ACC Guide to 2011 Cardiology Coding and Payment Changes

Introduction

The Diagnostic Cardiac Catheterization and Revascularization Coding for 2011 will undergo a substantial number of changes in response to the American Medical Association (AMA) RVS Update Committee (RUC) Five-Year Review Identification Workgroup screen on codes reported together frequently (75% of the time) under the Medicare Claims Processing System. This article will summarize all of the new Current Procedural Terminology (CPT®) codes pertaining to Cardiology and payment issues for the 2011 changes.

In particular, the American Medical Associations (AMA's) *CPT® 2011 Book* addresses the extension of the Centers for Medicare & Medicaid Services (CMS) bundling payment systems from echocardiography to diagnostic catheterizations and lower extremity revascularization. The AMA RUC directed the American College of Cardiology (ACC) to bundle all services performed during diagnostic cardiac catheterization into a single CPT code. The ACC and other specialty societies responded with a major overhaul of the code structure by creating one CPT code bundling all procedures that are used when performing non-congenital diagnostic catheterizations.

Overview

- Most non-congenital procedures will now be reported with one code.
- Codes for congenital cardiac catheterizations are the same.
- Report the injection procedures, which now include specific catheter placement, injection, and radiologic supervision and imaging.
- For non-congenital studies, the catheterization codes include most injection procedure services, imaging supervision, interpretation, and report.
- For all of the cardiac catheterization procedures, imaging supervision, interpretation, and report are included with the injection procedure, not reported separately.
- For left heart catheterization, left ventriculography (injection procedure, supervision, interpretation, and report) is included when performed.
- Modifier 51 should not be appended to **93451**, **93456**, **93503**.
- Please note that for the purposes of CPT code reporting, patients with anomalous coronary arteries, patent foramen ovale, mitral valve prolapse, and bicuspid valve should be reported using the non-congenital heart disease catheterization codes when they have no other elements of congenital heart disease.

Diagnostic catheterization

The Catheterization section in the Medicine Section of your CPT book has been restructured so that combinations of frequently performed services formerly reported together with multiple CPT codes will now be reported with one CPT code. The reorganized Catheterization section outlines new CPT codes, including imaging supervision, interpretation, and report. CPT codes **93451 – 93464** have been established to report diagnostic cardiac catheterization, effective January 1, 2011. The new codes **93452 – 93461** for catheterization will cover contrast injection(s), imaging supervision, interpretation, and report for typically performed imaging. Left heart catheterization (**93452**, **93453**, **93458 – 93461**) includes

intraprocedural injection for left ventricular/left atrial angiography, imaging supervision, and interpretation, when performed. Codes for catheter placement in bypass graft(s) (**93455**, **93457**, **93459**, **93461**) cover intraprocedural injection(s) for bypass graft angiography, imaging supervision, and interpretation. The catheterization CPT codes **93501** and **93508 – 93529**, and injection procedure codes **93539 – 93556** have been deleted. The following are new add-on CPT codes: **93563 – 93568** have been established for right heart injection procedures, pulmonary angiography, and aortography for all catheterization patients; and for left heart injection, coronary angiography, and bypass graft angiography for patients with congenital heart disease (reported with **93530 – 93533**). When left heart injection procedures, coronary angiography, and/or bypass graft angiography are performed on patients without congenital heart disease, the appropriate catheterization code covering those services should be chosen. These codes include catheter placement, injection procedure, and radiologic imaging and supervision. The guidelines for cardiac catheterization have also been revised to explain how to appropriately code using the new CPT codes. Please be sure to read all the new parentheticals included under the new codes. See *Table 1* for the listing of the new codes.

