



Reimbursement guide

ICD therapy

Facility & physician coding, coverage, and payment

February 2022

Overview

Coverage

Coding

Payment

FAQ



Facility & physician reimbursement guide

ICD therapy

This guide has been developed to help you understand Medicare coverage, coding, and payment for implantable cardioverter defibrillators (ICD).

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Table of contents

Overview for ICD therapy	4
Coverage for ICD therapy	5
• Traditional Medicare coverage	6
• Shared decision making	11
• Medicare Advantage coverage	11
• Non-Medicare payer coverage	11
Coding for ICD therapy	12
• CPT® codes	12
• ICD-10-PCS procedure codes	14
• HCPCS codes (C-codes)	16
• ICD-10-CM diagnosis codes	17
• Documentation best practices	19
Payment for ICD therapy	20
• Physician payment	20
• Hospital outpatient payment	23
• Ambulatory surgical center payment	24
• Hospital inpatient payment	27
Frequently asked questions	28

Overview

ICD therapy

The implantable automatic defibrillator is an electronic device designed to detect and treat life-threatening tachyarrhythmias. The device consists of a pulse generator and electrodes for sensing and defibrillating. When the device senses an arrhythmia, it sends an electrical signal through the leads to terminate the arrhythmia and restore normal heart rhythm.

Section 20.4 of the Medicare National Coverage Determinations (NCD) manual establishes conditions of coverage for ICDs.¹ First issued in 1986, the NCD provided limited coverage of ICDs and the policy has been expanded over the years since then. CMS last reconsidered this NCD in 2018. The most recent changes to the policy removed the registry requirement and added the shared decision making requirement for primary prevention indications.

MADIT-II and SCD-HeFT Patients

MADIT-II and SCD-HeFT are among published clinical trials that have studied the impact of ICD therapy on specific patient populations.^{2,3} These trials demonstrated decreased risk of death from sudden cardiac arrest for patients who receive an ICD. MADIT-II patients have survived a previous myocardial infarction (MI) and have impairment of the left ventricle, but no prior history of an arrhythmia. MADIT-II and SCD-HeFT patient populations overlap. The SCD-HeFT population is broader; for example, a prior MI is a MADIT-II indication, but may or may not be present in an SCD-HeFT patient. Both populations may include abnormalities in QRS duration.⁴



Patient population summary

MADIT-II	SCD-HeFT
Prior MI	Ischemic or nonischemic Cardiomyopathy
Left ventricular ejection fraction (LVEF) ≤ 30%	New York Heart Association (NYHA) Class II or III
	LVEF ≤ 35%



Coverage for ICD therapy



Medicare coverage

The Medicare coverage policy for ICD implants occurring on or after February 15, 2018, is printed verbatim; however, it is reformatted for easier readability.¹

The following information represents the CMS nationally covered indications for the use of implantable cardioverter defibrillators (ICDs) based on the national coverage determination (NCD) for ICDs (20.4).¹ Effective February 15, 2018. CMS covers ICDs for the following patient indications:

Medicare coverage policy

20.4 IMPLANTABLE AUTOMATIC DEFIBRILLATORS, Medicare National Coverage Determinations Manual (Chapter 1, Part I (Sections 10-80.12) Coverage Determinations)¹

A. General

An ICD is an electronic device designed to diagnose and treat life-threatening ventricular tachyarrhythmias.

Coverage for ICD therapy

Indications and Limitations of Coverage

B. Nationally Covered Indications

Effective for services performed on or after February 15, 2018, CMS has determined that the evidence is sufficient to conclude that the use of ICDs, (also referred to as defibrillators) is reasonable and necessary:

- 1 Patients with a personal history of sustained ventricular tachyarrhythmia (VT) or cardiac arrest due to ventricular fibrillation (VF). Patients must have demonstrated:
 - An episode of sustained VT, either spontaneous or induced by an electrophysiology (EP) study, not associated with an acute myocardial infarction (MI) and not due to a transient or reversible cause; or
 - An episode of cardiac arrest due to VF, not due to a transient or reversible cause.

