non-OR therapeutic procedures on skin and breast
 - iii. CCS 175 Other OR therapeutic procedures on skin and breast

The last two criteria are specific to the CCS-Services and Procedures due to the nature of the CPT and HCPCS Level II codes.

3. Categories that capture information on professional services and supply codes that were not applicable to the ICD-9-CM version of the CCS. The full list of categories specific to professional services and supply codes is included in [Appendix C](#).
 - a. A few examples are listed below:
 - i. CCS 239 Transportation for emergency and non-emergency transportation of patients, medical staff, equipment, and tissue
 - ii. CCS 242 Hearing devices and audiology supplies

³ The HCUP User Support website can be found at www.hcup-us.ahrq.gov/.

- iii. CCS 245 Telehealth (starting in v2020.1) for remote monitoring, telephone calls, online communication, etc. Additional information on identifying telehealth is included in [Appendix D](#).
- 4. Categories that include CPT or HCPCS Level II codes that are not classified.
 - a. 998 CPT codes not classified (starting with v2020.1): For CPT category II codes ending in the letter F that are used for tracking patient follow up and outcomes.
 - b. 999 HCPCS Level II codes not classified (starting with v2020.1): For certain HCPCS codes used to identify performance measurements, Medicare-approved demonstration projects, consultation from a qualified clinical decision support mechanism (CDSM), or dental services.⁴ This includes all codes that start with D or M1 and a subset of the codes that start with the letter G.

Guidelines for Assigning CCS Categories to CPT and HCPCS Level II Codes

The following guidelines were developed to ensure consistent assignments of the CPT and HCPCS Level II codes into CCS categories:

1. If the code included two operating room (OR) procedures, the procedure that would result in the greatest morbidity, extent of surgery, or resource took precedence.
2. When a CPT or HCPCS Level II code could be assigned to a more specific category or to a more general category, the more specific was selected.
3. Codes were assigned to the body system associated with a physician's specialty.
 - a. For example, the CPT code 33282⁵ Implantation of patient-activated cardiac event recorder, included an incision and dissection down to the subcutaneous tissue to implant a recorder; however, a cardiologist most likely performed this procedure. Therefore, this specific CPT code was assigned to Other diagnostic cardiovascular procedures category (CCS 62) as opposed to the category for Other non-OR therapeutic procedures on the skin and breast (CCS 174).
4. If a CPT or HCPCS Level II code contained both diagnostic and therapeutic components, and the applicable CCS categories were split between these two types of services, the therapeutic aspect took precedence.
5. If a CPT or HCPCS Level II code contained both OR and non-OR components, the OR category was chosen.

⁴ Note: Starting in v2022.1, Current Dental Terminology (CDT) codes are included in a new CCS category of 997.

⁵ This CPT code was discontinued in 2019.
HCUP (5/27/22)

6. If a CPT or HCPCS Level II code included the phrase “with or without” a specific additional procedure, the code was mapped to the more general category rather than the specific category. This was done to reduce erroneous categorization of those records that did not include the additional procedure.
7. A CPT code that is only to be reported in tandem with another code (i.e., the CPT code is paired with another code to provide additional information) is classified into the same CCS as the primary code. For example, the CPT code for “Percutaneous transluminal coronary angioplasty (PTCA) for each additional branch of a coronary artery (List separately in addition to code for primary procedure)” and the CPT code listing the primary procedure “PTCA single major coronary artery or branch” are both included in CCS 45 for PTCA.
8. All CPT and HCPCS Level II codes are assigned to a CCS category, starting in v2020.1.
 - a. CPT category II codes ending in the letter F are assigned to CCS 998. These are supplemental codes that are used for tracking patient follow up and outcomes.
 - b. A subset of HCPCS Level II codes are assigned to CCS 999. These codes are used to identify performance measurements, Medicare-approved demonstration projects, consultation from a qualified clinical decision support mechanism (CDSM), or dental services. This includes all codes that start with D or M1 and a subset of the codes that start with the letter G.
9. Prior to v2019.2 of the CCS-Services and Procedures, there are instances in which a CPT code for an invasive operating room procedure⁶ was mistakenly included in a non-OR CCS category. Starting with v2019.2, this has been corrected.

No fee schedules, basic unit values, relative value guides, conversion factors, or scales are included in any part of the HCPCS coding system or CCS-Services and Procedures. For a full list of all CCS-Services and Procedures categories, refer to [Appendix B](#).