LIST OF NEW CODES

Table 1*

93451	RT HEART CATHETERIZATION INCLUDING MEASUREMENT(S) OF OXYGEN SATURATION AND CARDIAC OUTPUT	ADD-ON CODES	
93452	LT HEART CATH INCLUDING INTRAPROCEDURAL INJ FOR LT VENTRICULOGRAPHY, IMAGING SUPERVISION & INTERPRETATION, WHEN PERFORMED	+93462	LT HEART CATH BY TRANSSEPTAL PUNCTURE THROUGH INTACT SEPTUM OR BY TRANSAPICAL PUNCTURE
93453	COMBINED RT & LT HEART CATH INCLUDING INTRAPROCEDURAL INJ FOR LT VENTRICULOGRAPHY, IMAGING SUPERVISION & INTERPRETATION, WHEN PERFORMED	+93463	PHARMACOLOGIC AGENT ADMIN, INCLUDING ASSESSING HEMODYNAMIC MEASUREMENTS BEFORE, DURING, AFTER, AND REPEAT PHARMACOLOGIC AGENT ADMIN, WHEN PERFORMED
93454	CATHETER PLACEMENT IN CORONARY ARTERY(S) FOR CORONARY ANGIOGRAPHY, INCLUDING CORONARY ANGIOGRAPHY, IMAGING SUPERVISION AND INTERPRETATION;	+93464	PHYSIOLOGIC EXERCISE STUDY INCLUDING ASSESSING HEMODYNAMIC MEASUREMENTS BEFORE & AFTER
93455	WITH CATHETER PLACEMENT(S) IN BYPASS GRAFT(S) (INTERNAL MAMMARY, FREE ARTERIAL VENOUS GRAFT) INCLUDING INTRAPROCEDURAL INJECTION(S) FOR BYPASS GRAFT ANGIOGRAPHY	+93563	INJ PROC DURING CARDIAC CATH INCLUDING IMAGING SUPERVISION, INTERPRETATION, & REPORT; FOR SELECTIVE CORONARY ANGIOGRAPHY DURING CONGENITAL HEART CATH
93456	WITH RT HEART CATHETERIZATION	+93564	FOR SELECTIVE OPACIFICATION OF AORTOCORONARY VENOUS OR ARTERIAL BYPASS GRAFT(S) TO ONE OR MORE CORONARY ARTERIES & IN SITU ARTERIAL CONDUITS, WHETHER NATIVE OR USED FOR BYPASS TO ONE OR MORE CORNARY ARTERIES DURING CONGENTIAL HEART CATH, WHEN PERFORMED
93457	WITH CATHETER PLACEMENT(S) IN BYPASS GRAFT(S) (INTERNAL MAMMARY, FREE ARTERIAL, VENOUS GRAFTS) INCLUDING INTRAPROCEDURAL INJECTION(S) FOR BYPASS GRAFT ANGIOGRAPHY AND RT HEART CATHETERIZATION	+93565	FOR SELECTIVE LEFT VENTRICULAR OR LEFT ATRIAL ANGIOGRAPHY

93458	WITH LT HEART CATHETERIZATION INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LEFT VENTRICULOGRAPHY, WHEN PERFORMED	+93566	FOR SELECTIVE RT VENTRICULAR OR RT ATRIAL ANGIOGRAPHY
93459	WITH LT HEART CATHETERIZATION INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LEFT VENTRICULOGRAPHY, WHEN PERFORMED, CATHETER PLACEMENT(S) IN BYPASS GRAFT(S) (INTERNAL MAMMARY, FREE ARTERIAL, VENOUS GRAFT)	+93567	FOR SUPRAVALVULAR AORTOGRAPHY
93460	WITH RT & LT HEART CATH INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LT VENTRICULOGRAPHY WHEN PERFORMED	+93568	FOR PULMONARY ANGIOGRAPHY
93461	WITH RT & LT HEART CATH INCLUDING INTRAPROCEDURAL INJECTION(S) FOR LT VENTRICULOGRAPHY WHEN PERFORMED, CATHETER PLACEMENT(S) IN BYPASS GRAFT(S) (INTERNAL MAMMARY, FREE ARTERIAL, VENOUS GRAFT(S) WITH BYPASS GRAFT ANGIOGRAPHY		

Table 2 below reviews the general 2010 catheterization codes crosswalk to the 2011 catheterization codes. This table can be used a guideline when selecting the appropriate code for services provided.

