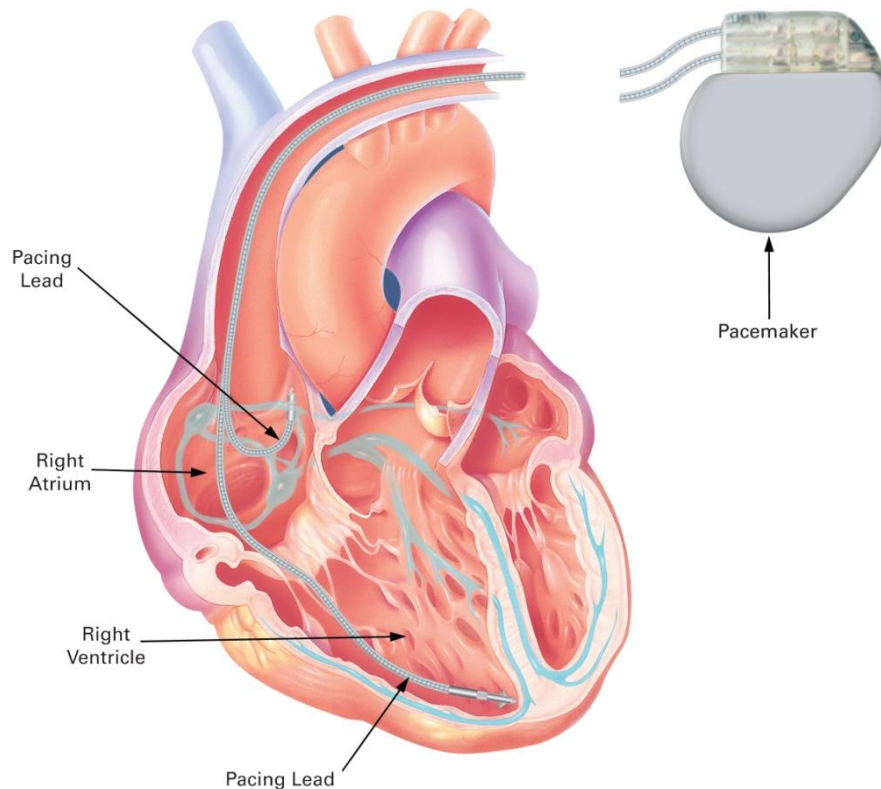


1 Pacemakers

Pacemaker Coding Overview 1-1

Commonly Billed Pacemaker Scenarios 1-2

Pacemaker Coding Overview



Pacemaker Implant Procedure

The implant of a permanent pacemaker system requires the use of a pacemaker pulse generator and one electrode or lead for a single chamber system, or two electrodes or leads for a dual chamber system. The leads monitor and deliver electrical stimulation to the right atrium or right ventricle for a single chamber system, or both the right atrium and right ventricle for a dual chamber system. The lead(s) are inserted through the subclavian vein and are positioned in the right atrium and/or right ventricle. In some cases, the cephalic or internal jugular vein may be used as an alternative to the subclavian vein.

A STEP-BY-STEP DESCRIPTION OF A TYPICAL INITIAL PACEMAKER SYSTEM IMPLANT PROCEDURE

1. The subclavian vein is accessed and a pulse generator pocket is formed.
2. Under fluoroscopy, the pacing lead(s) are inserted into the right atrium (33206) or right ventricle (33207) for a single chamber system, or into the right atrium and right ventricle for a dual chamber system (33208).
3. Lead measurement tests, including pacing and sensing thresholds and lead impedances, are performed.
4. The pacemaker pulse generator (included in 33206, 33207, and 33208) is connected to the lead(s) that are in place.
5. Additional testing of the lead(s) is completed.
6. The lead(s) and device are secured and the pulse generator pocket is closed.

Note: This document is for reference purposes only and does not replace physicians' medical documentation.

