

GE Healthcare

Reimbursement Information For Electrophysiology and Arrhythmia Service Procedures¹

2011 Update

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This overview addresses coding, coverage, and payment for electrophysiology procedures when performed in the hospital outpatient, inpatient department, ambulatory surgery center as well as the physician's office. While this advisory focuses on Medicare program policies, these policies may also be applicable to selected private payers throughout the country.

The following provides 2011 national Medicare Physician Fee Schedule (MPFS) and the Hospital Outpatient Ambulatory Payment Category (APC) payment rates. **Payment will vary in geographic locality.**

2011 National Average MPFS and APC Reimbursement for Procedures Performed By Electrophysiologists

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Electrophysiology Studies				
CPT 93600 Bundle of His recording	Professional (-26)*	\$122.65	0084	\$709.56
	Technical (-TC)**	Carrier Priced		
	Global	Carrier Priced		
CPT 93602 Intra-atrial recording	Professional (-26)	\$122.32	0084	\$709.56
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93603 Right ventricular recording	Professional (-26)	\$122.32	0084	\$709.56
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT +93609 Intraventricular and/or intra-atrial mapping of tachycardia site(s) with catheter manipulation to record from multiple sites to identify origin of tachycardia (List separately in addition to code for primary procedure)	Professional (-26)	\$290.50	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93610 Intra-atrial pacing	Professional (-26)	\$173.96	0084	\$709.56
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Electrophysiology Studies				
CPT 93612 Intraventricular pacing	Professional (-26)	\$173.28	0084	\$709.56
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT +93613 Intracardiac electrophysiologic 3-dimensional mapping (List separately in addition to code for primary procedure)	Facility	\$407.38	N/A	Packaged Service No Separate Payment
	Non-Facility	Carrier Priced		
CPT 93615 Esophageal recording of atrial electrogram with or without ventricular electrogram(s)	Professional (-26)*	\$51.64	0084	\$709.56
	Technical (-TC)**	Carrier Priced		
	Global	Carrier Priced		
CPT 93616 Esophageal recording of atrial electrogram with or without ventricular electrogram(s); with pacing	Professional (-26)*	\$67.61	0084	\$709.56
	Technical (-TC)**	Carrier Priced		
	Global	Carrier Priced		
CPT 93618 Induction of arrhythmia by electrical pacing	Professional (-26)	\$247.69	0084	\$709.56
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93619 Comprehensive electrophysiologic evaluation with right atrial pacing and recording, right ventricular pacing and recording, His bundle recording, including insertion and repositioning of multiple electrode catheters, without induction or attempted induction of arrhythmia	Professional (-26)	\$428.10	0085	\$3694.70
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93620 Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with right atrial pacing and recording, right ventricular pacing and recording, His bundle recording	Professional (-26)	\$675.45	0085	\$3694.70
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Electrophysiology Studies				
CPT 93621 Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with left atrial pacing and recording from coronary sinus or left atrium (List separately in addition to code for primary procedure)	Professional (-26)	\$121.98	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93622 Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with left ventricular pacing and recording (List separately in addition to code for primary procedure)	Professional (-26)	\$179.40	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93623 Programmed stimulation and pacing after intravenous drug infusion (List separately in addition to code for primary procedure)	Professional (-26)	\$166.14	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93624 Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia	Professional (-26)	\$281.32	0085	\$3694.70
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93631 Intra-operative epicardial and endocardial pacing and mapping to localize the site of tachycardia or zone of slow conduction for surgical correction	Professional (-26)	\$423.69	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93640 Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement	Professional (-26)	\$204.20	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93641 Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement; with testing of single or dual chamber pacing cardioverter-defibrillator pulse generator	Professional (-26)	\$344.86	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Electrophysiology Studies				
CPT 93642 Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters)	Professional (-26)	\$256.18	0084	\$709.56
	Technical (-TC)	\$171.58		
	Global	\$427.76		
CPT 93650 Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement	Facility	\$620.75	0085	\$3694.70
	Non Facility	N/A		
CPT 93651 Intracardiac catheter ablation of arrhythmogenic focus; for treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathways, accessory atrioventricular connections or other atrial foci, singly or in combination	Facility	\$945.22	0086	\$8447.42
	Non Facility	N/A		
CPT 93652 Intracardiac catheter ablation of arrhythmogenic focus; for treatment of ventricular tachycardia	Facility	\$1028.81	0086	\$8447.42
	Non Facility	N/A		
CPT 93662 Intracardiac echocardiography during therapeutic/ diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)	Professional (-26)	\$148.82	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
Tilt Table Testing				
CPT 93660 Evaluation of cardiovascular function with tilt table evaluation, with continuous ECG monitoring and intermittent blood pressure monitoring, with or without pharmacological intervention	Professional (-26)	\$98.53	0101	\$293.90
	Technical (-TC)	\$65.91		
	Global	\$164.45		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Intracardiac Mapping				
CPT +93609 Intraventricular and/or intra-atrial mapping of tachycardia site(s) with catheter manipulation to record from multiple sites to identify origin of tachycardia (List separately in addition to code for primary procedure)	Professional (-26)	\$290.50	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT +93613 Intracardiac electrophysiologic 3-dimensional mapping (List separately in addition to code for primary procedure)	Facility	\$407.38	N/A	Packaged Service No Separate Payment
	Non Facility	N/A		
CPT 93631 Intra-operative epicardial and endocardial pacing and mapping to localize the site of tachycardia or zone of slow conduction for surgical correction	Professional (-26)	\$423.69	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
Intracardiac Echocardiography				
CPT +93662 Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)	Professional (-26)	\$148.82	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
Catheter Ablation				
CPT 93650 Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement	Facility	\$620.75	0085	\$3694.70
	Non Facility	N/A		
CPT 93651 Intracardiac catheter ablation of arrhythmogenic focus; for treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathways, accessory atrioventricular connections or other atrial foci, singly or in combination	Facility	\$945.22	0086	\$8447.42
	Non Facility	N/A		
CPT 93652 Intracardiac catheter ablation of arrhythmogenic focus; for treatment of ventricular tachycardia	Facility	\$1028.81	0086	\$8447.42
	Non Facility	N/A		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Operative Ablation				
CPT 33257 Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), limited (eg, modified maze procedure) (List separately in addition to code for primary procedure)	Facility	\$609.54	N/A	Inpatient Only
	Non Facility	N/A		
CPT 33258 Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (eg, maze procedure), without cardiopulmonary bypass (List separately in addition to code for primary procedure)	Facility	\$685.64	N/A	Inpatient Only
	Non Facility	N/A		
CPT 33259 Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (eg, maze procedure), with cardiopulmonary bypass (List separately in addition to code for primary procedure)	Facility	\$885.42	N/A	Inpatient Only
