



# Medtronic

## PHYSICIAN & HOSPITAL CODING REFERENCE

- What's New
- Cardiac Resynchronization Procedures
- Electrophysiology Procedures
- Implantable Cardioverter Defibrillator Procedures
- Pacing Procedures
- Reveal<sup>®</sup> Plus Procedures
- Medtronic CareLink<sup>™</sup> Network Procedures

*Valid from October 1<sup>st</sup>, 2003 through  
September 30<sup>th</sup>, 2004*



## Medtronic

*When Life Depends on Medical Technology*

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## To Our Partners in Health Care

This booklet includes the commonly billed physician and hospital codes for cardiac rhythm management devices and procedures. This is not a comprehensive list of all available codes and it is possible that there is a more appropriate code for any given procedure.

*These coding suggestions do not replace seeking coding advice from the payer and/or your own coding staff. The ultimate responsibility for correct coding lies with the provider of services. Please contact your local payer for interpretation of the appropriate codes to use for specific procedures. Medtronic makes no guarantee that the use of this information will prevent differences of opinion or disputes with Medicare or other third party payers as to the correct form of billing or the amount that will be paid to providers of service.*

For questions or for more information, please contact Medtronic at 1-800-328-2518 extension 48892.

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## A Few Notes About Coding Systems and Medicare Payment Methodologies

### Physician CPT Coding and Reimbursement

Physicians use ICD-9-CM codes for diagnoses and CPT codes for procedures, regardless of whether the setting is inpatient or outpatient. The ICD-9-CM diagnosis codes are used for claims adjudication. However, for determining Medicare payment, only the CPT procedure codes are used. For Medicare, physician reimbursement is under the RBRVS system. Each CPT code is assigned a unique relative value unit, which is then converted into the payment amount.

Medicare has used RBRVS for physician reimbursement since 1992.

### Hospital Inpatient ICD-9-CM Procedure Coding and Reimbursement

Hospitals assign ICD-9-CM codes for both diagnoses and procedures for inpatient admissions. For Medicare, inpatient hospital reimbursement is under the DRG system. For each admission, the ICD-9-CM diagnosis and procedure codes are grouped into one of about 540 DRGs. Regardless of the number of codes, only one DRG is assigned per admission. Each DRG has a unique relative weight, which is then converted into the payment amount.

Medicare has used DRGs for hospital inpatient reimbursement since 1983.

### Hospital Outpatient Coding and Reimbursement

Similar to physicians, hospitals use ICD-9-CM codes for diagnoses and CPT or HCPCS II codes for procedures for outpatient encounters. For Medicare, hospital outpatient reimbursement is under the APC system. Only the CPT and HCPCS II procedure codes are used. Each CPT and HCPCS II code is assigned to an APC with a unique relative weight, which is then converted into the payment amount. Additional amounts may also be available for specific pass-through devices.

Medicare has used APCs for hospital outpatient reimbursement since 2000.

## WHAT'S NEW

Changes to ICD-9-CM procedure and diagnosis codes, as well as DRGs, are effective October 1st each year. Changes to CPT codes as well as APCs and RBRVS are effective January 1st each year. Medtronic intends to publish the Physician & Hospital Coding guide twice a year in order to provide updated information.

## I. New DRGs for Implantable Cardioverter Defibrillators for Medicare Inpatient Hospital

Effective October 1st, 2003

CMS has deleted DRG 514 and replaced it with the following two DRGs:

- DRG 535 for Cardiac Defibrillator Implant With Cardiac Catheterization **with** acute myocardial infarction, heart failure or shock, and
- DRG 536 for Cardiac Defibrillator Implant With Cardiac Catheterization **without** acute myocardial infarction, heart failure or shock

Note that to be assigned to DRG 535, the patient must have a *principal diagnosis* of acute myocardial infarction, heart failure or shock.

DRG 515 for Cardiac Defibrillator Implant Without Cardiac Catheterization will stay the same

## II. Revised DRG Assignments for Combinations of ICD Leads and Generators for Medicare Hospital Inpatient

Effective October 1st, 2003

CMS has corrected an oversight in prior DRG logic and now assigns all combinations of ICD lead and generator implantation or replacement performed during the same inpatient stay to DRGs 535, 536 or 515, the same DRGs that are assigned for total ICD system implantation.

## III. Coding Changes for Implantable Cardioverter Defibrillators for Medicare Outpatient Hospital

Effective October 1st, 2003

For outpatient hospital reporting, CMS now requires the use of newly created HCPCS II codes instead of CPT codes for insertion of ICD generators and leads. These new codes are for *hospitals only* and their use is mandatory; hospitals which use the CPT codes after October 1st will have their claims returned. However, *physicians* should continue to use the CPT codes.