⁶ Invasive operating room procedures can be identified using the Surgery Flags Software for Services and Procedures (www.hcup-us.ahrq.gov/toolssoftware/surgeryflags_svcproc/surgeryflagssvc_proc.jsp).

USING THE CLINICAL CLASSIFICATIONS SOFTWARE-SERVICES AND PROCEDURES WITH THE SURGERY FLAGS SOFTWARE FOR SERVICES AND PROCEDURES

Users may consider using the Surgery Flags Software for Services and Procedures in conjunction with the CCS-Services and Procedures. The Surgery Flags Software for Services and Procedures identifies a subset of CPT codes as surgical procedures. CPT codes in the specified ranges are classified as one of three categories:

- A narrowly defined surgery (Narrow) that is usually a major therapeutic procedure
- A more broadly defined surgery (Broad) that includes major diagnostic and invasive minor therapeutic procedures
- Neither a narrowly nor broadly defined surgery (Neither).

The individual CPT codes within a CCS-Services and Procedures category are clinically similar but may vary in their surgery flag assignment. For example, CCS 113 *Transurethral Resection of Prostate (TURP)* includes 7 CPT codes, 5 of which are broad, and 2 of which are narrow.⁷ In contrast, CCS 85 *Inguinal and Femoral Hernia Repair* includes 17 different codes, all of which are considered narrow.

Counting Major Therapeutic Surgeries Using the CCS-Services and Procedures and Surgery Flags Software-Services and Procedures

The CCS-Services and Procedures is often used to report the occurrence of procedures in the outpatient setting. If the focus is *major therapeutic surgeries*, the Surgery Flags Software-Services and Procedures can be used to identify the Narrow surgeries and the CCS-Services and Procedures can be used to classify the individual procedure codes into clinical categories. For example, identifying records in the HCUP State Ambulatory Surgery and Services Databases in CCS 113 *TURP* (described above as including Broad and Narrow procedures) and limiting those records to those for which the CPT code in CCS 113 was a Narrow procedure (surgery flag value 2) would result in a count of major therapeutic TURP encounters in the State.

⁷ The one HCPCS Level II code in CCS 113 *TURP* is not included in the surgery flag tool.

USING THE DOWNLOADABLE CCS-SERVICES AND PROCEDURE FILES

System Requirements

Using the CCS-Services and Procedures requires a program to decompress or “unzip” files.⁸ Approximately 0.5 megabytes of disk space available on one’s hard drive also will be needed to accommodate all the CCS-Services and Procedures files. Additional space is necessary for saving CCS-Services and Procedures output files.

Downloadable Files

Before downloading the CCS-Services and Procedures, users must agree to a license agreement with the AMA for using CPT codes.

The CCS-Services and Procedures zip file contains the following:

1. One translation table in comma separated values (CSV) file format that is used to assign the CCS categories to data sets that contain CPT or HCPCS Level II information
2. SAS program to apply the tool to the user’s data
3. CCS-Services and Procedures User Guide (PDF)
4. Change log detailing changes between v2021.2 and v2021.1.

Table 1 includes detail on the names and purposes of each file contained in the CCS-Services and Procedures zip file.

⁸ Third-party zip utilities are available from the following reputable vendors on their official websites: ZIP Reader (Windows) (free download offered by PKWARE, Inc.), SecureZIP® for Mac or Windows (free evaluation and licensed/fee software offered by PKWARE, Inc.), WinZip (Windows) (evaluation and fee versions offered by the Corel Corporation), Stuffit Expander® (Mac) (free evaluation and licensed/fee software offered by Smith Micro Software Inc.).

Table 1. Contents of the CCS-Services and Procedures Zip File

File Name	Purpose
CCS_Services_Procedures_vyyyy-r_mmdyy.csv where yyyy represents calendar year and <i>r</i> represents a release number within the year, ^a and <i>mmdyy</i> is the creation date of the CSV file	The CSV mapping file lists ranges of CPT and HCPCS Level II codes, the CCS-Services and Procedures categories assigned, and the full description corresponding to each CCS category. This file can be converted to Excel where a filter can be applied to examine individual CPT/HCPCS code ranges or CCS-Services and Procedures categories.
CCS_Services_Procedures_Mapping_vyyyy-r.SAS where yyyy represents calendar year and <i>r</i> represents a release number within the year ^a	SAS mapping program applies the CCS-Services and Procedures to the user's data
CCS-SvsPro-User-Guide-vyyyy-r.pdf where yyyy represents calendar year and <i>r</i> represents a release number within the year ^a	This document (i.e., User Guide for the CCS-Services and Procedures in PDF format).
CCS-ServicesProcedures-Reference-File-vyyyy-r.xlsx where yyyy represents calendar year and <i>r</i> represents a release number within the year ^a	This document includes a searchable list of the CCS-Services and Procedures categories.
CCS-ServicesProcedures-ChangeLog_vyyyy-vyyyy-r.xlsx where yyyy represents calendar year and <i>r</i> represents a release number within the year ^a	A log (Microsoft Excel) between two versions of the CCS-Services and Procedures software including list of changes and mapping of CPT/HCPCS code ranges into categories.