	Non Facility	N/A		
Cardioversion				
CPT 92960 Cardioversion, elective, electrical conversion of arrhythmia; external	Facility	\$128.77	0679	\$371.97
	Non Facility	\$240.89		
CPT 92961 Cardioversion, elective, electrical conversion of arrhythmia; internal (separate procedure)	Facility	\$254.82	0679	\$371.97
	Non Facility	N/A		
Pacemaker Implantation				
CPT 33202 Insertion of epicardial electrode(s); open incision (eg, thoracotomy, median sternotomy, subxiphoid approach)	Facility	\$807.28	N/A	Packaged Service No Separate Payment
	Non Facility	N/A		
CPT 33203 Insertion of epicardial electrode(s); endoscopic approach (eg, thoracoscopy, pericardioscopy)	Facility	\$847.03	N/A	Packaged Service No Separate Payment
	Non Facility	N/A		
CPT 33206 Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial	Facility	\$482.80	0089	\$7811.77
	Non Facility	N/A		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Pacemaker Implantation				
CPT 33207 Insertion or replacement of permanent pacemaker with transvenous electrode(s); ventricular	Facility	\$514.40	0089	\$7811.77
	Non Facility	N/A		
CPT 33208 Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular	Facility	\$555.51	0655	\$9484.51
	Non Facility	N/A		
CPT 33212 Insertion or replacement of pacemaker pulse generator only; single chamber, atrial or ventricular	Facility	\$357.77	0090	\$6583.98
	Non Facility	N/A		
CPT 33213 Insertion or replacement of pacemaker pulse generator only; dual chamber	Facility	\$408.06	0654	\$7445.41
	Non Facility	N/A		
CPT 33214 Upgrade of implanted pacemaker system, conversion of single chamber system to dual chamber system (includes removal of previously placed pulse generator, testing of existing lead, insertion of new lead, insertion of new pulse generator)	Facility	\$509.31	0655	\$9484.51
	Non Facility	N/A		
CPT 33216 Insertion of a single transvenous electrode, permanent pacemaker or cardioverter-defibrillator	Facility	\$398.88	0106	\$3596.28
	Non Facility	N/A		
CPT 33217 Insertion of 2 transvenous electrodes, permanent pacemaker or cardioverter-defibrillator	Facility	\$396.50	0106	\$3596.28
	Non Facility	N/A		
CPT 33210 Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)	Facility	\$190.61	0106	\$3596.28
	Non Facility	N/A		
CPT 33211 Insertion or replacement of temporary transvenous dual chamber pacing electrodes (separate procedure)	Facility	\$193.67	0106	\$3596.28
	Non Facility	N/A		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Pacemaker Implantation				
CPT 33233 Removal of permanent pacemaker pulse generator	Facility	\$252.78	0105	\$1565.84
	Non Facility	N/A		
CPT 33234 Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular	Facility	\$515.42	0105	\$1565.84
	Non Facility	N/A		
CPT 33235 Removal of transvenous pacemaker electrode(s); dual lead system	Facility	\$672.73	0105	\$1565.84
	Non Facility	N/A		
CPT 33236 Removal of permanent epicardial pacemaker and electrodes by thoracotomy; single lead system, atrial or ventricular	Facility	\$817.47	N/A	Inpatient Only
	Non Facility	N/A		
CPT 33237 Removal of permanent epicardial pacemaker and electrodes by thoracotomy; dual lead system	Facility	\$875.57	N/A	Inpatient Only
	Non Facility	N/A		
CPT 33238 Removal of permanent transvenous electrode(s) by thoracotomy	Facility	\$973.76	N/A	Inpatient Only
	Non Facility	N/A		
CPT 33215 Repositioning of previously implanted transvenous pacemaker or pacing cardioverter-defibrillator (right atrial or right ventricular) electrode	Facility	\$323.12	0105	\$1565.84
	Non Facility	N/A		
CPT 33218 Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter-defibrillator	Facility	\$415.87	0105	\$1565.84
	Non Facility	N/A		
CPT 33220 Repair of 2 transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter-defibrillator	Facility	\$419.27	0105	\$1565.84
	Non Facility	N/A		
CPT 33222 Revision or relocation of skin pocket for pacemaker	Facility	\$365.93	0136	\$1185.47
	Non Facility	N/A		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Pacemaker Implantation				
CPT 33226 Repositioning of previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion and/or replacement of generator)	Facility	\$518.14	0105	\$1565.84
	Non Facility	N/A		
CPT 71090-26 Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation	Professional (-26)	\$28.54	N/A	Packaged Service No Separate Payment
	Technical (-TC)	N/A		
	Global	N/A		
Pacemaker Analysis, Interrogation and Programming				
CPT 93724 Electronic analysis of antitachycardia pacemaker system (includes electrocardiographic recording, programming of device, induction and termination of tachycardia via implanted pacemaker, and interpretation of recordings)	Professional (-26)	\$254.14	0690	\$35.08
	Technical (-TC)	\$46.21		
	Global	\$300.35		
In Person Pacemaker Evaluation				
CPT 93279 Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; single lead pacemaker system	Professional (-26)	\$34.32	0690	\$35.08
	Technical (-TC)	\$18.35		
	Global	\$52.66		
CPT 93280 Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; dual lead pacemaker system	Professional (-26)	\$40.77	0690	\$35.08
	Technical (-TC)	\$21.41		
	Global	\$62.18		
CPT 93281 Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; multiple lead pacemaker system	Professional (-26)	\$47.57	0690	\$35.08
	Technical (-TC)	\$24.80		
	Global	\$72.37		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
In Person Pacemaker Evaluation				
CPT 93288 Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead pacemaker system	Professional (-26)	\$22.42	0690	\$35.08
	Technical (-TC)	\$17.33		
	Global	\$39.75		
Remote Pacemaker Evaluation				
CPT 93293 Transtelephonic rhythm strip pacemaker evaluation(s) single, dual, or multiple lead pacemaker system, includes recording with and without magnet application with physician analysis, review and report(s), up to 90 days	Professional (-26)	\$15.97	0690	\$35.08
	Technical (-TC)	\$40.09		
	Global	\$56.06		
CPT 93294 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system with interim physician analysis, review(s) and report(s)	Facility	\$34.66	N/A	Not Payable Under OPSS
	Non Facility	\$34.66		
CPT 93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable cardioverter-defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results	Facility	N/A	0690	\$35.08
	Non Facility	\$32.62		
Peri-Procedural Pacemaker Evaluation and Programming				
CPT 93286 Peri-procedural device evaluation (in person) and programming of device system parameters before or after a surgery, procedure, or test with physician analysis, review and report; single, dual, or multiple lead pacemaker system	Professional (-26)	\$14.61	N/A	Packaged Service No Separate Payment
	Technical (-TC)	\$11.89		
	Global	\$26.50		
Biventricular Pacing (Cardiac Resynchronization)^				
CPT 33224 Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, with attachment to previously placed pacemaker or pacing cardioverter-defibrillator pulse generator (including revision of pocket, removal, insertion, and/or replacement of generator)	Facility	\$538.19	0418	\$10,630.16
	Non Facility	N/A		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Biventricular Pacing (Cardiac Resynchronization)^				
CPT +33225 Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of pacing cardioverter-defibrillator or pacemaker pulse generator (including upgrade to dual chamber system) (List separately in addition to code for primary procedure)	Facility	\$485.18	0418	\$10,630.16
	Non Facility	N/A		
Implantable Cardioverter Defibrillator (ICD)				
CPT 33202 Insertion of epicardial electrode(s); open incision (eg, thoracotomy, median sternotomy, subxiphoid approach)	Facility	\$807.28	N/A	Inpatient Only
	Non Facility	N/A		
CPT 33203 Insertion of epicardial electrode(s); endoscopic approach (eg, thoracoscopy, pericardioscopy)	Facility	\$847.03	N/A	Inpatient Only
	Non Facility	N/A		
CPT 33216 Insertion of a single transvenous electrode, permanent pacemaker or cardioverter-defibrillator	Facility	\$398.88	0106	\$3596.28
	Non Facility	N/A		
CPT 33217 Insertion of 2 transvenous electrodes, permanent pacemaker or cardioverter-defibrillator	Facility	\$396.50	0106	\$3596.28
	Non Facility	N/A		
CPT 33240 Insertion of single or dual chamber pacing cardioverter-defibrillator pulse generator	Facility	\$490.96	0107	\$23,404.61
	Non Facility	N/A		