**CPT 33240**, insertion of single or dual chamber pacing cardioverter defibrillator pulse generator, is replaced by:

- **G0297** Insertion of single chamber pacing cardioverter defibrillator pulse generator, or;
- **G0298** Insertion of dual chamber pacing cardioverter defibrillator pulse generator

**CPT 33249**, insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator, is replaced by:

- **G0299** Insertion or repositioning of electrode lead for single chamber pacing cardioverter defibrillator and insertion of pulse generator, or;
- **G0300** Insertion or repositioning of electrode lead(s) for dual chamber pacing cardioverter defibrillator and insertion of pulse generator

## IV. Coding Changes for ICD Bedside Check Update \*

The AHA's Coding Clinic publication for ICD-9-CM advises that Code 37.26, cardiac electrophysiologic stimulation and recording studies, should not be assigned for a bedside evaluation of an implantable automatic cardioverter defibrillator (AICD). The AHA explains that the bedside check of the AICD device is not the same as a cardiac electrophysiologic stimulation and recording study which is performed on a patient's heart. The AICD test is performed on the device itself. The AHA recommends that code 89.59, other nonoperative cardiac and vascular measurements, be used for a bedside check of the device.

\* AHA Coding Clinic for ICD-9-CM, Volume 20, Number 3, Third Quarter, 2003

## V. Reactivation of C-codes

As of January 1<sup>st</sup>, 2004, CMS will be reactivating the 95 device category pass-through or C-codes that expired on December 31<sup>st</sup>, 2002. While these C-codes will not be separately payable, the codes will be used by CMS to establish future APC payment rates involving devices.

However, the left ventricular leads listed below continue to be reported using pass-through code C1900, a separately payable C-code. This code was established July 2002 and should be in effect during the 2-3 year counting period as designated by CMS.

Lead Model Number	Category Code	Category Description
Attain™ LV Model 2187	C1900	Lead, left ventricular coronary venous system
Attain™ (CS/CV) Model 2188	C1900	Lead, left ventricular coronary venous system
Attain™ OTW Model 4193	C1900	Lead, left ventricular coronary venous system

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# CARDIAC RESYNCHRONIZATION PROCEDURES

## Cardiac Resynchronization and ICD System (CRT-D) Physician CPT Coding

### Insertion of CRT-D, Full System Implant: CRT-D generator, RA, RV, and LV lead

- 33249** Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator
- 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)

*Additional code that may be appropriate*

- 71090-26<sup>1</sup>** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

### Upgrade current system to Cardiac Resynchronization: Pacemaker or ICD generator replacement with insertion of LV lead

- 33240** Insertion of single or dual chamber pacing cardioverter defibrillator pulse generator,
- 33241** Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator
- 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)

*Additional code that may be appropriate*

- 71090-26<sup>1</sup>** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

**Cardiac Resynchronization and ICD System generator, RA and RV leads successfully placed (transvenous approach). Due to patient's anatomy, LV lead was attempted, but not successfully implanted. Cardiac Surgeon implants an epicardial lead to provide cardiac resynchronization.**

- 33249** Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator
- 33225-53<sup>2</sup>** 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)

*Additional code that may be appropriate*

- 71090-26<sup>1</sup>** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

### LV lead placement performed by Cardiac Surgeon using an epicardial lead

- 33999** Unlisted procedure, cardiac surgery (for the epicardial left ventricular lead)

### Insertion of Left Ventricular Lead Only (Stand-Alone Code)

- 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)

### Repositioning of Left Ventricular Lead

- 33226** Repositioning of a previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion and/or replacement of generator)

### AV Optimization

- 93307** Echocardiography, transthoracic, real-time with image documentation (2D) with or without M-mode recording; complete
- 93308** follow-up or limited study
- 93320** Doppler echocardiography, pulsed wave and/or continuous wave with spectral display (List separately in addition to codes for echocardiographic imaging); complete
- 93321** follow-up or limited study (List separately in addition to codes for echocardiographic imaging)

### Analysis and Reprogramming

- 93743** Electronic analysis of pacing cardioverter defibrillator (includes interrogation, evaluation of pulse generator status, evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); dual chamber, without reprogramming
- 93744** dual chamber, with reprogramming

<sup>1</sup> Modifier-26 entails only the professional component of procedures that are a combination of a physician component and a technical component.

<sup>2</sup> Modifier-53 indicates this was a discontinued procedure when the physician has elected to terminate a procedure that was initiated.

## Cardiac Resynchronization and ICD System (CRT-D) Hospital Outpatient Coding

### Insertion of CRT-D

- G0300** Insertion or repositioning of electrode lead(s) for dual chamber pacing cardioverter defibrillator and insertion of pulse generator
- 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)

*Additional code that may be appropriate*

- 71090** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

### Upgrade current system to Cardiac Resynchronization: ICD generator replacement with insertion of LV lead

- G0298** Insertion of dual chamber pacing cardioverter defibrillator pulse generator
- 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)

*Additional code that may be appropriate*

- 71090** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

## Possible APC Assignments

- 0105** Revision/Removal of Pacemakers, AICD, or Vascular. (CPT 33226, 33233, 33241)
- 0107** Insertion of Cardioverter Defibrillator (G0298)
- 0108** Insertion/Replacement/Repair of Cardioverter Defibrillator Leads and pulse generator (G0300)
- 0269** Level III Echocardiogram Except Transesophageal (CPT 93307)
- 0272** Level I Fluoroscopy (CPT 71090)
- 0671** Level II Echocardiogram Except Transesophageal (CPT 93320)
- 0689** Electronic Analysis of Cardioverter Defibrillators (CPT 93743, 93744)
- 0690** Electronic Analysis of Pacemakers and other Cardiac Devices (CPT 93731, 93732)
- 0697** Level I Echocardiogram Except Transesophageal (CPT 93308, 93321)
- 1547** New Technology - Level X (CPT 33224)
- 1550** New Technology - Level XIII (CPT 33225)

## Pass-Through

As of January 1<sup>st</sup>, 2004, CMS will be reactivating the 95 device category pass-through or C-codes that expired on December 31<sup>st</sup>, 2002. While these C-codes will not be separately payable, the codes will be used by CMS to establish future APC payment rates involving devices.