- 2 Patients with a prior MI and a measured left ventricular ejection fraction (LVEF) ≤ 0.30 . Patients must not have:
 - New York Heart Association (NYHA) Classification IV heart failure; or
 - Had a coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) with angioplasty and/ or stenting, within the past three months; or
 - Had an MI within the past 40 days; or
 - Clinical symptoms and findings that would make them a candidate for coronary revascularization.

For these patients identified in 2, a formal shared decision making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1) of the Social Security Act (the Act)) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa) (5) of the Act) using an evidence-based decision tool on ICDs prior to initial ICD implantation. The shared decision making encounter may occur at a separate visit.

Coverage for ICD therapy

3 Patients who have severe, ischemic, dilated cardiomyopathy but no personal history of sustained VT or cardiac arrest due to VF, and have NYHA Class II or III heart failure, LVEF \leq 35%. Additionally, patients must not have:

- Had a CABG, or PCI with angioplasty and/or stenting within the past three months; or
- Had an MI within the past 40 days; or
- Clinical symptoms and findings that would make them a candidate for coronary revascularization.

For these patients identified in 3, a formal shared decision making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1) of the Act) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa)(5) of the Act) using an evidence-based decision tool on ICDs prior to initial ICD implantation. The shared decision making encounter may occur at a separate visit.

4 Patients who have severe, nonischemic, dilated cardiomyopathy but no personal history of cardiac arrest or sustained VT, NYHA Class II or III heart failure, LVEF \leq 35%, been on optimal medical therapy for at least three months. Additionally, patients must not have:

- Had a CABG or PCI with angioplasty and/or stenting within the past three months; or
- Had an MI within the past 40 days; or
- Clinical symptoms and findings that would make them a candidate for coronary revascularization.

For these patients identified in 4, a formal shared decision making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1) of the Act) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa)(5) of the Act) using an evidence-based decision tool on ICDs prior to initial ICD implantation. The shared decision making encounter may occur at a separate visit.

Medtronic

Overview

Coverage

Coding

Payment

FAQ



Coverage for ICD therapy

5 Patients with documented, familial, or genetic disorders with a high risk of life-threatening tachyarrhythmias (sustained VT or VF, to include, but not limited to, long QT syndrome or hypertrophic cardiomyopathy.)

For these patients identified in 5, a formal shared decision making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1) of the Act) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa)(5) of the Act) using an evidence-based decision tool on ICDs prior to initial ICD implantation. The shared decision making encounter may occur at a separate visit.

6 Patients with an existing ICD may receive an ICD replacement if it is required due to the end of battery life, elective replacement indicator (ERI), or device/lead malfunction.

For each of the six covered indications above, the following additional criteria must also be met:

1. Patients must be clinically stable (e.g., not in shock, from any etiology);
2. LVEF must be measured by echocardiography, radionuclide (nuclear medicine) imaging, cardiac magnetic resonance imaging (MRI), or catheter angiography;
3. Patients must not have:
 - Significant, irreversible brain damage; or
 - Any disease, other than cardiac disease (e.g., cancer, renal failure, liver failure) associated with a likelihood of survival less than one year; or
 - Supraventricular tachycardia such as atrial fibrillation with a poorly controlled ventricular rate.

Overview

Coverage

Coding

Payment

FAQ



Coverage for ICD therapy

Medtronic



Exceptions to waiting periods for patients that have had a CABG or PCI with angioplasty and/or stenting within the past three months, or had an MI within the past 40 days:

Cardiac pacemakers

Patients who meet all CMS coverage requirements for cardiac pacemakers, and who meet the criteria in this national coverage determination for an ICD, may receive the combined devices in one procedure, at the time the pacemaker is clinically indicated.

Replacement of ICDs

Patients with an existing ICD may receive an ICD replacement if it is required due to the end of battery life, ERI, or device/lead malfunction.

C. Nationally Non-covered Indications

N/A

D. Other

For patients that are candidates for heart transplantation on the United Network for Organ Sharing (UNOS) transplant list awaiting a donor heart, coverage of ICDs, as with cardiac resynchronization therapy, as a bridge-to-transplant to prolong survival until a donor becomes available, is determined by the local Medicare Administrative Contractors (MACs).