CPT 33249 Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter-defibrillator and insertion of pulse generator	Facility	\$962.55	0108	\$26,829.61
	Non Facility	N/A		
CPT 33241 Subcutaneous removal of single or dual chamber pacing cardioverter-defibrillator pulse generator	Facility	\$238.17	0105	\$1565.84
	Non Facility	N/A		
CPT 33243 Removal of single or dual chamber pacing cardioverter-defibrillator electrode(s); by thoracotomy	Facility	\$1432.11	N/A	Inpatient Only
	Non Facility	N/A		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Implantable Cardioverter Defibrillator (ICD)				
33244 Removal of single or dual chamber pacing cardioverter-defibrillator electrode(s); by transvenous extraction	Facility	\$905.81	0105	\$1565.84
	Non Facility	N/A		
CPT 33215 Repositioning of previously implanted transvenous pacemaker or pacing cardioverter-defibrillator (right atrial or right ventricular) electrode	Facility	\$323.12	0105	\$1565.84
	Non Facility	N/A		
CPT 33218 Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter-defibrillator	Facility	\$415.87	0105	\$1565.84
	Non Facility	N/A		
CPT 33220 Repair of 2 transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter-defibrillator	Facility	\$419.27	0105	\$1565.84
	Non Facility	N/A		
CPT 33223 Revision of skin pocket for cardioverter-defibrillator	Facility	\$439.31	0136	\$1185.47
	Non Facility	N/A		
CPT 33226 Repositioning of previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion and/or replacement of generator)	Facility	\$518.14	0105	\$1565.84
	Non Facility	N/A		
CPT 71090-26 Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation	Professional (-26)	\$28.54	N/A	Packaged Service No Separate Payment
	Technical (-TC)	N/A		
	Global	N/A		
Intraoperative Device Testing				
CPT 93640 Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement	Professional (-26)	\$204.20	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		
CPT 93641 Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement; with testing of single or dual chamber pacing cardioverter-defibrillator pulse generator	Professional (-26)	\$344.86	N/A	Packaged Service No Separate Payment
	Technical (-TC)	Carrier Priced		
	Global	Carrier Priced		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
ICD Device Analysis, Interrogation and Programming				
In Person ICD Evaluation				
CPT 93282 Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; single lead implantable cardioverter-defibrillator system	Professional (-26)	\$44.51	0690	\$35.08
	Technical (-TC)	\$22.08		
	Global	\$66.59		
CPT 93283 Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; dual lead implantable cardioverter-defibrillator system	Professional (-26)	\$59.80	0690	\$35.08
	Technical (-TC)	\$25.48		
	Global	\$85.28		
CPT 93284 Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; multiple lead implantable cardioverter-defibrillator system	Professional (-26)	\$65.91	0690	\$35.08
	Technical (-TC)	\$28.88		
	Global	\$94.79		
CPT 93289 Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead implantable cardioverter-defibrillator system, including analysis of heart rhythm derived data elements	Professional (-26)	\$46.89	0690	\$35.08
	Technical (-TC)	\$21.41		
	Global	\$68.29		
Remote ICD Evaluation				
CPT 93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable cardioverter-defibrillator system with interim physician analysis, review(s) and report(s)	Facility	\$68.29	N/A	Not Payable Under OPSS
	Non Facility	\$68.29		
CPT 93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable cardioverter-defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results	Facility	N/A	0690	\$35.08
	Non Facility	\$32.62		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Mobile Cardiovascular Telemetry (MCT)				
CPT 93228 Wearable mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; physician review and interpretation with report	Facility	\$25.82	N/A	Not Payable Under OPPTS
	Non Facility	\$25.82		
CPT 93229 Wearable mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; technical support for connection and patient instructions for use, attended surveillance, analysis and physician prescribed transmission of daily and emergent data reports	Facility	N/A	0209	\$780.77
	Non Facility	681.23		
CPT 93292 Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; wearable defibrillator system	Professional (-26)	\$22.42	0690	\$35.08
	Technical (-TC)	\$11.89		
	Global	\$34.32		
CPT 93745 Initial set-up and programming by a physician of wearable cardioverter-defibrillator includes initial programming of system, establishing baseline electronic ECG, transmission of data to data repository, patient instruction in wearing system and patient reporting of problems or events	Professional (-26)	Carrier Priced	0690	\$35.08
	Technical (-TC)	N/A		
	Global	N/A		
Peri-Procedural ICD Evaluation and Programming				
CPT 93287 Peri-procedural device evaluation (in person) and programming of device system parameters before or after a surgery, procedure, or test with physician analysis, review and report; single, dual, or multiple lead implantable cardioverter-defibrillator system	Professional (-26)	\$21.74	N/A	Packaged Service No Separate Payment
	Technical (-TC)	\$12.91		
	Global	\$34.66		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Biventricular Pacing With Defibrillation (Cardiac Resynchronization)^				
CPT 33224 Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, with attachment to previously placed pacemaker or pacing cardioverter-defibrillator pulse generator (including revision of pocket, removal, insertion, and/or replacement of generator)	Facility	\$538.19	0418	\$10,630.16
	Non Facility	N/A		
CPT +33225 Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of pacing cardioverter-defibrillator or pacemaker pulse generator (including upgrade to dual chamber system) (List separately in addition to code for primary procedure)	Facility	\$485.18	0418	\$10,630.16
	Non Facility	N/A		
Implantable Cardiovascular Monitoring				
CPT 93290 Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; implantable cardiovascular monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors	Professional (-26)	\$20.73	0035	\$18.42
	Technical (-TC)	\$9.85		
	Global	\$30.58		
CPT 93297 Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors, physician analysis, review(s) and report(s)	Facility	\$25.82	N/A	Not Payable Under OPSS
	Non Facility	\$25.82		
CPT 93299 Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular monitor system or implantable loop recorder system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results	Facility	Carrier Priced	0691	\$166.82
	Non Facility	Carrier Priced		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Wearable ECG/Holter				
CPT 93224 Wearable electrocardiographic rhythm derived monitoring for 24 hours by continuous original waveform recording and storage, with visual superimposition scanning; includes recording, scanning analysis with report, physician review and interpretation	Facility	N/A	N/A	Not Payable Under OPSS
	Non Facility	\$96.83		
CPT 93225 Wearable electrocardiographic rhythm derived monitoring for 24 hours by continuous original waveform recording and storage, with visual superimposition scanning; recording (includes connection, recording, and disconnection)	Facility	N/A	0097	\$66.25
	Non Facility	\$28.20		
CPT 93226 Wearable electrocardiographic rhythm derived monitoring for 24 hours by continuous original waveform recording and storage, with visual superimposition scanning; scanning analysis with report	Facility	N/A	0097	\$66.25
	Non Facility	\$41.45		
CPT 93227 Wearable electrocardiographic rhythm derived monitoring for 24 hours by continuous original waveform recording and storage, with visual superimposition scanning; physician review and interpretation	Facility	\$27.18	N/A	Not Payable Under OPSS
	Non Facility	\$27.18		
CPT 93228 Wearable mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; physician review and interpretation with report	Facility	\$25.82	N/A	Not Payable Under OPSS
	Non Facility	\$25.82		
CPT 93229 Wearable mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; technical support for connection and patient instructions for use, attended surveillance, analysis and physician prescribed transmission of daily and emergent data reports	Facility	N/A	0209	\$780.77
	Non Facility	\$681.23		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴

Wearable ECG/Holter

CPT Codes 93230-93235

have been deleted for 2011. See codes 93224-93227 to report external ECG rhythm derived monitoring for up to 48 hours.

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
12 Lead ECG				
CPT 93000 Electrocardiogram, routine ECG with at least 12 leads; with interpretation and report	Facility	N/A	N/A	Not Payable Under OPSS
	Non Facility	\$19.71		
CPT 93005 Electrocardiogram, routine ECG with at least 12 leads; tracing only, without interpretation and report	Facility	N/A	0099	\$27.26
	Non Facility	\$10.87		
CPT 93010 Electrocardiogram, routine ECG with at least 12 leads; interpretation and report only	Facility	\$8.83	N/A	Not Payable Under OPSS
	Non Facility	\$8.83		
TransTelephonic ECG Monitoring				
93268 External patient and, when performed, auto activated electrocardiographic rhythm derived event recording with symptom-related memory loop with remote download capability up to 30 days, 24-hour attended monitoring; includes transmission, physician review and interpretation	Facility	N/A	N/A	Not Payable Under OPSS
	Non Facility	\$250.75		
93270 External patient and, when performed, auto activated electrocardiographic rhythm derived event recording with symptom-related memory loop with remote download capability up to 30 days, 24-hour attended monitoring; recording (includes connection, recording, and disconnection)	Facility	N/A	0097	\$66.25
	Non Facility	\$15.29		
93271 External patient and, when performed, auto activated electrocardiographic rhythm derived event recording with symptom-related memory loop with remote download capability up to 30 days, 24-hour attended monitoring; transmission download and analysis	Facility	N/A	0692	\$110.95
	Non Facility	\$209.63		
93272 External patient and, when performed, auto activated electrocardiographic rhythm derived event recording with symptom-related memory loop with remote download capability up to 30 days, 24-hour attended monitoring; physician review and interpretation	Facility	\$25.82	N/A	Not Payable Under OPSS
	Non Facility	\$25.82		