However, the left ventricular leads listed below continue to be reported using pass-through code C1900, a separately payable C-code. This code was established July 2002 and should be in effect during the 2-3 year counting period as designated by CMS.

Lead Model Number	Category Code	Category Description
Attain™ LV Model 2187	C1900	Lead, left ventricular coronary venous system
Attain™ (CS/CV) Model 2188	C1900	Lead, left ventricular coronary venous system
Attain™ OTW Model 4193	C1900	Lead, left ventricular coronary venous system

## Cardiac Resynchronization and ICD System (CRT-D) Hospital Inpatient ICD-9-CM Procedure Coding

### Implantation and Replacement

- 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 only [CRT-D]

### Insertion of Epicardial Lead for Difficult Surgical Scenarios

- 37.74** Insertion or replacement of epicardial lead (electrode) into epicardium
- 37.95** Implantation of automatic cardioverter defibrillator lead(s) only

## Possible DRG Assignments

- 115** Permanent Cardiac Pacemaker Implant with Acute Myocardial Infarction/Heart Failure/Shock or AICD Lead or Generator Procedure
- 515** Cardiac Defibrillator Implant without Cardiac Catheterization
- 535** Cardiac Defibrillator Implant with Cardiac Cath with Acute Myocardial Infarction/Heart Failure/Shock
- 536** Cardiac Defibrillator Implant with Cardiac Cath without Acute Myocardial Infarction/Heart Failure/Shock

## Cardiac Resynchronization System (CRT-P) Physician CPT Coding

### Insertion of CRT-P, Full System Implant: CRT-P generator, RA, RV, and LV lead

- 33208** Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
- 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)

*Additional code that may be appropriate*

- 71090-26<sup>1</sup>** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

### Upgrade current system to Cardiac Resynchronization: Pacemaker generator replacement with insertion of LV lead

- 33233** Removal of permanent pacemaker pulse generator, and
- 33213** Insertion or replacement of pacemaker pulse generator only; dual chamber
- 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)

*Additional code that may be appropriate*

- 71090-26<sup>1</sup>** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

**Cardiac Resynchronization System generator, RA and RV leads successfully placed (transvenous approach). Due to patient's anatomy, LV lead was attempted, but not successfully implanted. Cardiac Surgeon implants an epicardial lead to provide cardiac resynchronization.**

- 33208** Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
- 33225-53<sup>2</sup>** 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)

*Additional code that may be appropriate*

- 7190-26<sup>2</sup>** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

### LV lead placement performed by Cardiac Surgeon using an epicardial lead

- 33999** Unlisted procedure, cardiac surgery (for the epicardial left ventricular lead)

### Insertion of Left Ventricular Lead Only (Stand-Alone Code)

- 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)

### Repositioning of Left Ventricular Lead

- 33226** Repositioning of a previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion and/or replacement of generator)

### AV Optimization

- 93307** Echocardiography, transthoracic, real-time with image documentation (2D) with or without M-mode recording; complete
- 93308** follow-up or limited study
- 93320** Doppler echocardiography, pulsed wave and/or continuous wave with spectral display (List separately in addition to codes for echocardiographic imaging); complete
- 93321** follow-up or limited study (List separately in addition to codes for echocardiographic imaging)

### Analysis and Reprogramming

- 93731** Electronic analysis of dual chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming
- 93732** with reprogramming

<sup>1</sup> Modifier-26 entails only the professional component of procedures that are a combination of a physician component and a technical component.

<sup>2</sup> Modifier-53 indicates this was a discontinued procedure when the physician has elected to terminate a procedure that was initiated.

## Cardiac Resynchronization System (CRT-P) Hospital Outpatient Coding

### Insertion of CRT-P

- 33208** Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
- 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)

### Upgrade current system to Cardiac Resynchronization: Pacemaker generator replacement with insertion of LV lead

- 33233** Removal of permanent pacemaker pulse generator, and
- 33213** Insertion or replacement of pacemaker pulse generator only; dual chamber
- 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)

## Possible APC Assignments

- 0105** Revision/Removal of Pacemakers, AICD, or Vascular (CPT 33226, 33233, 33241)
- 0269** Level III Echocardiogram Except Transesophageal (CPT 93307)
- 0272** Level I Fluoroscopy (CPT 71090)
- 0654** Insertion/Replacement of a permanent dual chamber pacemaker (CPT 33213)
- 0655** Insertion/Replacement/Conversion of a permanent dual chamber pacemaker (CPT 33208)
- 0671** Level II Echocardiogram Except Transesophageal (CPT 93320)
- 0690** Electronic Analysis of Pacemakers and other Cardiac Devices (CPT 93731, 93732)
- 0697** Level I Echocardiogram Except Transesophageal (CPT 93308, 93321)
- 1547** New Technology - Level X (CPT 33224)
- 1550** New Technology - Level XIII (CPT 33225)

## Pass-Through

As of January 1<sup>st</sup>, 2004, CMS will be reactivating the 95 device category pass-through or C-codes that expired on December 31<sup>st</sup>, 2002. While these C-codes will not be separately payable, the codes will be used by CMS to establish future APC payment rates involving devices.