Commonly Billed Pacemaker Scenarios

Key:

⊙ **Moderate sedation** (For these procedures, moderate [conscious] sedation is included and cannot be billed separately when provided by the same physician. See AMA's 2012 *Current Procedural Terminology* for specific guidelines.) + **Add-on** code

Physician CPT® Codes¹

Hospital Outpatient CPT® Codes²

Hospital Inpatient ICD-9-CM Codes³

1.1 Initial single chamber rate-responsive pacemaker system implant with right atrial lead

Scenario 1.1: Physician CPT® Codes¹

- ⊙ **33206** Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial

Scenario 1.1: Hospital Outpatient CPT® Codes²

- ⊙ **33206** Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial

Scenario 1.1: Hospital Inpatient ICD-9-CM Codes³

37.73 Initial insertion of transvenous lead [electrode] into atrium

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

37.82 Initial insertion of single chamber device, rate responsive

- Rate responsive to physiologic stimuli other than atrial rate

Excludes:

- Replacement of existing pacemaker device (37.85–37.87)

1.2 Initial single chamber rate-responsive pacemaker system implant with right ventricular lead

Scenario 1.2: Physician CPT® Codes¹

- ⊙ **33207** Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular

Scenario 1.2: Hospital Outpatient CPT® Codes²

- ⊙ **33207** Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular

Scenario 1.2: Hospital Inpatient ICD-9-CM Codes³

37.71 Initial insertion of transvenous lead [electrode] into ventricle

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

37.82 Initial insertion of single chamber device, rate responsive

- Rate responsive to physiologic stimuli other than atrial rate

Excludes:

- Replacement of existing pacemaker device (37.85–37.87)

1.3 Initial dual chamber pacemaker system implantation

Scenario 1.3: Physician CPT® Codes¹

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

Scenario 1.3: Hospital Outpatient CPT® Codes²

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

Scenario 1.3: Hospital Inpatient ICD-9-CM Codes³

- 37.83 Initial insertion of dual chamber device
 - Atrial ventricular sequential device

Excludes:

- Replacement of existing pacemaker device (37.85-37.87)

- 37.72 Initial insertion of transvenous leads [electrodes] into atrium and ventricle

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

1.4 Initial dual chamber pacemaker insertion with cardioversion

Scenario 1.4: Physician CPT® Codes¹

- ⊙ 33208 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
- ⊙ 92960-51⁴ Cardioversion, elective, electrical conversion of arrhythmia; external

Scenario 1.4: Hospital Outpatient CPT® Codes²

- ⊙ 33208 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
- ⊙ 92960 Cardioversion, elective, electrical conversion of arrhythmia; external

Scenario 1.4: Hospital Inpatient ICD-9-CM Codes³

- 37.83 Initial insertion of dual chamber device
 - Atrial ventricular sequential device

Excludes:

- Replacement of existing pacemaker device (37.85–37.87)

- 37.72 Initial insertion of transvenous leads [electrodes] into atrium and ventricle

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

- 99.62 Other electric countershock of heart

1.5 Replacement of single chamber rate-responsive pulse generator

Scenario 1.5: Physician CPT® Codes¹

- ⊙ 33227 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; single lead system

Scenario 1.5: Hospital Outpatient CPT® Codes²

- ⊙ 33227 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; single lead system

Scenario 1.5: Hospital Inpatient ICD-9-CM Codes³

- 37.86 Replacement of any type pacemaker device with single chamber device, rate responsive
 - Rate responsive to physiologic stimuli other than atrial rate

1.6 Replacement of dual chamber pacemaker, insertion of new atrial lead, capping of existing atrial lead

Scenario 1.6: Physician CPT® Codes¹

- ⊙ 33206 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial
- ⊙ 33233-51⁴ Removal of permanent pacemaker pulse generator only

Scenario 1.6: Hospital Outpatient CPT® Codes²

- ⊙ 33206 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial
- ⊙ 33233 Removal of permanent pacemaker pulse generator only

Scenario 1.6: Hospital Inpatient ICD-9-CM Codes³

- 37.76 Replacement of transvenous atrial and/or ventricular lead(s) [electrode]
 - Removal or abandonment of existing transvenous or epicardial lead(s) with transvenous lead(s) replacement

Excludes:

- Replacement of epicardial lead [electrode] (37.74)
- 37.87 Replacement of any type pacemaker device with dual chamber device
 - Atrial ventricular sequential device

1.7 Replacement of dual chamber pacemaker, insertion of new ventricular lead, capping of existing ventricular lead

Scenario 1.7: Physician CPT® Codes¹

- ⊙ 33207 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular
- ⊙ 33233-51⁴ Removal of permanent pacemaker pulse generator only

Scenario 1.7: Hospital Outpatient CPT® Codes²

- ⊙ 33207 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular
- ⊙ 33233 Removal of permanent pacemaker pulse generator only