All other indications for ICDs not currently covered in accordance with this decision may be covered under Category B Investigational Device Exemption (IDE) trials (42 CFR 405.201).

Please see the following page for a Medicare ICD coverage overview chart.

Overview

Coverage

Coding

Payment

FAQ



Medicare ICD coverage overview chart

Primary or secondary prevention	Indication	Left ventricle ejection fraction*	NYHA class	Shared decision making required	Exclusions or other criteria
Secondary	History of sustained ventricular tachyarrhythmia (VT)† or cardiac arrest due to ventricular fibrillation (VF).	N/A	N/A	No	<ul style="list-style-type: none"> An episode of sustained VT, either spontaneous or induced by an electrophysiology (EP) study, not associated with an acute myocardial infarction (MI) and not due to a transient or reversible cause; or An episode of cardiac arrest due to VF, not due to a transient or reversible cause
Primary	Documented prior MI**	≤ 30%	Any except IV	Yes	<ul style="list-style-type: none"> Had a CABG or PCI with angioplasty and/or stenting with the past three months‡; or Had an MI within the past 40 days‡; or Clinical symptoms and findings that would make them a candidate for coronary revascularization.
Primary	Ischemic, dilated cardiomyopathy but no personal history of sustained VT or cardiac arrest due to VF	≤ 35%	II or III	Yes	
Primary	Nonischemic, dilated cardiomyopathy but no personal history of cardiac arrest or sustained VT† and has been on optimal medical therapy for at least three months	≤ 35%	II or III	Yes	
Primary	Documented, familial, or genetic disorders with a high risk of life-threatening tachyarrhythmias (sustained VT or VF, to include, but not limited to, long QT syndrome or hypertrophic cardiomyopathy)	N/A	N/A	Yes	
N/A	ICD replacement	N/A	N/A	No	<ul style="list-style-type: none"> Due to the end of battery life, elective replacement indicator (ERI), or device/lead malfunction

*Ejection fractions must be measured by angiography, radionuclide scanning, or echocardiography.

**MIs must be documented and defined according to the consensus document of the Joint European Society of Cardiology/American College of Cardiology Committee for the Redefinition of Myocardial Infarction.

‡Exceptions to waiting periods for patients that have had a CABG or PCI with angioplasty and/or stenting within the past three months, or had an MI within the past 40 days:

Cardiac pacemakers: Patients who meet all CMS coverage requirements for cardiac pacemakers, and who meet the criteria in this national coverage determination for an ICD, may receive the combined devices in one procedure, at the time the pacemaker is clinically indicated.

Replacement of ICDs: Patients with an existing ICD may receive an ICD replacement if it is required due to the end of battery life, ERI, or device/lead malfunction.

Overview

Coverage

Coding

Payment

FAQ



Shared decision making (SDM)

For primary prevention patients, the CMS NCD specifies that a formal shared decision making encounter must occur between the patient and a physician or qualified non-physician practitioner (physician assistant, nurse practitioner, or clinical nurse specialist) using an evidence-based decision tool on ICDs prior to initial ICD implantation.⁴ This encounter can happen during a separate visit.

The NCD references a sample shared decision-making tool that can be found at: <https://patientdecisionaid.org/icd/>.

In addition, guidelines published in 2017 by AHA/ACC/HRS provide recommendations for the elements of shared decision-making.⁵

A commonly accepted definition for shared decision making includes four components:

- 01** At least two participants – the clinician and the patient – are involved
- 02** Both parties share information
- 03** Both parties take steps to build a consensus about the preferred treatment
- 04** An agreement is reached on the treatment to implement

Medicare advantage coverage

Medicare Advantage plans are required to cover at least what is covered by traditional Medicare. Therefore, Medicare coverage policies apply to both traditional Medicare and Medicare Advantage plans.⁶ Medicare Advantage plan administrators may have policies and additional requirements such as prior testing and prior authorization. Medtronic recommends that you review the specific payer coverage policies applicable to your patient to verify all the criteria for coverage are met and/or to request a prior authorization. Asking about coverage or requesting authorization after an implant procedure or device interrogation may result in unpaid claims, leaving both the hospital and the physician without compensation.