However, the left ventricular leads listed below continue to be reported using pass-through code C1900, a separately payable C-code. This code was established July 2002 and should be in effect during the 2-3 year counting period as designated by CMS.

Lead Model Number	Category Code	Category Description
Attain™ LV Model 2187	C1900	Lead, left ventricular coronary venous system
Attain™ (CS/CV) Model 2188	C1900	Lead, left ventricular coronary venous system
Attain™ OTW Model 4193	C1900	Lead, left ventricular coronary venous system

## Cardiac Resynchronization System (CRT-P) Hospital Inpatient ICD-9-CM Procedure Coding

### Implantation and Replacement

- 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]

### Insertion of Epicardial Lead for Difficult Surgical Scenarios

- 37.74** Insertion or replacement of epicardial lead (electrode) into epicardium
- 37.95** Implantation of automatic cardioverter defibrillator lead(s) only

## Possible DRG Assignments

- 115** Permanent Cardiac Pacemaker Implant with Acute Myocardial Infarction/Heart Failure/Shock or AICD Lead or Generator Procedure
- 116** Other Permanent Cardiac Pacemaker Implant
- 118** Cardiac Pacemaker Device Replacement

# ELECTROPHYSIOLOGY PROCEDURES

## Physician CPT Coding

### Recording, Mapping, and Pacing Procedures

- 93600 Bundle of His recording
- 93602 Intra-atrial recording
- 93603 Right ventricular recording
- 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)
- 93610 Intra-atrial pacing
- 93612 Intraventricular pacing
- 93613 Intracardiac electrophysiologic 3-dimensional mapping (List separately in addition to code for primary procedure)
- 93615 Esophageal recording of atrial electrogram with or without ventricular electrogram(s);
- 93616     with pacing
- 93618 Induction of arrhythmia by electrical pacing

### Electrophysiologic Evaluations

- 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
- 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
- 93621     with left atrial pacing and recording from coronary sinus or left atrium (List separately in addition to code for primary procedure)
- 93622     with left ventricular pacing and recording (List separately in addition to code for primary procedure)

### Pharmacologic Assessment During EPS

- 93623 Programmed stimulation and pacing after intravenous drug infusion (List separately in addition to code for primary procedure)

### EP Follow-Up Study

- 93624 Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia

### Intra-Operative Cardiac Pacing and Mapping

- 93631 Intra-operative epicardial and endocardial pacing and mapping to localize the site of tachycardia or zone of slow conduction for surgical correction

### Intracardiac Device Testing

- 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;
- 93641     with testing of single or dual chamber pacing cardioverter defibrillator pulse generator
- 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)

### Intracardiac Echocardiography

- 93662 Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)

### External and Internal Cardioversion

- 92960 Cardioversion, elective, electrical conversion of arrhythmia; external
- 92961     internal (separate procedure)

### Catheter Ablation

- 93650 Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement
- 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
- 93652     for treatment of ventricular tachycardia

### Analysis and Reprogramming

- 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)

### Other possible coding for reference

- 93660 Evaluation of cardiovascular function with tilt table evaluation, with continuous ECG monitoring and intermittent blood pressure monitoring, with or without pharmacological intervention

## Hospital Outpatient Coding

### Recording, Mapping and Pacing Procedures

- 93600 Bundle of His recording
- 93602 Intra-atrial recording
- 93603 Right ventricular recording
- 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)
- 93610 Intra-atrial pacing
- 93612 Intraventricular pacing
- 93613 Intracardiac electrophysiologic 3-dimensional mapping (List separately in addition to code for primary procedure)
- 93615 Esophageal recording of atrial electrogram with or without ventricular electrogram(s);
  - 93616 with pacing
- 93618 Induction of arrhythmia by electrical pacing

### Electrophysiologic Evaluations

- 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
- 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
  - 93621 with left atrial pacing and recording from coronary sinus or left atrium (List separately in addition to code for primary procedure)
  - 93622 with left ventricular pacing and recording (List separately in addition to code for primary procedure)

### Pharmacologic Assessment During EPS

- 93623 Programmed stimulation and pacing after intravenous drug infusion (List separately in addition to code for primary procedure)

### EP Follow-Up Study

- 93624 Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia

### Intra-Operative Cardiac Pacing and Mapping

- 93631 Intra-operative epicardial and endocardial pacing and mapping to localize the site of tachycardia or zone of slow conduction for surgical correction

### Intracardiac Device Testing

- 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;
  - 93641 with testing of single or dual chamber pacing cardioverter defibrillator pulse generator
- 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)

### Intracardiac Echocardiography

- 93662 Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)