CPT ² /HCPCS Code	Physician		Facility	
	Reimbursement Component	Medicare Physician Fee Schedule Payment ³	APC	Hospital Outpatient Payment ⁴
Rhythm ECG				
93040 Rhythm ECG, 1-3 leads; with interpretation and report	Facility	N/A	N/A	Not Payable Under OPSS
	Non Facility	\$13.25		
93041 Rhythm ECG, 1-3 leads; tracing only without interpretation and report	Facility	N/A	0035	\$18.42
	Non Facility	\$5.78		
93042 Rhythm ECG, 1-3 leads; interpretation and report only	Facility	\$7.47	N/A	Not Payable Under OPSS
	Non Facility	\$7.47		
Signal Averaging ECG				
93278 Signal-averaged electrocardiography (SAECG), with or without ECG	Professional (-26)	\$12.57	0035	\$18.42
	Technical (-TC)	\$22.42		
	Global	\$35.00		

* Professional - is the physician payment

** Technical - is the facility payment

*** Facility – is the payment made to the physician when the procedure is performed in a hospital or ASC.

**** Non-Facility – is the payment to the physician when the procedure is performed in the physician’s office.

+ indicates add-on code

^ May Be Used In Conjunction with CPT Codes from Pacemaker Section or ICD Section

HCPCS⁵ Coding

Medicare is requiring C-codes to track device cost information for rate-setting purposes. There is no additional payment to the facility for the use of the C-codes. All appropriate C-codes should be reported on the hospital's chargemaster in order to capture the cost of devices used in the outpatient setting. The following chart lists the current C-codes associated with electrophysiology procedures:

Description	Device Code	Code Description
Cardiac Electrophysiologic Recording/ Mapping/ Ablation	C1730	Catheter, electrophysiology, diagnostic, other than 3D mapping (19 or fewer electrodes)
	C1731	Catheter, electrophysiology, diagnostic, other than 3D mapping (20 or more electrodes)
	C1732	Catheter, electrophysiology, diagnostic/ablation, 3D or vector mapping
	C1733	Catheter, electrophysiology, diagnostic/ablation, other than 3D or vector mapping, other than cool-tip
	C1766	Introducer/sheath, guiding, intracardiac electrophysiological, steerable, other than peel-away
	C1892	Introducer/sheath, guiding, intracardiac electrophysiological, fixed-curve, peel-away
	C1893	Introducer/sheath, guiding, intracardiac electrophysiological, fixed-curve, other than peel-away
	C1894	Introducer/sheath, other than guiding, other than intracardiac electrophysiological, nonlaser
	C2629	Introducer/sheath, other than guiding, intracardiac electrophysiological, laser
	C2630	Catheter, electrophysiology, diagnostic/ablation, other than 3D or vector mapping, cool-tip
Insertion/Replacement of Pacemaker Pulse Generator	C1785	Pacemaker, dual chamber, rate-responsive (implantable)
	C1786	Pacemaker, single chamber, rate-responsive (implantable)
	C2619	Pacemaker, dual chamber, nonrate-responsive (implantable)
	C2620	Pacemaker, single chamber, nonrate-responsive (implantable)
	C2621	Pacemaker, other than single or dual chamber (implantable)

Description	Device Code	Code Description
Insertion/Replacement/ Repair of Pacemaker and/or Electrodes	C1777	Lead, cardioverter-defibrillator, endocardial single coil (implantable)
	C1779	Lead, pacemaker, transvenous VDD single pass
	C1895	Lead, cardioverter-defibrillator, endocardial dual coil (implantable)
	C1896	Lead, cardioverter-defibrillator, other than endocardial single or dual coil (implantable)
	C1898	Lead, pacemaker, other than transvenous VDD single pass
	C1899	Lead, pacemaker/cardioverter-defibrillator combination (implantable)
Insertion of Cardioverter-Defibrillator	C1721	Cardioverter-defibrillator, dual chamber (implantable)
	C1722	Cardioverter-defibrillator, single chamber (implantable)
	C1882	Cardioverter-defibrillator, other than single or dual chamber (implantable)
Insertion/Replacement/ Repair of Cardioverter-Defibrillator	C1721	Cardioverter-defibrillator, dual chamber (implantable)
	C1722	Cardioverter-defibrillator, single chamber (implantable)
	C1882	Cardioverter-defibrillator, other than single or dual chamber (implantable)
Insertion/Replacement/ Repair of Cardioverter-Defibrillator Leads	C1721	Cardioverter-defibrillator, dual chamber (implantable)
	C1722	Cardioverter-defibrillator, single chamber (implantable)
	C1882	Cardioverter-defibrillator, other than single or dual chamber (implantable)
Insertion of Left Ventricular Pacing Electrode	C1900	Lead, left ventricular coronary venous system
Insertion of Implantable Loop Recorder	C1764	Event recorder, cardiac (implantable)

2011 National Average Ambulatory Surgery Center (CMS) Medicare Reimbursement for Procedures Performed By Electrophysiologists

The following table lists the procedures included on the approved Ambulatory Surgery Center list and their average reimbursement rates for Medicare.