DIAGNOSTIC CARDIAC CATHETERIZATION CROSSWALK

Table 2

2011 CPT Code	Description	2010 Coding Combination						
93451	RHC w/wo O2 sat & CO	93501						
93452	LHC for LVG	93510	93543	93555				
93453	R+LHC wo cors eg ped wMR	93526	93543	93555				
93454	CORS	93508	93545	93556				
93455	CORS + Grafts	93508	93539	93540	93545	93556		
93456	RHC + CORS	93508	93501	93545	93556			
93457	RHC + CORS + Grafts	93508	93501	93539	93540	93545	93556	
93458	CORS + LVG	93510	93543	93545	93555	93556		
93459	CORS + Grafts + LHC	93510	93539	93540	93543	93545	93555	93556
93460	RHC + CORS + LVG	93526	93543	93545	93555	93556		
93461	R & L Cors & Grafts	93526	93539	93540	93543	93545	93555	93556
+93462	Transseptal puncture							

+93463	Pharmacological study							
+93464	Exercise study							
+93563	Inj selective cor angio	93545	93556					
+93564	Inj selective opac bypass graft	93540	93556					
+93565	Inj selective LV or LAG	93543	93555					
+93566	Inj RV or RTatrial angio	93542	93555					
+93567	Inj Supravalvular aortography	93544	93556					
+93568	Inj for Pulm angio	93541	93556					

CMS has elected to assign values to the new codes that result in a 10% decrease in the previous physician work values. CMS rejected the RUC's recommended values for the new diagnostic cardiac catheter codes. Below in *Table 3* are the new values for the catheter codes.

NEW VALUES FOR CATHETER CODES

Table 3

CPT Code	Modifier	Description	Total Facility RVU	Facility National Payment
93451	**26**	RHC w/wo O2 sat & CO	4.37	148.48
93452	**26**	LHC for LVG	7.66	260.26
93453	**26**	R+LHC wo cors eg ped wMR	10.04	341.12
93454	**26**	CORS	7.72	262.30
93455	**26**	CORS + Grafts	8.91	302.73
93456	**26**	RHC + CORS	9.88	335.69
93457	**26**	RHC + CORS + Grafts	11.08	376.46
93458	**26**	CORS + LVG	9.42	320.06
93459	**26**	CORS + Grafts + LHC	10.60	360.15
93460	**26**	RHC + CORS + LVG	11.81	401.26
93461	**26**	R & L Cors & Grafts	13.03	442.71
+93462		Transseptal puncture	6.00	203.86

+93463		Pharmacological study	3.18	108.04
+93464	**26**	Exercise study	2.80	95.13
+93563		Inj selective cor angio	1.65	56.06
+93564		Inj selective opac bypass graft	1.68	57.08
+93565		Inj selective LV or LAG	1.27	43.15
+93566		Inj RV or RT atrial angio	1.27	43.15
+93567		Inj Supravalvular aortography	1.43	48.59
+93568		Inj for Pulm angio	1.30	44.17

New add-on codes to report

The following procedures will be considered new add-ons in 2011:

- Right heart injection procedures, supravalvular aortography, and pulmonary angiography when performed with non-congenital or congenital studies;
- Coronary angiography, bypass angiography, and left heart injection procedures only when performed with congenital studies;
- Left heart catheterization by transseptal or transapical puncture (**93462**); and
- Pharmacologic agent administration (**93463**) and exercise (**93464**) for assessing hemodynamic responses to the specific intervention.

These new add-on codes are not bundled into the Cardiac Catheterization codes – they are coded as follows:

New injection codes 93563 – 93568

All injection codes include radiological supervision, interpretation, and report. Cardiac catheterization codes (**93452** – **93461**), other than those for congenital heart disease, include contrast injection(s) for imaging typically performed during these procedures. Times when you would additionally bill injection codes are as follow:

- When right ventricular or right atrial angiography is performed at the time of heart catheterization (**93566**);
- When supravalvular ascending aortography is performed at the time of heart catheterization (**93567**);
- When pulmonary angiography is performed at the time of a right hear catheterization (**93568**); and
- In conjunction with catheterization on a patient with congenital heart disease, coronary angiography is reported with **93563**, bypass graft angiography is reported with **93564**, and left ventriculography and/or left atrial angiography are reported with **93565**.