### External and Internal Cardioversion

- 92960 Cardioversion, elective, electrical conversion of arrhythmia; external
  - 92961 internal (separate procedure)

### Catheter Ablation

- 93650 Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement
- 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
  - 93652 for treatment of ventricular tachycardia

### Analysis and Reprogramming

- 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)

### Other possible coding for reference

- 93660 Evaluation of cardiovascular function with tilt table evaluation, with continuous ECG monitoring and intermittent blood pressure monitoring, with or without pharmacological intervention

## Possible APC Assignments

- 0084** Level I Electrophysiologic Evaluation (CPT 93624, 93640, 93641 & 93642)
- 0085** Level II Electrophysiologic Evaluation (CPT 93619, 93620, 93621 & 93622)
- 0086** Ablate Heart Dysrhythm Focus (CPT 93650, 93651 & 93652)
- 0087** Cardiac Electrophysiologic Recording/Mapping (CPT 93600, 93602, 93603, 93609, 93610, 93612, 93613, 93615, 93616, 93618, 93623 & 93631)
- 0101** Tilt Table Evaluation (CPT 93660)
- 0670** Intravenous and Intracardiac Ultrasound (CPT 93662)
- 0679** Level II Resuscitation and Cardioversion (CPT 92960 & 92961)
- 0690** Electronic Analysis of Pacemakers and Other Cardiac Devices (CPT 93724)

## Hospital Inpatient ICD-9-CM Procedure Coding

### Cardioversion

- 99.61** Atrial cardioversion
- 99.62** Other electric countershock of heart
- 99.69** Other conversion of cardiac rhythm

### Electrophysiologic Procedures

- 37.26** Cardiac electrophysiologic stimulation and recording studies
- 37.27** Cardiac mapping
- 37.29** Other diagnostic procedures on heart and pericardium

### Intracardiac Echocardiography

- 37.28** Intracardiac echocardiography

### Ablation Procedures

- 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 (peripherally inserted catheter, endovascular approach)

## Possible DRG Assignments

- 108** Other Cardiothoracic Procedures
- 516** Percutaneous Cardiovascular Procedures with Acute Myocardial Infarction
- 517** Percutaneous Cardiovascular Procedures with Non-Drug-Eluting Stent without Acute Myocardial Infarction
- 518** Percutaneous Cardiovascular Procedures without Acute Myocardial Infarction without Coronary Artery Stent
- 526** Percutaneous Cardiovascular Procedures with Drug-Eluting Stent with Acute Myocardial Infarction
- 527** Percutaneous Cardiovascular Procedures with Drug-Eluting Stent without Acute Myocardial Infarction

### Other DRGs for reference

- 138** Cardiac Arrhythmia and Conduction Disorders with Complications and Comorbidities
- 139** Cardiac Arrhythmia and Conduction Disorders without Complications and Comorbidities

# IMPLANTABLE CARDIOVERTER DEFIBRILLATOR PROCEDURES

## Physician CPT Coding

### Insertion

- 33216** Insertion of a transvenous electrode; single chamber (one electrode) permanent pacemaker or single chamber pacing cardioverter defibrillator
- 33217** dual chamber (two electrodes) permanent pacemaker or dual chamber pacing cardioverter defibrillator
- 33240** Insertion of single or dual chamber pacing cardioverter defibrillator pulse generator
- 33245** Insertion of epicardial single or dual chamber pacing cardioverter defibrillator electrodes by thoracotomy;
- 33246** with insertion of pulse generator
- 33249** Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator

### Removal

- 33241** Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator
- 33243** Removal of single or dual chamber pacing cardioverter defibrillator electrode(s); by thoracotomy
- 33244** by transvenous extraction

### Revision, Repair, Repositioning

- 33215** Repositioning of previously implanted transvenous pacemaker or pacing cardioverter defibrillator (right atrial or right ventricular) electrode
- 33218** Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter defibrillator
- 33220** Repair of two transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter defibrillator
- 33223** Revision of skin pocket for single or dual chamber pacing cardioverter defibrillator

### Intracardiac Device Testing

- 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;
- 93641** with testing of single or dual chamber pacing cardioverter defibrillator pulse generator
- 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)

### Analysis and Reprogramming

- 93741** Electronic analysis of pacing cardioverter defibrillator (includes interrogation, evaluation of pulse generator status, evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event marker and device response); single chamber, without reprogramming
- 93742** single chamber, with reprogramming
- 93743** dual chamber, without reprogramming
- 93744** dual chamber, with reprogramming

### Radiological Supervision and Interpretation

- 71090-26<sup>1</sup>** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

<sup>1</sup> Modifier-26 entails only the professional component of procedures that are a combination of a physician component and a technical component.