Coverage with non-Medicare payers

Non-Medicare payers typically determine coverage for procedures based on medical policy and prior authorization requirements. It is recommended that you review the payer’s coverage policy to verify that you have met all the criteria for coverage for your specific patient. Not all published policies apply to all patients covered by a specific payer. We recommend you contact the payer to obtain a prior authorization or prior approval. Determining coverage after implant may result in unpaid claims, leaving both the hospital and the physician without compensation.

Overview

Coverage

Coding

Payment

FAQ



Coding for ICD therapy

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. All diagnosis and procedure codes reported must be supported by clear documentation within the medical record.

Physician procedure codes

The following CPT^{®7} codes describe procedures associated with ICD therapy implants. Depending on the type of ICD implanted, one or more of the following codes may be appropriate. This is not an all-inclusive list. These codes are used by physicians to report their services. Additionally, hospitals use CPT[®] codes to report services rendered in the outpatient hospital setting.

CPT® code	CPT® code description
33202	Insertion of epicardial electrode(s); open incision (e.g., thoracotomy, median sternotomy, subxiphoid approach)
33203	Insertion of epicardial electrode(s); endoscopic approach (e.g., thoracoscopy, pericardioscopy)
33216	Insertion of a single transvenous electrode, permanent pacemaker, or implantable defibrillator
33217	Insertion of 2 transvenous electrodes, permanent pacemaker, or implantable defibrillator
33230	Insertion of implantable defibrillator pulse generator only; with existing dual leads
33231	Insertion of implantable defibrillator pulse generator only; with existing multiple leads
33240	Insertion of implantable defibrillator pulse generator only; with existing single lead
33241	Removal of implantable defibrillator pulse generator only
33244	Removal of single or dual chamber implantable defibrillator electrode(s); by transvenous extraction
33249	Insertion or replacement of permanent implantable defibrillator system, with transvenous lead(s), single or dual chamber
33262	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; single lead system
33263	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; dual lead system
33264	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; multiple lead system

Overview

Coverage

Coding

Payment

FAQ





Hospital inpatient procedure codes

The following ICD-10-PCS codes describe commonly performed defibrillator procedures. This is not an all-inclusive list. These codes are only used by hospitals for reporting inpatient services.

ICD-10-PCS	Description
Implant cardioverter-defibrillator generator	
0JH608Z	Insertion of defibrillator generator into chest subcutaneous tissue and fascia, open approach
0JH808Z	Insertion of defibrillator generator into abdomen subcutaneous tissue and fascia, Open approach
Insert RA or RV lead, transvenous	
02H63KZ	Insertion of defibrillator lead into right atrium, percutaneous approach
02HK3KZ	Insertion of defibrillator lead into right ventricle, percutaneous approach
Insert subcutaneous defibrillator lead implantation	
0JH60PZ	Insertion of cardiac rhythm-related device into chest subcutaneous tissue and fascia, open approach
Replace epicardial lead	
02HN0KZ	Insertion of defibrillator lead into pericardium, open approach
02PA0MZ	Removal of cardiac lead from heart, open approach
Revise and reposition RA, RV, or LV lead	
02WA3MZ	Revision of cardiac lead in heart, percutaneous approach
Revise or relocate pocket	
0JWT0PZ	Revision of cardiac rhythm-related device in trunk subcutaneous tissue and fascia, open approach
Remove generator	
0JPT0PZ	Removal of cardiac rhythm-related device from trunk subcutaneous tissue and fascia, open approach

Overview

Coverage

Coding

Payment

FAQ



Hospital outpatient procedure codes

Please refer to page 13 for CPT procedure codes pertaining to ICD procedures. These same codes would be used by hospitals to report ICD procedures performed in the outpatient setting. This is not an all-inclusive list and the appropriate coding would be dependent on documentation for the procedure(s) performed.

HCPCS (C-codes) (device codes)

Medicare provides device C-codes for hospital use in billing Medicare for medical devices in the outpatient setting.