Exercise study 93464

Use this code when exercise is combined with a cardiac catheterization. This code is used only once per catheterization when the purpose of reading hemodynamic measurements is to evaluate hemodynamic response.

Pharmacologic agent administration 93463

This code includes assessing hemodynamic measurements before, during, after, and repeat pharmacologic agent administration, when performed. This code is not to be reported for intracoronary administration of pharmacologic agents during percutaneous coronary interventional procedures **92975**, **92977**, **92980**, **92982**, and **92995**. It may be reported only once per catheterization even if multiple agents are administered.

Lower extremity revascularization

WARNING: Be sure to read the parentheticals that were revised in the Surgery/Cardiovascular (30000) section of the* CPT® 2011 Book *for cardiac catheterizations and the Radiology (70000) section for vascular procedures (arteries and veins).

Endovascular revascularization CPT changes

Again, ACC and other specialty societies responded to the AMA RUC Five-Year Review Identification Workgroup analyses with a major overhaul of the endovascular lower extremity revascularization procedures (see *Table 4*). The new codes (**37220 – 37235**) comprehensively define the procedures performed. Codes **37220 – 37235** include the following work:

- accessing and selectively catheterizing the vessel,
- traversing the lesion,
- radiological supervision and interpretation directly related to the intervention(s) performed,
- embolic protection,
- closure of the arteriotomy by any method, and
- imaging performed to document completion of the intervention in addition to the intervention(s) performed.

These codes describe procedures performed either percutaneously or through an open surgical exposure for occlusive disease. Also included are balloon angioplasty, atherectomy, and stenting.

The new codes for revascularization therapies are provided in three arterial vascular territories: iliac, femoral/popliteal, and tibial/peroneal. Each territory has specific coding guidelines that are explained in your *2011 CPT® Book*. To accommodate these changes, the following two subsections have been added: 1) Endovascular Revascularization included in the Surgery section; and 2) Atherectomy for Supra-inguinal Arteries included in the Category III section. Here are a few coding tips that you will find in the guidelines in your *CPT® 2011 Book*.

- Codes **37220 – 37223** describe procedures performed in the iliac vascular territory, which divides into three vessels – common iliac, internal iliac, and external iliac.

        - Use a single code for the initial iliac artery treated. If other iliac vessels are also treated in that leg, use the add-on codes. Remember that the add-on codes are reported for different vessels in the same vascular territory, not for distinct lesions within the same vessel.
    - Codes **37224 – 37227** describe procedures performed in the femoral/popliteal territory which, for CPT reporting, is considered a single vessel.
        - Report a single code. There are no add-on codes for additional vessels treated within this vessel
    - Codes **37228 – 37235** describe procedures performed in the tibial/peroneal territory which divides up into three vessels – anterior tibial, posterior tibial, and peroneal arteries.
        - Use a single code for the initial tibial/peroneal artery treated. If other tibial/peroneal vessels are also treated in that leg, use your add-on codes. Up to two add-on codes could be used to describe services provided in a single leg. Again, multiple lesions in the same vessel are reported with only one code.
    - When reporting multiple procedures within the same territory, report the most intense intervention as the primary procedure, and report the less intense intervention(s) with the add-on code(s). As an intensity guide, follow this formula: (atherectomy + stenting) > atherectomy > stenting > balloon angioplasty.
    - Codes **35454**, **35456**, **35459**, **35470**, **35473**, **35474**, **35480 – 35485**, **35490 – 35495**, **75992 – 75996** have been deleted.
    - Codes **35471**, **37205 – 37208**, **75960**, **75962**, **75964** were revised.
    - Codes **0234T – 0238T** (Category III) describe atherectomy performed by any method in arteries above the inguinal ligaments.
    - Use modifier 59 to denote that different legs are being treated, even if the mode of therapy is different