## Hospital Outpatient Coding

### Insertion

- 33216** Insertion of a transvenous electrode; single chamber (one electrode) permanent pacemaker or single chamber pacing cardioverter defibrillator
- 33217** dual chamber (two electrodes) permanent pacemaker or dual chamber pacing cardioverter defibrillator
- G0297** Insertion of single chamber pacing cardioverter defibrillator pulse generator, or;
- G0298** Insertion of dual chamber pacing cardioverter defibrillator pulse generator
- 33245** Insertion of epicardial single or dual chamber pacing cardioverter defibrillator electrodes by thoracotomy;
- 33246** with insertion of pulse generator
- G0299** Insertion or repositioning of electrode lead for single chamber pacing cardioverter defibrillator and insertion of pulse generator, or;
- G0300** Insertion or repositioning of electrode lead(s) for dual chamber pacing cardioverter defibrillator and insertion of pulse generator

### Removal

- 33241** Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator
- 33243** Removal of single or dual chamber pacing cardioverter defibrillator electrode(s); by thoracotomy
- 33244** by transvenous extraction

## Revision, Repair, Repositioning

- 33215 Repositioning of previously implanted transvenous pacemaker or pacing cardioverter defibrillator (right atrial or right ventricular) electrode
- 33218 Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter defibrillator
- 33220 Repair of two transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter defibrillator
- 33223 Revision of skin pocket for single or dual chamber pacing cardioverter defibrillator

## Intracardiac Device Testing

- 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;
- 93641 with testing of single or dual chamber pacing cardioverter defibrillator pulse generator
- 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)

## Analysis and Reprogramming

- 93741 Electronic analysis of pacing cardioverter defibrillator (includes interrogation, evaluation of pulse generator status, evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event marker and device response); single chamber, without reprogramming
- 93742 single chamber, with reprogramming
- 93743 dual chamber, without reprogramming
- 93744 dual chamber, with reprogramming

## Radiological Supervision and Interpretation

- 71090 Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

### *Exclusively for Medicare Outpatient Hospital Implants New Codes for Insertion of Implantable Cardioverter Defibrillators (ICD).*

Today's payments are based on data collected in prior years. Effective for outpatient services furnished on or after October 1st, 2003, hospitals must discontinue reporting CPT codes 33240 and 33249. These codes have been split into more detailed HCPCS II codes. With these new codes, CMS will be able to collect more accurate data for more appropriate reimbursement according to the specific procedure.

- 33240 Insertion of single or dual chamber pacing cardioverter Defibrillator pulse generator, is replaced by:

- **G0297** Insertion of single chamber pacing cardioverter defibrillator pulse generator, or;
- **G0298** Insertion of dual chamber pacing cardioverter defibrillator pulse generator

- 33249 Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator, is replaced by:

- **G0299** Insertion or repositioning of electrode lead for single chamber pacing cardioverter defibrillator and insertion of pulse generator, or;
- **G0300** Insertion or repositioning of electrode lead(s) for dual chamber pacing cardioverter defibrillator and insertion of pulse generator

Please note that the new HCPCS II codes pertain to outpatient hospital coding only. CPT codes 33240 and 33249 remain in effect for physician billing.

## Possible APC Assignments

- 0027** Level IV Skin Repair (CPT 33223)
- 0084** Level I Electrophysiologic Evaluation (CPT 93640, 93641 & 93642)
- 0105** Revision/Removal of Pacemakers, AICD, or Vascular (CPT 33215, 33241 & 33244)
- 0106** Insertion/Replacement/Repair of Pacemaker and/or Electrodes (CPT 33216, 33218 & 33220)
- 0107** Insertion of Cardioverter Defibrillator (G0297 & G0298)
- 0108** Insertion/Replacement/Repair of Cardioverter Defibrillator Leads and Pulse Generator (G0299 & G0300)
- 0272** Level I Fluoroscopy (CPT 71090)
- 0689** Electronic Analysis of Cardioverter Defibrillators (93741, 93742, 93743 & 93744)

## Hospital Inpatient ICD-9-CM Procedure Coding

### ICD Implantation/Replacement

- 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 Checks

- 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
- 89.59 Other non-operative cardiac and vascular measurements, for a bedside check of the device

### Intracardiac Device Testing with Induction of Arrhythmia

- 37.26 Cardiac electrophysiologic stimulation and recording studies (including NIPS)

## Possible DRG Assignments

- 115 Permanent Cardiac Pacemaker Implant with Acute Myocardial Infarction/Heart Failure/Shock or AICD Lead or Generator Procedure
- 515 Cardiac Defibrillator Implant without Cardiac Catheterization
- 535 Cardiac Defibrillator Implant with Cardiac Cath with Acute Myocardial Infarction/Heart Failure/Shock
- 536 Cardiac Defibrillator Implant with Cardiac Cath without Acute Myocardial Infarction/Heart Failure/Shock



## Physician CPT Coding

### Insertion

- 33200** Insertion of permanent pacemaker with epicardial electrode(s); by thoracotomy
- 33201** by xiphoid approach
- 33206** Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial
- 33207** ventricular
- 33208** atrial and ventricular
- 33210** Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)
- 33211** Insertion or replacement of temporary transvenous dual chamber pacing electrodes (separate procedure)
- 33212** Insertion or replacement of pacemaker pulse generator only; single chamber, atrial or ventricular
- 33213** dual chamber
- 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)
- 33216** Insertion of a transvenous electrode; single chamber (one electrode) permanent pacemaker or single chamber pacing cardioverter defibrillator
- 33217** dual chamber (two electrodes) permanent pacemaker or dual chamber pacing cardioverter defibrillator