Scenario 1.7: Hospital Inpatient ICD-9-CM Codes³

- 37.76 Replacement of transvenous atrial and/or ventricular lead(s) [electrode]
 - Removal or abandonment of existing transvenous or epicardial lead(s) with transvenous lead(s) replacement
- Excludes:
 - Replacement of epicardial lead [electrode] (37.74)
- 37.87 Replacement of any type pacemaker device with dual chamber device
 - Atrial ventricular sequential device

1.8 Replacement of dual chamber pacemaker on a pacemaker-dependent patient with temporary pacemaker insertion**Scenario 1.8: Physician CPT® Codes¹**

- ⊙ 33228 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system
- ⊙ 33210-51/59⁴ Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)

Scenario 1.8: Hospital Outpatient CPT® Codes²

- ⊙ 33228 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system
- ⊙ 33210 Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)

Scenario 1.8: Hospital Inpatient ICD-9-CM Codes³

- 37.87 Replacement of any type pacemaker device with dual chamber device
 - Atrial ventricular sequential device
- 37.78 Insertion of temporary transvenous pacemaker system
 - Intraoperative cardiac pacemaker (39.64)

1.9 Replacement of dual chamber pulse generator**Scenario 1.9: Physician CPT® Codes¹**

- ⊙ 33228 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system

Scenario 1.9: Hospital Outpatient CPT® Codes²

- ⊙ 33228 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system

Scenario 1.9: Hospital Inpatient ICD-9-CM Codes³

- 37.87 Replacement of any type pacemaker device with dual chamber device
- Atrial ventricular sequential device

1.10 Upgrade from single chamber pacemaker with a ventricular lead to a dual chamber pacemaker with the addition of the right atrial lead**Scenario 1.10: Physician CPT® Codes¹**

- 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)

Scenario 1.10: Hospital Outpatient CPT® Codes²

- 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)

Scenario 1.10: Hospital Inpatient ICD-9-CM Codes³

- 37.87 Replacement of any type pacemaker device with dual chamber device
- Atrial ventricular sequential device

- 37.73 Initial insertion of transvenous lead [electrode] into atrium

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

1.11 Insertion of one transvenous pacing electrode**Scenario 1.11: Physician CPT® Codes¹**

- 33216 Insertion of a single transvenous electrode, permanent pacemaker or cardioverter-defibrillator

Scenario 1.11: Hospital Outpatient CPT® Codes²

- 33216 Insertion of a single transvenous electrode, permanent pacemaker or cardioverter-defibrillator

Scenario 1.11: Hospital Inpatient ICD-9-CM Codes³

ICD-9-CM procedural coding specifies lead placement into atrium or ventricle:

- 37.71 Initial insertion of transvenous lead [electrode] into ventricle

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

or

- 37.72 Initial insertion of transvenous lead [electrode] into atrium

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

1.12 Insertion of two transvenous pacing electrodes

Scenario 1.12: Physician CPT® Codes¹

- ⊙ **33217** Insertion of two transvenous electrodes, permanent pacemaker or cardioverter-defibrillator

Scenario 1.12: Hospital Outpatient CPT® Codes²

- ⊙ **33217** Insertion of two transvenous electrodes, permanent pacemaker or cardioverter-defibrillator

Scenario 1.12: Hospital Inpatient ICD-9-CM Codes³

37.72 Initial insertion of transvenous leads [electrodes] into atrium and ventricle

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

1.13 Single lead extraction; pacemaker electrode

Scenario 1.13: Physician CPT® Codes¹

- ⊙ **33234** Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular

Scenario 1.13: Hospital Outpatient CPT® Codes²

- ⊙ **33234** Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular

Scenario 1.13: Hospital Inpatient ICD-9-CM Code³

37.77 Removal of lead(s) [electrode] without replacement

Removal:

- Epicardial lead (transthoracic approach)
- Transvenous lead(s)

Excludes:

- Removal of temporary transvenous pacemaker system – omit code
- That with replacement of:
 - atrial and/or ventricular lead(s) [electrode] (37.76)
 - epicardial lead [electrode] (37.74)

1.14 Repositioning of right atrial or right ventricular electrode within 90 days of implant performed by the implanting physician

Scenario 1.14: Physician CPT® Codes¹

- ⊙ **33215-78** Repositioning of previously implanted transvenous pacemaker or pacing cardioverter-defibrillator (right atrial or right ventricular) electrode

Scenario 1.14: Hospital Outpatient CPT® Codes²

- ⊙ 33215-78 Repositioning of previously implanted transvenous pacemaker or pacing cardioverter-defibrillator (right atrial or right ventricular) electrode