Abbreviations: CCS-Services and Procedures, Clinical Classifications Software for Services and Procedures; CSV, comma separated values

^aFor example, the first mapping file release to include codes valid through calendar year 2021 is named CCS_services_procedures_2021-1_.csv.

Running the SAS Program to Add CCS-Services and Procedures Categories to Data

To download, modify, and run the software to apply the CCS-Services and Procedures to an input dataset, follow these steps:

1. Users should download and extract the contents of the zip file containing the CCS-Services and Procedures tool to a saved location on their computer. Files included in the zip file are described in Table 1 and referenced below.
2. Users must set up the SAS program (CCS_Services_Procedures_Mapping_vyyyy-r.sas) to run on their data. They must specify or modify where appropriate:
 - a. Change the paths in the SAS program to point to the computer location(s) of
 - i. The CSV mapping file (CCS_Services_Procedures_vyyyy-r.csv)
 - ii. The input dataset
 - iii. The output dataset
 - b. Set the macro variables in the SAS program to match the data element names and file structure of the input dataset (Table 2).

Table 2. Modifiable Macro Variables and Directory Paths

Description of Macro Variables and Directory Paths	SAS Program Syntax
File Location	
Specify the location of the CSV mapping file	FILENAME INRAW1
Specify the location of the input dataset	LIBNAME IN1
Specify the location of the output dataset	LIBNAME OUT1
Files Names	
Specify the file name of the input dataset	%LET CORE=YOUR_SAS_FILE
Specify the file name of the output dataset	%LET OUT1=OUTPUT_SAS_FILE
Input Characteristics	
Specify the maximum number of CPT codes on any record in the input file. In this example the maximum number of CPT codes on any record is 15. The value of NUMCPT must be numeric and greater than or equal to 1; otherwise, the program will not read in any procedure codes for CCS assignment	%LET NUMCPT=15
Specify the number of observations to use from the input dataset. Use MAX to use all observations; use a smaller value for testing the program.	%LET OBS = MAX

Abbreviation: CSV, comma-separate values

Data Elements Required for Input Dataset

The input dataset **must** contain an array of CPT and/or HCPCS Level II codes. These data elements are required for the assignment of CCS-Services and Procedures categories (Table 3).

Table 3. Required Input Data Element

Data Element Name in Program	Purpose	Data Element Name in HCUP Databases
CPT1-CPTn where n is the dimension of the procedure array	Array of CPT and/or HCPCS Level II codes used to assign CCS categories	CPT1-CPTn in all HCUP outpatient databases

Representation of CPT Codes

CPT and HCPCS Level II codes are represented by 5 alphanumeric characters:

- CPT Category I codes include only five numbers (e.g., 22903)
- CPT Category II and III codes have four numbers followed by an alpha character (e.g., 1033F, 0611T)
- HCPCS Level II codes start with an alpha character and then have four numbers (e.g., A0384, S0515).

The SAS program that assigns CCS-Services and Procedures categories is expecting CPT and HCPCS Level II codes that are alphanumeric character strings of length 5.

CCS Data Elements in the Output File

This SAS program assumes the input file includes one or more CPT or HCPCS Level II codes in an array. The output file includes all data elements from the input file, in addition to an array of CCS data elements (CPT_CCSn) with a one-to-one correspondence to the array of codes. For example, CPT_CC1 includes the CCS category for the code in the first position of the code array. If the CPT or HCPCS Level II code is blank or invalid for the time period applicable to the version, then the CCS category is missing (SAS missing value .).