### Repair, Revision, Repositioning

- 33215** Repositioning of previously implanted transvenous pacemaker or pacing cardioverter defibrillator (right atrial or right ventricular) electrode
- 33218** Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter defibrillator
- 33220** Repair of two transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter defibrillator
- 33222** Revision or relocation of skin pocket for pacemaker

### Removal

- 33233** Removal of permanent pacemaker pulse generator
- 33234** Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular
- 33235** dual lead system
- 33236** Removal of permanent epicardial pacemaker and electrodes by thoracotomy; single lead system, atrial or ventricular
- 33237** dual lead system
- 33238** Removal of permanent transvenous electrode(s) by thoracotomy

### Radiological Supervision and Interpretation

- 71090-26<sup>1</sup>** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

### Analysis and Reprogramming

- 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)
- 93731** Electronic analysis of dual chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming
- 93732** with reprogramming
- 93733** Electronic analysis of dual chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of waveform, and/or testing of sensory function of pacemaker), telephonic analysis
- 93734** Electronic analysis of single chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming
- 93735** with reprogramming
- 93736** Electronic analysis of single chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker), telephonic analysis

<sup>1</sup> Modifier-26 entails only the professional component of procedures that are a combination of a physician component and a technical component.

## Hospital Outpatient Coding

### Insertion

- 33200** Insertion of permanent pacemaker with epicardial electrode(s); by thoracotomy
- 33201** by xiphoid approach
- 33206** Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial
- 33207** ventricular
- 33208** atrial and ventricular
- 33210** Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)
- 33211** Insertion or replacement of temporary transvenous dual chamber pacing electrodes (separate procedure)
- 33212** Insertion or replacement of pacemaker pulse generator only; single chamber, atrial or ventricular
- 33213** dual chamber
- 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)
- 33216** Insertion of a transvenous electrode; single chamber (one electrode) permanent pacemaker or single chamber pacing cardioverter defibrillator
- 33217** dual chamber (two electrodes) permanent pacemaker or dual chamber pacing cardioverter defibrillator

### Repair, Revision, Repositioning

- 33215** Repositioning of previously implanted transvenous pacemaker or pacing cardioverter defibrillator (right atrial or right ventricular) electrode
- 33218** Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter defibrillator
- 33220** Repair of two transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter defibrillator
- 33222** Revision or relocation of skin pocket for pacemaker

### Removal

- 33233** Removal of permanent pacemaker pulse generator
- 33234** Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular
- 33235** dual lead system
- 33236** Removal of permanent epicardial pacemaker and electrodes by thoracotomy; single lead system, atrial or ventricular
- 33237** dual lead system
- 33238** Removal of permanent transvenous electrode(s) by thoracotomy

### Radiological Supervision and Interpretation

- 71090** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

### Analysis and Reprogramming

- 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)
- 93731** Electronic analysis of dual chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming
- 93732** with reprogramming
- 93733** Electronic analysis of dual chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of waveform, and/or testing of sensory function of pacemaker), telephonic analysis
- 93734** Electronic analysis of single chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming
- 93735** with reprogramming
- 93736** Electronic analysis of single chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker), telephonic analysis

## Possible APC Assignments

- 0027** Level IV Skin Repair (CPT 33222)
- 0089** Insertion/Replacement of Permanent Pacemaker and Electrodes (CPT 33206 & 33207)
- 0090** Insertion/Replacement of Pacemaker Pulse Generator (CPT 33212)
- 0105** Revision/Removal of Pacemakers, AICD, or Vascular (CPT 33215, 33233, 33234 & 33235)
- 0106** Insertion/Replacement/Repair of Pacemaker and/or Electrodes (CPT 33216, 33217, 33218 & 33220)
- 0272** Level I Fluoroscopy (CPT 71090)
- 0654** Insertion/Replacement of a permanent dual chamber pacemaker (CPT 33213)
- 0655** Insertion/Replacement/Conversion of a permanent dual chamber pacemaker (CPT 33208 & 33214)
- 0690** Electronic Analysis of Pacemakers and other Cardiac Devices (CPT 93724, 93731, 93732, 93733, 93734, 93735 & 93736)

## Hospital Inpatient ICD-9-CM Procedure Coding

### Pacemaker and Lead Insertion/Replacement

- 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
- 37.76 Replacement of transvenous atrial and/or ventricular lead(s)[electrode]
- 37.78 Insertion of temporary transvenous pacemaker system
- 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 pacemaker device with single chamber device, not specified as rate responsive
- 37.86 Replacement of any type pacemaker device with single chamber device, rate responsive
- 37.87 Replacement of any type pacemaker device with dual chamber device

### Pacemaker and Lead Revision/Removal

- 37.75 Revision of lead [electrode]
- 37.77 Removal of lead(s) [electrode] without replacement
- 37.79 Revision or relocation of pacemaker pocket
- 37.89 Revision or removal of pacemaker device

### Device Checks

- 89.45 Artificial pacemaker rate check
- 89.46 Artificial artifact waveform check
- 89.47 Artificial pacemaker electrode impedance check
- 89.48 Artificial pacemaker voltage or amperage threshold check