Scenario 1.14: Hospital Inpatient ICD-9-CM Codes³

- 37.75 Revision of lead [electrode]
- Repair of electrode [removal with re-insertion]
 - Repositioning of lead(s) (AICD) (cardiac device) (CRT-D) (CRT-P) (defibrillator) (pacemaker) (pacing) (sensing) [electrode]
 - Revision of lead NOS

Excludes:

- Repositioning of temporary transvenous pacemaker system – omit code

1.15 Single chamber pacemaker follow-up (in person)**Scenario 1.15: Physician CPT® Codes¹**

- 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

or

- 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

Scenario 1.15: Hospital Outpatient CPT® Codes²

- 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

or

- 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

Scenario 1.15: Hospital Inpatient ICD-9-CM Codes³

- 89.45 Artificial pacemaker rate check
- Artificial pacemaker function check NOS
 - Bedside device check of pacemaker or cardiac resynchronization pacemaker [CRT-P]
 - Interrogation only without arrhythmia induction

Excludes:

- Catheter based invasive electrophysiologic testing (37.26)
- Non-invasive programmed electrical stimulation [NIPS] (arrhythmia induction) (37.20)

1.16 Dual chamber pacemaker follow-up (in person)

Scenario 1.16: Physician CPT® Codes¹

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

or

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

Scenario 1.16: Hospital Outpatient CPT® Codes²

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

or

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

Scenario 1.16: Hospital Inpatient ICD-9-CM Codes³

- 89.45 Artificial pacemaker rate check
- Artificial pacemaker function check NOS
 - Bedside device check of pacemaker or cardiac resynchronization pacemaker [CRT-P]
 - Interrogation only without arrhythmia induction

Excludes:

- Catheter based invasive electrophysiologic testing (37.26)
- Non-invasive programmed electrical stimulation [NIPS] (arrhythmia induction) (37.20)

1.17 Device programming evaluation dual chamber with wound check performed by implanting physician 14 days post-op

Scenario 1.17: Physician CPT® Codes¹

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

Wound Check is considered to be inclusive of the 90-day global period and not separately billable

Scenario 1.17: Hospital Outpatient CPT® Codes²

- 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
Wound Check is considered to be inclusive of the 90-day global period and not separately billable

Scenario 1.17: Hospital Inpatient ICD-9-CM Codes³

N/A

1.18 Dual chamber device follow-up – device programmed VVIR. At same office visit, patient seen by physician for medication adjustment**Scenario 1.18: Physician CPT® Codes¹**

- 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
Wound Check is considered to be inclusive of the 90-day global period and not separately billable
- 99211-99215 Office or other outpatient visit for the evaluation and management of an established patient (The correct level of service will depend on the documented elements; please refer to the AMA's 2012 *Current Procedural Terminology* manual)

Scenario 1.18: Hospital Outpatient CPT® Codes²

- 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
Wound Check is considered to be inclusive of the 90-day global period and not separately billable

Scenario 1.18: Hospital Inpatient ICD-9-CM Codes³

N/A

1.19 Single, dual or multi chamber pacemaker follow-up (remote)**Scenario 1.19: Physician CPT® Codes¹**

- 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)
- 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

Scenario 1.19: Hospital Outpatient CPT® Codes²

- 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)
- 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

Scenario 1.19: Hospital Inpatient ICD-9-CM Codes³

N/A

1.20 Single, dual, or multi chamber pacemaker follow-up (remote) with analysis of Implantable Cardiovascular Monitor (ICM)**Scenario 1.20: Physician CPT® Codes¹**

- 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)
- 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

and

- 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)

Scenario 1.20: Hospital Outpatient CPT® Codes²

- 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)
- 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

and

- 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)

Scenario 1.20: Hospital Inpatient ICD-9-CM Codes³

N/A

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- ² As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) require hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. If C-codes are not identified on submitted Medicare outpatient claims, the claim(s) will be returned to the hospital for correction. Find C-codes for CRM devices at <http://www.bostonscientific.com/crm/reimbursement>. Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at http://www.cms.hhs.gov/HospitalOutpatientPPS/Downloads/DeviceCats_OPSPUpdate.pdf.
- ³ American Medical Association: *2012 ICD-9-CM for Hospitals, Volumes 1, 2 and 3, Professional Edition*, Chicago, IL.
- ⁴ Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the AMA's *2012 Current Procedural Terminology* for complete descriptions. Always verify appropriate usage with payers.

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