The following HCPCS (C-codes) (device codes) relate to the implantation of an implantable defibrillator (ICD) and cardiac resynchronization therapy-defibrillator (CRT-D) components. Depending on the type of device implanted and the specific components, one or more of the following codes may be appropriate:

HCPCS codes	HCPCS code description
C1721	Cardioverter-defibrillator, dual chamber (implantable)
C1722	Cardioverter-defibrillator, single chamber (implantable)
C1777	Lead, cardioverter-defibrillator, endocardial single coil (implantable)
C1779	Lead, pacemaker, transvenous VDD single pass (implantable)
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)

Use of HCPCS (C-codes) for Medicare patients

Medicare (CMS) no longer uses procedure-to-device and device-to-procedure edits for device-intensive hospital outpatient services. For a procedure that requires a device to be implanted and is also assigned to a device-intensive ambulatory payment classification (APC), the claim must include a “device code.”

The table below provides implantable cardioverter defibrillator device-intensive APCs⁸:

Device-intensive APC number and APC description	Procedure code	Procedure code brief description
5222 Level 2 Pacemaker and Similar Procedures	33216	Insert single lead, pacemaker or ICD
	33217	Insert 2 leads, pacemaker or ICD
5231 Level 1 ICD and Similar Procedures	33240	Insert ICD pulse generator only; w/existing single lead
	33262	Remove ICD gen, replace ICD gen; single lead system
	33263	Remove ICD gen, replace ICD gen; dual lead system
5232 Level 2 ICD and Similar Procedures	33231	Insert ICD pulse generator only; w/existing multiple leads
	33249	Insert/replace ICD system w/leads single or dual chamber
	33264	Remove ICD gen, replace ICD gen; multiple lead system
	33270	Insert/replace subcutaneous defibrillator system w/subcutaneous electro

Overview

Coverage

Coding

Payment

FAQ





ICD-10-CM diagnosis codes

The following is a list of examples of possible ICD-10-CM diagnosis codes that can relate to indications associated with ICD procedures. Payers will determine coverage based on their medical policies, criteria, and documented medical necessity. This is not an all-inclusive list and the diagnosis codes reported should be based on documentation of what the individual patient presents with.⁹

ICD-10-CM diagnosis code	ICD-10-CM diagnosis code description
I47.2	Ventricular tachycardia
I49.01	Ventricular fibrillation
I49.02	Ventricular flutter
I46.2	Cardiac arrest due to underlying cardiac condition
I46.9	Cardiac arrest, cause unspecified
I49.9	Cardiac arrhythmia, unspecified
T82.120A	Displacement of cardiac electrode, initial encounter
T82.121A	Displacement of cardiac pulse generator (battery), initial encounter
T82.190A	Other mechanical complication of cardiac electrode, initial encounter
T82.191A	Other mechanical complication of cardiac pulse generator (battery), initial encounter
Z86.74	Personal history of sudden cardiac arrest (SCA) (successfully resuscitated)

Overview

Coverage

Coding

Payment

FAQ



ICD-10-CM diagnosis code	ICD-10-CM diagnosis code description
Ischemic cardiomyopathy	
I25.5	Ischemic cardiomyopathy
I25.6	Silent myocardial ischemia
I25.9	Chronic ischemic heart disease, unspecified
Nonischemic cardiomyopathy	
I42.1	Obstructive hypertrophic cardiomyopathy
I42.2	Other hypertrophic cardiomyopathy
I42.0	Dilated cardiomyopathy
I42.5	Other restrictive cardiomyopathy
I42.8	Other cardiomyopathies
I42.9	Cardiomyopathy, unspecified
Long QT syndrome	
I45.81	Long QT syndrome
QRS duration, wide and narrow	
R94.31	Abnormal electrocardiogram [ECG] [EKG]

Prior myocardial infarction

With ICD-10-CM diagnosis coding: An acute myocardial infarction (AMI) is identified as “acute” for four weeks from the time of the incident.