CPT	Description	2011 Average ASC Rate ⁶
33206	Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial	\$6816.91
33207	Insertion or replacement of permanent pacemaker with transvenous electrode(s); ventricular	\$6816.91
33208	Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular	\$8393.22
33210	Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)	\$2022.94
33211	Insertion or replacement of temporary transvenous dual chamber pacing electrodes (separate procedure)	\$2022.94
33212	Insertion or replacement of pacemaker pulse generator only; single chamber, atrial or ventricular	\$5803.96
33213	Insertion or replacement of pacemaker pulse generator only; dual chamber	\$6597.53
33214	Upgrade of implanted pacemaker system, conversion of single chamber system to dual chamber system (includes removal of previously placed pulse generator, testing of existing lead, insertion of new lead, insertion of new pulse generator)	\$8393.22
33215	Repositioning of previously implanted transvenous pacemaker or pacing cardioverter-defibrillator (right atrial or right ventricular) electrode	\$880.80
33216	Insertion of a single transvenous electrode, permanent pacemaker or cardioverter-defibrillator	\$2022.94
33217	Insertion of 2 transvenous electrodes, permanent pacemaker or cardioverter-defibrillator	\$2022.94
33218	Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter-defibrillator	\$880.80
33220	Repair of 2 transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter-defibrillator	\$880.80
33222	Revision or relocation of skin pocket for pacemaker	\$666.84
33223	Revision of skin pocket for cardioverter-defibrillator	\$666.84
33224	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, with attachment to previously placed pacemaker or pacing cardioverter-defibrillator pulse generator (including revision of pocket, removal, insertion, and/or replacement of generator)	\$9373.10
33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of pacing cardioverter-defibrillator or pacemaker pulse generator (including upgrade to dual chamber system) (List separately in addition to code for primary procedure)	\$9373.10

CPT	Description	2010 Average ASC Rate ⁶
33226	Repositioning of previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion and/or replacement of generator)	\$880.80
33233	Removal of permanent pacemaker pulse generator	\$880.80
33234	Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular	\$880.80
33235	Removal of transvenous pacemaker electrode(s); dual lead system	\$880.80
33240	Insertion of single or dual chamber pacing cardioverter-defibrillator pulse generator	\$22,212.75
33241	Subcutaneous removal of single or dual chamber pacing cardioverter-defibrillator pulse generator	\$880.80
33249	Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter-defibrillator and insertion of pulse generator	\$25,360.04

Modifiers

Modifiers explain that a procedure or service was changed without changing the definition of the CPT code set. Here are some common modifiers related to the use of Electrophysiological procedures. This is not an all-inclusive list of applicable modifiers. Refer to your current CPT and/or HCPCS manual for a complete list of modifiers and instructions.

26 - Professional Component

A physician who performs the interpretation of an EP exam in the hospital outpatient setting may submit a charge for the professional component of the EP service using a modifier (-26) appended to the procedure code.

TC - Technical Component

This modifier would be used to bill for services by the owner of the equipment only to report the technical component of the service.

22- Increased Procedural Services

This modifier would be appended to the appropriate CPT code when the work required to provide a service is substantially greater than typically required. Documentation must support the additional work and the reason for it.

25 – Significant, Separately Identifiable Evaluation and Management Services by the Same Physician on the Same Day of the Procedure or Other Service

This modifier would be used when a procedure or service was performed and the patient's condition required a significant, separately identifiable Evaluation and Management (E/M) service above and beyond the other service provided or beyond the usual preoperative/postoperative care associated with the procedure performed.

-51 – Multiple Procedures

This modifier is used when the same provider performs multiple procedures at the same session. The primary procedure may be reported as usual and the modifier would be appended to the additional procedure(s). This modifier does not apply to E/M services.

-52 – Reduced Services

When a service or procedure is partially reduced or eliminated at the physician's discretion, modifier -52 would be appended to the applicable procedure code.

-53 – Discontinued Procedure

The physician may choose to terminate a surgical or diagnostic procedure in certain circumstances. If the procedure was started and then discontinued, the modifier -53 would be appended to the procedure code.

-59 – Distinct Procedural Service

This modifier is used when it is necessary to indicate that a procedure or service was distinct or independent from other non-E/M services performed on the same day. This modifier may be used with procedure codes that aren't usually billed together, but may be due to certain circumstances.

-76 – Repeat Procedure or Service by Same Physician

This modifier would be used when it a procedure or service was repeated subsequent to the original procedure or service.

-77 – Repeat Procedure by Another Physician

This modifier is used to indicate that a procedure or service performed by another physician was repeated.

-78 – Unplanned Return to the Operating/Procedure Room by the Same Physician Following Initial Procedure for a Related Procedure During the Postoperative Period

When another unplanned procedure was performed during the postoperative period of the initial procedure, this modifier would be appended to the procedure code.

-80 – Assistant Surgeon

When surgical assistant services are used the modifier –80 may be appended to the procedure code.

Hospital Inpatient - ICD-9-CM Procedure Coding

ICD-9-CM procedure codes are used to report procedures performed in a hospital inpatient setting. The following are ICD-9-CM procedure codes that are typically used to report procedures commonly performed by electrophysiologists in the inpatient setting:

Electrophysiology Procedures

- 37.20 Noninvasive programmed electrical stimulation [NIPS]
- 37.26 Catheter based invasive electrophysiologic testing
- 37.27 Cardiac mapping
- 37.28 Intracardiac echocardiography
- 37.29 Other diagnostic procedures on heart and pericardium
- 99.61 Atrial cardioversion
- 99.69 Other conversion of cardiac rhythm

Tilt Table

- 89.54 Electrographic monitoring

Operative Ablation

- 37.33 Excision or destruction of other lesion or tissue of heart, open approach
- 37.34 Excision or destruction of other lesion or tissue of heart, other approach