NEW ENDOVASCULAR REVASCULARIZATION CODES

Table 4*

CPT Code	Description	CPT Code	Description
37220	Revascularization, endovascular, open or percutaneous, iliac artery, unilateral, initial vessel; with transluminal angioplasty	37228	Revascularization, endovascular, open or percutaneous, tibial/peroneal artery, unilateral, initial vessel; with transluminal angioplasty
37221	with transluminal stent placement(s), includes angioplasty within same vessel, when performed.	37229	with atherectomy, includes angioplasty within the same vessel, when performed
+37222	Revascularization, endovascular, open or percutaneous, iliac artery, each additional ipsilateral iliac vessel; with transluminal angioplasty (List separately in addition to code for primary procedure)	37230	with transluminal stent placement(s), includes angioplasty with the same vessel, when performed
+37223	with transluminal stent placement(s), includes angioplasty within the same vessel, when performed (List separately in addition to code for primary procedure)	37231	with transluminal stent placement(s) and atherectomy, includes angioplasty within the same vessel, when performed

37224	Revascularization, endovascular, open or percutaneous, femoral/popliteal artery(s), unilateral; with transluminal angioplasty	+37232	Revascularization, endovascular, open or percutaneous, tibial/peroneal artery, unilateral, each additional vessel; with transluminal angioplasty (List separately in addition to code for primary procedure)
37225	with atherectomy, includes angioplasty within the same vessel, when performed	+37233	with atherectomy, includes angioplasty within the same vessel, when performed (List separately in addition to code for primary procedure)
37226	with transluminal stent placement(s), includes angioplasty within the same vessel, when performed	+37234	with transluminal stent placement(s), includes angioplasty within the same vessel, when performed (List separately in addition to code for primary procedure)
37227	with transluminal stent placement(s) and atherectomy, includes angioplasty with the same vessel, when performed	+37235	with transluminal stent placements(s) and atherectomy, includes angioplasty within the same vessel, when performed (List separately in addition to code for primary procedure)

Below in *Table 5* are the new valves for the revascularization codes. As a whole, these will be reduced about 20 to 30% under the bundling process.

NEW VALVES FOR THE REVASCULARIZATION CODES

Table 5

CPT Code	Description	Non-Facility RVU	National Payment Non-Facility	Facility RVU	National Payment Facility
37220	Iliac revasc	93.35	3,171.70	12.84	436.26
37221	Iliac revasc w/stent	137.93	4,686.36	15.62	530.71
+37222	A Iliac revasc add-on	26.92	914.64	5.83	198.08
+37223	Iliac revasc w/stent add-on	75.96	2,580.85	6.62	224.92
37224	Fem/popl revas w/tla	112.15	3,810.45	14.14	480.43
37225	Fem/popl revas w/ather	316.61	10,757.27	19.05	647.25
37226	Fem/popl revasc w/stent	265.01	9,004.09	15.69	533.09
37227	Fem/popl revasc stent & ather	428.03	14,542.92	23.01	781.80
37228	Tib/per revasc w/tla	159.64	5,423.99	17.28	587.11
37229	Tib/per revasc w/ather	313.91	10,665.53	22.31	758.01

37230	Tib/per revasc w/stent	246.63	8,379.60	21.52	731.17
37231	A Tib/per revasc stent & ather	395.72	13,445.14	23.39	794.71
+37232	Tib/per revasc add-on	35.86	1,218.39	6.25	212.35
+37233	Tibper revasc w/ather add-on	43.83	1,489.19	10.27	348.94
+37234	Revsc opn/prq tib/pero stent	114.17	3,879.09	8.56	290.84
+37235	Tib/per revasc stent & ather	121.98	4,144.44	12.15	412.81

Cardiovascular monitoring services changes

There is a new subsection in the Medicine/Cardiovascular section of the CPT book. These changes are in response to the Five-Year Review Identification Workgroup's screen of CPT codes with over 100,000 in utilization and the CMS request for a coding proposal to address the ambiguity in the current family of external monitoring codes. This was done by adding introductory language, deleting codes, revising the current descriptors to reflect the new technology utilized, and grouping the family of codes into three families:

- Holter monitoring codes for recording up to 48 hours (**93224 – 93227**),
- Mobile cardiac telemetry monitor codes (**93228 – 93229**), and
- Event monitoring codes (**93268 – 93272**).