Overview

Coverage

Coding

Payment

FAQ



Documentation best practices



CMS has posted a “Clinical Concepts in Cardiology” tip sheet on their website identifying several clinical documentation tips for cardiology services and ICD-10-CM diagnosis codes.¹⁰ The tip sheet includes common codes, clinical documentation tips, and clinical scenarios. Some of these tips are:

- Document why the patient encounter took place.
- When known, document whether the patient is compliant with their medications.
- Document lab test results, both normal and abnormal.
- Document any criteria required from policy



Please review the CMS tip sheet for complete information at:

<https://www.cms.gov/Medicare/Coding/ICD10/Downloads/ICD10ClinicalConceptsCardiology1.pdf>

Heart failure codes requirement

There are three indications in Medicare’s NCD that include heart failure as part of the criteria. The reporting of the heart failure codes is required on ICD implant claims even if the heart failure is being appropriately treated and the patient is not in “acute” heart failure. Additional information on this requirement can be found in MLN SE20006 that can be found at <https://www.cms.gov/files/document/se20006.pdf>

Heart failure can be a CC (complication or comorbidity) or MCC (major complication or comorbidity)

Under the MS-DRG system, heart failure can be considered both a chronic and acute condition. Documentation about the specific type of heart failure is critical to determine if the condition is considered a CC or an MCC.

Heart failure diagnosis codes must be explicitly documented by the physician; it cannot be assumed by the coder on the basis of the ejection fraction. Nondiagnostic and nonspecific terms such as “low ejection fraction” and “ventricular dysfunction” should also be avoided. Low ejection fraction is a characteristic of heart failure, and it is essential that physicians document the diagnosis clearly.



Payment for ICD therapy

The following information reflects the Medicare national allowable amount published by CMS and does not include Medicare payment reductions resulting from sequestration adjustments to the amount payable to the provider, as mandated by the Budget Control Act of 2011. The Medtronic Customer Economics and Reimbursement teams can provide current site-specific information upon request.



Physician payment¹¹

Effective Jan. 1, 2022-Dec. 31, 2022

Physicians use CPT[®] codes to represent procedures and services performed in all places of service. Under Medicare's methodology for physician payment, each CPT[®] code is assigned a value, known as relative value units (RVUs). RVUs are part of how Medicare determines a payment amount.

Overview

Coverage

Coding

Payment

FAQ

CPT® code ⁷	CPT® description	2022 Medicare national non-facility		2022 Medicare national facility	
		Total RVUs ¹¹	Unadjusted payment rate ¹¹	Total RVUs ¹¹	Unadjusted payment rate ¹¹
33202	Insertion of epicardial electrode(s); open incision (e.g., thoracotomy, median sternotomy, subxiphoid approach)	N/A	N/A	22.68	\$785
33203	Insertion of epicardial electrode(s); endoscopic approach (e.g., thoracoscopy, pericardioscopy)	N/A	N/A	23.76	\$822
33216	Insertion of a single transvenous electrode, permanent pacemaker, or implantable defibrillator	N/A	N/A	11.03	\$382
33217	Insertion of 2 transvenous electrodes, permanent pacemaker, or implantable defibrillator	N/A	N/A	10.93	\$378
33230	Insertion of implantable defibrillator pulse generator only; with existing dual leads	N/A	N/A	11.39	\$394
33231	Insertion of implantable defibrillator pulse generator only; with existing multiple leads	N/A	N/A	11.83	\$409
33240	Insertion of implantable defibrillator pulse generator only; with existing single lead	N/A	N/A	10.87	\$376

Overview

Coverage

Coding

Payment

FAQ



CPT® code ⁷	CPT® description	2022 Medicare national non-facility		2022 Medicare national facility	
		Total RVUs ¹¹	Unadjusted payment rate ¹¹	Total RVUs ¹¹	Unadjusted payment rate ¹¹
33241	Removal of implantable defibrillator pulse generator only	N/A	N/A	6.39	\$221
33244	Removal of single or dual chamber implantable defibrillator electrode(s); by transvenous extraction	N/A	N/A	25.68	\$889
33249	Insertion or replacement of permanent implantable defibrillator system, with transvenous lead(s), single or dual chamber	N/A	N/A	27.14	\$939
33262	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; single lead system	N/A	N/A	11.08	\$383
33263	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; dual lead system	N/A	N/A	11.52	\$399
33264	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; multiple lead system	N/A	N/A	12.00	\$415

Overview

Coverage

Coding

Payment

FAQ



Hospital outpatient payment¹²

Effective Jan. 1, 2022-Dec. 31, 2022

Hospitals use CPT[®] codes for outpatient services. The procedure codes below apply to services performed in the hospital outpatient setting.