Cardioversion

- 37.91 Open chest cardiac massage
- 99.62 Other electric countershock of heart

Pacemaker

- 37.70 Initial insertion of lead (electrode), not otherwise specified
- 37.71 Initial insertion of transvenous lead (electrode) into ventricle
- 37.72 Initial insertion of transvenous leads (electrodes) into atrium and ventricle
- 37.73 Initial insertion of transvenous lead (electrode) into atrium
- 37.74 Insertion or replacement of epicardial lead (electrode) into epicardium
- 37.75 Revision of lead (electrode)
- 37.76 Replacement of transvenous atrial and/or ventricular lead(s) (electrode(s))
- 37.77 Removal of lead(s) (electrodes) without replacement
- 37.78 Insertion of temporary transvenous pacemaker system
- 37.79 Revision or relocation of cardiac device pocket
- 37.80 Insertion of permanent pacemaker, initial or replacement, type of device not specified
- 37.81 Initial insertion of single-chamber device, not specified as rate responsive
- 37.82 Initial insertion of single-chamber device, rate responsive
- 37.83 Initial insertion of dual-chamber device
- 37.85 Replacement of any type of pacemaker device with single-chamber device, not specified as rate responsive
- 37.86 Replacement of any type of pacemaker device with single-chamber device, rate responsive
- 37.87 Replacement of any type of pacemaker device with dual-chamber device
- 37.89 Revision or removal of pacemaker device
- 37.98 Replacement of automatic cardioverter/defibrillator pulse generator only
- 37.99 Other operations on heart and pericardium

Implantable Cardioverter Defibrillator

- 37.70 Initial insertion of lead (electrode), not otherwise specified
- 37.71 Initial insertion of transvenous lead (electrode) into ventricle
- 37.72 Initial insertion of transvenous leads (electrodes) into atrium and ventricle
- 37.73 Initial insertion of transvenous lead (electrode) into atrium
- 37.74 Insertion or replacement of epicardial lead (electrode) into epicardium
- 37.75 Revision of lead (electrode)
- 37.76 Replacement of transvenous atrial and/or ventricular lead(s) (electrode(s))
- 37.79 Revision or relocation of cardiac device pocket
- 37.81 Initial insertion of single-chamber device, not specified as rate responsive
- 37.82 Initial insertion of single-chamber device, rate responsive
- 37.83 Initial insertion of dual-chamber device
- 37.89 Revision or removal of pacemaker device

- 37.94 Implantation or replacement of automatic cardioverter/defibrillator, total system (AICD)
- 37.95 Implantation of automatic cardioverter/defibrillator lead(s) only
- 37.96 Implantation of automatic cardioverter/defibrillator pulse generator only
- 37.97 Replacement of automatic cardioverter/defibrillator lead(s) only
- 37.98 Replacement of automatic cardioverter/defibrillator pulse generator only
- 37.99 Other operations on heart and pericardium

Device Monitoring

- 89.45 Artificial pacemaker rate check
- 89.46 Artificial pacemaker artifact wave form check
- 89.47 Artificial pacemaker electrode impedance check
- 89.48 Artificial pacemaker voltage or amperage threshold check
- 89.49 Automatic implantable cardioverter/defibrillator (AICD) check

Biventricular Pacemaker

- 00.50 Implantation of cardiac resynchronization pacemaker without mention of defibrillation, total system (CRT-P)
- 00.52 Implantation or replacement of transvenous lead (electrode) into left ventricular coronary venous system
- 00.53 Implantation or replacement of cardiac resynchronization pacemaker pulse generator only (CRT-P)

Biventricular Pacemaker with Defibrillator

- 00.51 Implantation of cardiac resynchronization defibrillator, total system (CRT-D)
- 00.52 Implantation or replacement of transvenous lead (electrode) into left ventricular coronary venous system
- 00.54 Implantation or replacement of cardiac resynchronization defibrillator pulse generator device only (CRT-D)

Wearable ECG/Holter

- 89.50 Ambulatory cardiac monitoring

12-Lead ECG

- 89.50 Ambulatory cardiac monitoring
- 89.51 Rhythm electrocardiogram
- 89.52 Electrocardiogram

Trans-Telephonic ECG Strip Evaluation

- 89.50 Ambulatory cardiac monitoring
- 89.51 Rhythm electrocardiogram
- 89.52 Electrocardiogram Rhythm ECG
- 89.51 Rhythm electrocardiogram

Signal Averaging ECG

- 89.59 Other nonoperative cardiac and vascular measurements

ICD-9-CM Diagnosis Coding

Because of the vast array of diagnoses related to the aforementioned procedures, please check with your payer regarding appropriate ICD-9-CM diagnosis code selection.

Revenue Codes

Revenue codes are three-digit code used by hospitals to report the accounting center where the charge originates. The revenue codes allow the hospital to assign specific accommodation, supplies and ancillary services to specific cost centers. Individual hospitals determine which cost center and revenue codes are applicable. Each supply or service provided during the patient's hospitalization must be associated with a revenue code. Revenue codes are mandatory on Medicare and Medicaid claims. Providers should select the most appropriate revenue codes(s) for the services provided to the patient.

Commonly used Revenue codes for EP procedures may include the following from the 027X (Medical Surgical Supplies) series of Revenue Codes. This is not an all-inclusive list.

- 0272 Medical Surgical Supplies, Sterile Supply
- 0275 Medical Surgical Supplies, Pacemaker
- 0278 Medical Surgical Supplies, Other Implants

MS-DRG Medicare Reimbursement

The following table lists some of the Medicare MS-DRGs associated with procedures performed by electrophysiologists and their 2010 national average reimbursement rates.