ASSIGNING CCS CATEGORIES TO DIFFERENT DATA YEARS

Starting with v2019.2, the CCS-Services and Procedures is specific to codes valid as of the respective calendar year because HCPCS Level II codes can be reassigned over time to have different meanings. Table 4 lists the available versions of the CCS-Services and Procedures, the applicable codes, and key changes to the software. Please reference the change log provided with each version for more detail on the codes added and removed between versions. All versions of the tool are available on the [HCUP User Support \(HCUP-US\)](#) website.

Table 4. Versions of Clinical Classifications Software for Services and Procedures

CCS Version	Applicable CPT and HCPCS Level II Codes	Key Changes to the Software
v2021.2	<i>Best to use the updated v2021.2 if assigning CCS-Services and Procedures to 2021 data.</i> Codes valid as of January 1, 2021, with the exception of codes related to COVID-19 vaccinations and potential therapies that became effective during 2021	<ul style="list-style-type: none">• Added 147 codes that are valid on January 1, 2021, but were previously overlooked in v2021.1• Added 28 codes related to COVID-19 vaccinations and potential therapies that became effective during 2021
v2021.1	Codes valid as of January 1, 2021	<ul style="list-style-type: none">• Added 257 codes• Removed 223 codes that were discontinued during 2020
v2020.1	Codes valid as of January 1, 2020, with the addition of CPT Category I Pathology and Laboratory code changes related to COVID-19, which became effective between March and September 2020	<ul style="list-style-type: none">• Added 371 codes• Removed 174 codes that were discontinued during 2019

CCS Version	Applicable CPT and HCPCS Level II Codes	Key Changes to the Software
v2019.2	Codes valid at any time during calendar years 2018 and 2019	<ul style="list-style-type: none"> • Six CCS category labels were modified to better align with descriptors for relevant CPT or HCPCS Level II codes (CCS 141, 212, 213, 215, 219, 222) • Two CCS categories were renamed to better represent the types of services and procedures that are included within the HCPCS coding system as well as align with overarching themes that are essential to healthcare (CCS 227 and 236) • A CCS category for the rapidly emerging field of Telehealth was added • To ensure that all CPT and HCPCS Level II codes are captured in a CCS category, two categories were added <ul style="list-style-type: none"> • CCS 998: <i>CPT codes not classified</i> for supplemental codes used for tracking patient follow up and outcomes (codes ending in F). • CCS 999: <i>HCPCS Level II codes not classified</i> for codes used to identify performance measurements, Medicare-approved demonstration projects, consultation from a qualified clinical decision support mechanism (CDSM), or dental services (all codes that start with D or M1 and a subset of the codes that start with the letter G)
v2019.1	CPT codes valid between January 1992 and January 2019 and HCPCS Level II codes released at any time between January 2002 and January 2019	The mapping of codes into CCS categories may not take into consideration longitudinal changes in code definitions.

APPENDIX A: BACKGROUND ON THE DEVELOPMENT OF THE CCS-SERVICES AND PROCEDURES

The initial development of the CCS-Services and Procedures involved certified clinical coding specialists and AHRQ staff possessing clinical and administrative data experience. The objective was to define CCS categories using CPT and HCPCS Level II codes consistent with the clinical concepts under the ICD-9-CM procedure version of the CCS.⁹ The following iterative process was used for the initial assignment of CPT and HCPCS Level II codes to CCS categories:

- Each CPT and HCPCS Level II code was entered into Encoder Pro Professional© (a software application from Ingenix, Inc.).
- The CPT and HCPCS Level II Crosscoder within the software was used to identify any and all ICD-9-CM procedure codes that might be comparable to the CPT and HCPCS Level II code.
- Each ICD-9-CM procedure code in the CCS for ICD-9-CM was analyzed, in order to understand how the ICD-9-CM procedure codes had been assigned to CCS categories.
- If there were multiple CCS categories for the comparable ICD-9-CM procedure codes, the one that best fit the description of the CPT and HCPCS Level II code was chosen.
- If there was not one best category, the second coding specialist was consulted to make the determination.
- Assignments were reviewed by AHRQ staff; questions about assignments were raised.
- CPT and HCPCS Level II code assignments were reviewed by the coding specialists and reassignments were made.
- A final review was conducted by AHRQ staff.

In 2020, the grouping of CPT codes into CCS categories was compared to the [Surgery Flags Software for Services and Procedures](#). That same year, AHRQ had expanded the range for CPT codes included in the Surgery Flags Software-Services and Procedures and reevaluated all code assignments. The CCS category was modified if the CCS category specifying an operating room (OR) or non-OR procedure disagreed with the surgery flag assignment.