## Possible DRG Assignments

- 115 Permanent Cardiac Pacemaker Implant with Acute Myocardial Infarction/ Heart Failure/Shock or AICD Lead or Generator Procedure
- 116 Other Permanent Cardiac Pacemaker Implantation
- 117 Cardiac Pacemaker Revision Except Device Replacement
- 118 Cardiac Pacemaker Device Replacement



## Physician CPT Coding

### Insertion

- 33282** Implantation of patient-activated cardiac event recorder (includes programming)

### Removal

- 33284** Removal of an implantable, patient-activated cardiac event recorder

### Electronic Analysis

- 93727** Electronic analysis of implantable loop recorder (ILR) system (includes retrieval of recorded and stored ECG data, physician review and interpretation of retrieved ECG data and reprogramming)

### Device (if implanted in the physician's office)

- E0616** Implantable cardiac event recorder with memory, activator, and programmer

## Hospital Outpatient Coding

### Insertion

- 33282** Implantation of patient-activated cardiac event recorder (includes programming)

### Removal

- 33284** Removal of an implantable, patient-activated cardiac event recorder

### Electronic Analysis

- 93727** Electronic analysis of implantable loop recorder (ILR) system (includes retrieval of recorded and stored ECG data, physician review and interpretation of retrieved ECG data and reprogramming)

## Possible APC Assignments

- 0109** Removal of Implanted Devices (CPT 33284)  
**0680** Insertion of Patient-Activated Event Recorders (CPT 33282)  
**0690** Electronic Analysis of Pacemakers and other Cardiac Devices (CPT 93727)

## Hospital Inpatient ICD-9-CM Procedure Coding

### Insertion

- 86.09** Other incision of skin and subcutaneous tissue

### Removal

- 86.05** Incision with removal of foreign body from skin and subcutaneous tissue

## Possible DRG Assignments

- 141** Syncope and Collapse with Complications and Comorbidities  
**142** Syncope and Collapse without Complications and Comorbidities

# MEDTRONIC CARELINK™ NETWORK PROCEDURES

## Internet-based Electronic Analysis and Device Evaluation of Implantable Cardioverter Defibrillator

There are several CPT codes that physicians may consider using to report the electronic analysis of pacing cardioverter defibrillators utilizing the Medtronic CareLink Network. The existing CPT codes used to describe the electronic analysis of an ICD range from CPT 93741 through 93744. This range of codes describes evaluation of dual or single chamber ICDs with and without reprogramming. The Internet-based electronic analysis of an ICD will not involve any device reprogramming. Therefore, the reprogramming codes (93742 and 93744) would not be appropriate. Physicians may choose to report the Internet-based electronic analysis using the existing CPT codes 93741 or 93743 (without reprogramming) if they believe that the code descriptions accurately describe the service being performed and the pertinent payer(s) agree that it is appropriate to do so. Since the Medtronic CareLink service represents a variation on an existing service, check with your payers regarding the appropriate codes to use.

Alternatively, physicians may choose to report the Internet-based electronic analysis of an ICD using a miscellaneous CPT code if they believe the existing ICD electronic analysis codes do not accurately describe the Internet-based analysis or a particular payer requires you to do so. Billing for a service using a miscellaneous CPT code requires that documentation of the service accompany the claim. When submitting a claim using a miscellaneous code, also attach notes and/or device data printouts from the patient's chart to the claim. Miscellaneous codes require payers to manually review the claim to determine a payment amount. Therefore, to assist the payer in determining a payment amount (and for the physician to set a charge amount) we recommend that a letter be sent with the claim that describes how this procedure is similar to another listed code.

### Physician CPT Coding

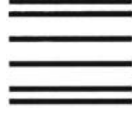
- 93741** Electronic analysis of pacing cardioverter defibrillator (includes interrogation, evaluation of pulse generator status, evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recordings and interpretation of recordings at rest and during exercise, analysis of event markers and device response); single chamber, without reprogramming
- 93743** Electronic analysis of pacing cardioverter defibrillator (includes interrogation, evaluation of pulse generator status, evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recordings and interpretation of recordings at rest and during exercise, analysis of event markers and device response); dual chamber, without reprogramming
- 93799** Unlisted cardiovascular service

## Hospital Outpatient Coding

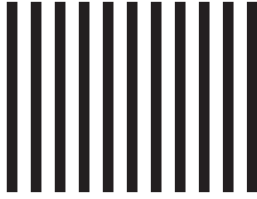
- 93741** Electronic analysis of pacing cardioverter defibrillator (includes interrogation, evaluation of pulse generator status, evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recordings and interpretation of recordings at rest and during exercise, analysis of event markers and device response); single chamber, without reprogramming
- 93743** Electronic analysis of pacing cardioverter defibrillator (includes interrogation, evaluation of pulse generator status, evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recordings and interpretation of recordings at rest and during exercise, analysis of event markers and device response); dual chamber, without reprogramming
- 93799** Unlisted cardiovascular service

### Possible APC Assignments

- 0096** Non-Invasive Vascular Studies (CPT 93799)
- 0689** Electronic Analysis of Cardioverter Defibrillators (CPT 93741 & 93743)



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