MS-DRG ⁷	Description	2011 Medicare Rate
Electrophysiology Studies, Catheter Ablation and Cardiac Mapping		
250	Percutaneous Cardiovascular Procedure without Coronary Artery Stent with MCC	\$16,102.53
251	Percutaneous Cardiovascular Procedure without Coronary Artery Stent without MCC	\$10,047.02
Implantable Cardioverter Defibrillator and Cardiac Resynchronization Therapy with Defibrillator		
222	Cardiac Defibrillator Implant with Cardiac Catheterization with Acute Myocardial Infarction/Heart Failure/Shock with MCC	\$47,593.69
223	Cardiac Defibrillator Implant with Cardiac Catheterization with Acute Myocardial Infarction/Heart Failure/Shock without MCC	\$35,877.92
224	Cardiac Defibrillator Implant with Cardiac Catheterization without Acute Myocardial Infarction/Heart Failure/Shock with MCC	\$42,337.99
225	Cardiac Defibrillator Implant with Cardiac Catheterization without Acute Myocardial Infarction/Heart Failure/Shock without MCC	\$33,617.64
226	Cardiac Defibrillator Implant without Cardiac Catheterization with MCC	\$36,023.25
227	Cardiac Defibrillator Implant without Cardiac Catheterization without MCC	\$29,001.66
245	AICD Generator Procedures	\$23,724.87
265	AICD Lead Procedures	\$12,930.95
Pacemaker and Cardiac Resynchronization Therapy - Pacemaker		
242	Permanent Cardiac Pacemaker Implant with MCC	\$20,815.80
243	Permanent Cardiac Pacemaker Implant with CC	\$14,802.47
244	Permanent Cardiac Pacemaker Implant without CC/MCC	\$11,390.22
258	Cardiac Pacemaker Device Replacement with MCC	\$16,127.17
259	Cardiac Pacemaker Device Replacement w/o MCC	\$10,237.70
260	Cardiac Pacemaker Revision Except Device Replacement with MCC	\$19,823.60

MS-DRG ⁷	Description	2011 Medicare Rate
Pacemaker and Cardiac Resynchronization Therapy - Pacemaker		
261	Cardiac Pacemaker Revision Except Device Replacement with CC	\$9,196.23
262	Cardiac Pacemaker Revision Except Device Replacement without CC/MCC	\$6,279.65
Operative Ablation		
228	Other Cardiothoracic Procedures with MCC	\$42,373.12
229	Other Cardiothoracic Procedures with CC	\$26,661.58
230	Other Cardiothoracic Procedures without CC/MCC	\$19,796.17
Cardioversion		
237	Major Cardiovascular Procedures with MCC or Thoracic Aortic Aneurysm Repair	\$28,983.18
238	Major Cardiovascular Procedures without MCC	\$17,216.11

Documentation Requirements

As with all medical procedures performed, the following requirements should be met in order to be considered for coverage and reimbursement by Medicare:

- Medical necessity as determined by the payer
- Completeness
- Documented in the patient's medical record

Payment Methodologies for Electrophysiological Services

Medicare reimburses for EP services when the services are within the scope of the provider's license and are deemed medically necessary. The following describes the various payment methods by site of service.

Site of Service – EP Services

Physician Office (Medicare Physician Fee Schedule (MPFS))

In the office setting, a physician who owns the equipment and performs the service may report the global/non-facility code and report the CPT code without any modifier may be reported.

Hospital Outpatient

If the site of service is a hospital outpatient setting and the physician is performing certain services, the -26 modifier (professional service only) should be appended to the CPT code for the service.

Hospital Inpatient

Charges for the EP services occurring in the hospital inpatient setting would be coded with the appropriate ICD-9-CM procedure code and payment would be bundled under the Medicare MS-DRG payment system for the primary procedure performed. Physician may still submit a bill for his/her professional services regardless.

Note: Medicare reimburses for services when the services are within the scope of the provider's license and are deemed medically necessary.

Ambulatory Surgery Center (ASC)

While some EP procedures (pacemaker and ICD implants) may be performed in the ASC setting, many are not on the list of ASC approved procedures and are not be reimbursed when performed in the ASC setting. If the procedure is on the ASC approved list, which is typically updated annually, it would be reported with the appropriate CPT code.

Coverage Policies

Medicare has national coverage determination (NCD) for Pacemaker Implant, Pacemaker Analysis and also for Implantable Cardioverter Defibrillator Insertion. There may be existing local coverage determinations (LCDs) as well, but most often they mirror what the NCD states regarding coverage requirements. EP procedures may be covered if the patient meets all the requirements established by the particular payer. For coverage of other indications, it is advisable that you check with your local Medicare Contractor. Also, it is essential that each claim be coded appropriately and supported with adequate documentation in the medical record.

Coverage by private payers varies by payer and by plan with respect to which medical specialties may perform EP services. Some payers will reimburse EP procedures to all specialties while other plans will limit EP procedures to specific types of medical specialties. In addition, there are plans that require providers to submit applications requesting these services be added to the list of services performed in their practice. It is important that you contact the payer prior to submitting claims to determine their requirements.

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- ⁴ Third party reimbursement amounts and coverage policies for specific procedures will vary by payer and by locality. The technical component is a payment amount assigned to an Ambulatory Payment Classification under the hospital outpatient prospective payment system, as published in Federal Register, Vol. 75, No. 226, November 24, 2010. The professional component is generally paid based on the Medicare physician fee schedule. Amounts do not necessarily reflect any subsequent changes in payment since publication. To confirm reimbursement rates for specific codes, consult with your local Medicare contractor.
- ⁵ 2010 Healthcare Common Procedure Coding System (HCPCS), American Medical Association. Copyright © 2010 Saunders, an imprint of Elsevier Inc.
- ⁶ Federal Register / Vol. 74, No. 226 / November 24, 2010.
- ⁷ Federal Register / Vol. 75, No. 157 / August 16, 2010.
Note: The payment amounts indicated are estimates only based upon data elements derived from various CMS sources. These sources include the 8/16/10 Federal Register and the hospital payment impact file dated 7/30/10. Calculations assume that all hospitals are receiving the full 2.35% quality reporting update. Actual payment may vary based on various hospital-specific factors not reflected in the source data. Providers indicated by an asterisk (*) may be paid based on a methodology, which differs from the standard MS-DRG payment calculation reflected in the amount shown (i.e., rural referral centers, hospitals in the state of Maryland). Actual payment may also vary based on adjustments that CMS may make from time to time.

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