Each year, new CPT or HCPCS Level II codes are added to the HCPCS coding system. To coincide with these annual updates, a new version of the CCS-Services and Procedures is released. Newly added CPT or HCPCS Level II codes are reviewed, and CCS category

⁹ The initial development used CPT and HCPCS Level II codes valid for calendar year 2005 and ICD-9-CM procedure codes valid for fiscal year 2005.

assignments are made. This process involves review and feedback loops from clinical coding specialists, clinicians, and AHRQ staff. Additionally, existing CPT or HCPCS Level II codes may be reassigned either as the result of the review process or feedback received directly from users of the CCS-Services and Procedures.

As described above, the CCS-Services and Procedures was designed to align with the CCS categories that were part of the CCS for ICD-9-CM procedure codes. In October 2015, the United States transitioned to a modified version of the World Health Organization International Classification of Diseases, Tenth Revision (ICD-10-CM/PCS), replacing the ICD-9-CM diagnosis and procedure coding system with the ICD-10-CM diagnosis coding system for most inpatient and outpatient medical encounters and the ICD-10-PCS procedure coding system for inpatient hospital procedures. A refined version of the CCS based on ICD-10-PCS procedure codes (called the [Clinical Classifications Software Refined \[CCSR\] for ICD-10-PCS](#)) was released in December 2020. The CCSR for ICD-10-PCS includes categories that take advantage of the specificity of the ICD-10-PCS coding system and, at this time, do not align with the categories included in the CCS-Services and Procedures and the CCS for ICD-9-CM procedures.

APPENDIX B: CATEGORIES FOR THE CCS-SERVICES AND PROCEDURES

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
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

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
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

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
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)

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
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

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
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
134	Cesarean section

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
135	Forceps; vacuum; and breech delivery
137	Other procedures to assist delivery
138	Diagnostic amniocentesis
139	Fetal monitoring
140	Repair of current obstetric laceration
141	Other therapeutic obstetrical procedures, including antepartum and postpartum care
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

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
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

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
188 ¹⁰	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

¹⁰ Starting calendar year 2013, there are no CPT or HCPCS Level III codes in CCS category 188 Cerebral arteriogram. The radiology supervision and interpretation CPT codes 75650-75685 were discontinued in 2012 and new CPT codes specific to vascular injection procedures (codes 36221-36228) were added in 2013. These new codes are included CCS 54 Other vascular catheterization, not heart.

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
211	Therapeutic radiology for cancer treatment
212	Diagnostic physical, occupational, and speech therapy
213	Physical, occupational, and speech therapy exercises; manipulation; and other procedures
214	Traction; splints; and other wound care
215	Other physical, occupational, and speech therapy and rehabilitation
216	Respiratory intubation and mechanical ventilation
217	Other respiratory therapy
218	Psychological and psychiatric evaluation and therapy
219	Alcohol and drug management, treatment, and rehabilitation
220	Ophthalmologic and otologic diagnosis and treatment
221	Nasogastric tube
222	Blood and blood product transfusion
223	Enteral and parenteral nutrition
224	Cancer chemotherapy
225	Conversion of cardiac rhythm
226	Other diagnostic radiology and related techniques
227	Consultation, evaluation, and preventative care
228	Prophylactic vaccinations and inoculations
229	Nonoperative removal of foreign body
230	Extracorporeal shock wave lithotripsy; other than urinary
231	Other therapeutic procedures
232	Anesthesia
233	Laboratory - Chemistry and hematology
234	Pathology
235	Other laboratory
236	Nonhospital-based care (e.g., home health care, hospice)
237	Ancillary services

CCS- Services and Procedure Category	CCS- Services and Procedures Category Description
238	Infertility Services
239	Transportation - patient, provider, equipment
240	Medications (Injections, infusions and other forms)
241	Visual aids and other optical supplies
242	Hearing devices and audiology supplies
243	DME and supplies
244	Gastric bypass and volume reduction
245	Telehealth
998	CPT codes not classified (codes ending in F)
999	HCPCS Level II codes not classified (all codes starting with D or M1 and a subset of codes starting with G) Note: Starting in v2022.1, Current Dental Terminology (CDT) codes starting with D are included in a new CCS category of 997. This change was not made in version v2021.2 for consistency with v2021.1.

APPENDIX C: CCS-SERVICES AND PROCEDURES CATEGORIES FOR PROFESSIONAL SERVICE AND SUPPLY CODES

The following CCS categories are included in the CCS-Services and Procedures tool to capture information on professional services and supply codes. These categories are not applicable to the original ICD-9-CM version of the CCS.