The following two codes have been deleted:

- **93012** – telephonic transmission of post-symptom electrocardiogram rhythm strip(s), 24-hour attended monitoring, per 30 day period of time; tracing only; and
- **93014** – Telephonic transmission of post-symptom electrocardiogram rhythm strip(s), 24-hour attended monitoring, per 30 day period of time; physician review with interpretation and report only.

To report telephonic transmission of post-symptom electrocardiogram rhythm strips, see CPT codes **93268 – 93272**. The term "wearable" has been replaced with the term "external" for consistency with other CPT codes. For less than 12 hours of continuous recording, modifier 52 for reduced services should be reported.

There are no code changes for Implantable and Wearable Device Evaluations but there is new introductory language for Implantable Cardiovascular Monitor (ICM) and Implantable Loop Recorder.

PLEASE NOTE ERRORS IN CPT BOOK: CPT code 93268 is wrong in appendix B of your CPT book. The wording should retain the phrase "24-hour attended monitoring" in the code descriptor. Also, there is an error in the introductory language of "Cardiovascular Monitoring

Services." The last sentence in the first paragraph should state, "Event monitors (93268 – 93272) record segments of ECGs with recording initiation triggered either by patient activation or by an internal automatic, preprogrammed detection algorithm (or both), and transmit the recorded electrocardiographic data when requested (but cannot transmit immediately based upon the patient or algorithmic activation rhythm), and do not require attended surveillance."

Subsequent observation care

Subsequent observation care codes are a new series of Evaluation and Management (E/M) Services. Codes **99224 – 99226*** were established in response to the increase in the number of observation services that extended beyond the initial day of service, and they include subsequent observation care, per day, for the E/M of a patient. Please review the new guidelines for initial and subsequent observation care.

All levels of subsequent observation care include reviewing medical records, diagnostic studies, and changes in the patient's status since the last assessment by the physician. Codes **99224 – 99226** include subsequent observation care, per day, for the E/M of a patient.

Category III codes*

Category III codes are temporary codes for emerging technology, services, and procedures. These codes allow for data collection of these services. Use of unlisted codes does not offer the opportunity for the collection of data. If a Category III code is available, this code must be reported instead of a Category I unlisted code.

Three new codes have been added describing acoustic cardiography procedures. Guidelines have also been added to instruct the user on appropriate use of the codes. The following codes include acoustic cardiography:

- **0223T** – including automated analysis of combined acoustic and electrical intervals; single, with interpretation and report;
- **0224T** – including serial trended analysis and limited reprogramming of device parameter, AV or VV delays only; multiple, with interpretation and report; and
- **0225T** – including serial trended analysis and limited reprogramming of device parameter, AV and VV delays; multiple, with interpretation and report.

Two new codes have been established to report implantation of a catheter-delivered prosthetic aortic heart valve:

- **0256T** – for the endovascular approach, and
- **0257T** – for the open thoracic approach (e.g., transapical, transventricular).

Two new codes have been established to report transthoracic cardiac exposure (e.g., sternotomy, thoracotomy, subxiphoid) for catheter-delivered aortic valve replacement):

- **0258T** – without cardiopulmonary bypass, and
- **0259T** – with cardiopulmonary bypass.

Conclusion

The above guidelines provide a general overview of the AMA CPT® changes for 2011 but are not comprehensive. ACC encourages all practices to review the *CPT® 2011 Book* for the most current information available. Always read the introductory language, guidelines, and parentheticals in each section and subsection of the codes you are reporting.

The AMA website posts any corrections that are in your current CPT book at http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/coding-billing-insurance/cpt/about-cpt/errata.shtml.

For more information, contact Debra Mariani at *dmariani@acc.org*.

*The *CPT® 2010 Book* © Copyright 2010 American Medical Association. All rights reserved.