1. 232 Anesthesia: To capture the increased resource use of anesthesia administered by an anesthesiologist or surgeon. Examples include anesthesia for procedures on spine, perineum, and arthroscopic surgery.
2. 233 Laboratory - Chemistry and Hematology: Chemistry testing of specimens (i.e., serum, blood, feces) by a physician or a technologist under physician supervision. Examples include basic metabolic panel, blood count, and pulse oximetry. This category is for chemistry and hematology only; all other labs were assigned CCS 235. (Note: Urinalysis tests can be found in CCS 206 Microscopic Exams and CCS 200 Urinary System Measurements.)
3. 234 Pathology: Anatomic, cytopathology, and surgical pathology services provided by a physician or a technologist under physician supervision. Examples include clinical pathology consult, postmortem exam, Pap smear, and gross and microscopic surgical pathology.
4. 235 Other Lab: Non-chemistry tests on specimens by a physician or a technologist under physician supervision. This category is used to capture labs outside CCS 233 Chemistry & Hematology. Examples include thyroid panel, drug assays, and antibody tests.
5. 236 Nonhospital-based care (e.g., home health care, hospice): For evaluation and management services provided in a private residence or hospice respite care. Examples include home visits for respiratory therapy, chemotherapy, and counseling.
6. 237 Ancillary Services: For services performed adjunct to a basic procedure or by an ancillary healthcare worker. Examples include transportation of specimens, medical testimony, and services by a dietitian.
7. 238 Infertility Services: Includes codes for infertility care such as in vitro fertilization and ovulation induction.
8. 239 Transportation: For emergency and non-emergency transportation of patients, medical staff, equipment, and tissue.
9. 240 Medications: For the provision of medications, infusions, injections, and other pharmaceutical services.

10. 241 Visual aids and other optical supplies: For all optical supplies including eyeglasses, lenses, and prosthetics.
11. 242 Hearing devices and audiology supplies: For supplies related to hearing such as ear molds and impressions, hearing aids, and batteries for hearing aids.
12. 243 DME and supplies: A miscellaneous category for other forms of durable medical equipment and supplies including power sources and batteries, cables, injectable contrast materials, implantable devices, tissues for transplantations, joint replacement devices, non-ocular prostheses, compression stockings, orthotics, orthopedic devices, casting supplies, tape, continence supplies, wound care kits and supplies, dialysis equipment and solutions, ostomy supplies, catheters and stents, pacemakers and leads, and crutches.
13. 244 Gastric bypass and volume reduction: For all procedures dealing with gastric bypass and volume reduction, primarily for the purpose of bariatric surgery. (To ensure that all codes relate to obesity surgery, this code should be used in conjunction with diagnosis codes for obesity.)
14. 245 Telehealth (starting with v2020.1): For codes specific to telehealth (i.e., remote monitoring, telephone calls, online communication, etc.). This is a rapidly emerging field that is important to monitor moving forward. Additional information on identifying telehealth is included in [Appendix D](#).

APPENDIX D: IDENTIFICATION OF TELEHEALTH SERVICES

Starting with v2020.1, there is CCS category 245 which includes CPT and HCPCS Level II codes related to telehealth. The codes identify remote monitoring, telephone calls, online communication, etc.

It is important to note that telehealth services can also be identified by the addition of a two-character CPT modifier to a CPT code that is not specific to telehealth (e.g., follow-up consultation). The CPT modifiers specific to telehealth include the following:

- 95: Synchronous telemedicine service rendered via real-time interactive audio & visual telecommunication system
- G0: Telehealth services for diagnosis, evaluation, or treatment, of symptoms of acute stroke (added 1/1/2019)
- GT: Telehealth service rendered Via interactive audio and video telecommunication systems
- GQ: Telehealth service rendered via asynchronous telecommunications system

Only CPT and HCPCS Level II codes that are specific to telehealth (without the use of a modifier) are included in CCS category 245 Telehealth.

Information on Centers for Medicare & Medicaid Services (CMS) requirements for telehealth services can be found on their website under Outreach and Education (www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/telehealthsrvcfsht.pdf). A list of CPT and HCPCS Level II codes that are allowed by CMS for reporting telehealth services also can be found on the CMS website (www.cms.gov/Medicare/Medicare-General-Information/Telehealth/Telehealth-Codes).