Under Medicare's Ambulatory Payment Classification (APC) methodology for hospital outpatient payment, each CPT[®] code is assigned to an ambulatory payment category. Each APC has a relative weight that is then converted to a flat payment amount.

CPT [®] code ⁷	CPT [®] description	2022 APC ¹²	Status indicator ¹²	Relative weight ¹²	2022 Medicare national unadjusted rate ¹²
33202	Insertion of epicardial electrode(s); open incision (e.g., thoracotomy, median sternotomy, subxiphoid approach)	N/A	C	N/A	N/A
33203	Insertion of epicardial electrode(s); endoscopic approach (e.g., thoracoscopy, pericardioscopy)	N/A	C	N/A	N/A
33216	Insertion of a single transvenous electrode, permanent pacemaker, or implantable defibrillator	5222	J1	98.99	\$8,332
33217	Insertion of 2 transvenous electrodes, permanent pacemaker, or implantable defibrillator	5222	J1	98.99	\$8,332

CPT® code ⁷	CPT® description	2022 APC ¹²	Status indicator ¹²	Relative weight ¹²	2022 Medicare national unadjusted rate ¹²
33230	Insertion of implantable defibrillator pulse generator only; with existing dual leads	5231	J1	279.78	\$23,551
33231	Insertion of implantable defibrillator pulse generator only; with existing multiple leads	5232	J1	398.53	\$33,547
33240	Insertion of implantable defibrillator pulse generator only; with existing single lead	5231	J1	279.78	\$23,551
33241	Removal of implantable defibrillator pulse generator only	5221	Q2	41.78	\$3,517
33244	Removal of single or dual chamber implantable defibrillator electrode(s); by transvenous extraction	5221	Q2	41.78	\$3,517
33249	Insertion or replacement of permanent implantable defibrillator system, with transvenous lead(s), single or dual chamber	5232	J1	398.53	\$33,547
33262	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; single lead system	5231	J1	279.78	\$23,551
33263	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; dual lead system	5231	J1	279.78	\$23,551
33264	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; multiple lead system	5232	J1	398.53	\$33,547

Overview

Coverage

Coding

Payment

FAQ



Ambulatory surgical center (ASC) payment¹³

Effective Jan. 1, 2022-Dec. 31, 2022

ASCs use CPT[®] codes for their services. Medicare payment for procedures performed in an ambulatory surgery center is generally based on Medicare's Ambulatory Payment Classification (APC) methodology for hospital outpatient payment. However, comprehensive APCs are used only for hospital outpatient services and are not applied to procedures performed in ASCs. Alternately, payment for some CPT codes is based on the physician fee schedule payment, particularly for procedures commonly performed in the physician office.

Each CPT code designated as an approved procedure in an ASC is assigned a comparable relative weight as under the hospital outpatient APC system. This is then converted to a flat payment amount using a formula unique to ASCs. Multiple procedures can be paid for each claim. Certain ancillary services, such as imaging, may also be reimbursed when they are integral to an approved surgical procedure. Some of these ancillary services are not separately payable. There is no separate payment for these devices in the ASC setting; their payment is included in the payment for the procedure.

CPT [®] code ⁷	CPT [®] description	Subject to multiple procedure discounting ¹³	2022 Medicare national unadjusted rate ¹³
33216	Insertion of a single transvenous electrode, permanent pacemaker, or implantable defibrillator	Y	\$5,675
33217	Insertion of 2 transvenous electrodes, permanent pacemaker, or implantable defibrillator	Y	\$7,308

CPT® code ⁷	CPT® description	Subject to multiple procedure discounting ¹³	2022 Medicare national unadjusted rate ¹³
33230	Insertion of implantable defibrillator pulse generator only; with existing dual leads	Y	\$21,243
33231	Insertion of implantable defibrillator pulse generator only; with existing multiple leads	Y	\$27,334
33240	Insertion of implantable defibrillator pulse generator only; with existing single lead	Y	\$20,820
33241	Removal of implantable defibrillator pulse generator only	N	\$1,783
33244	Removal of single or dual chamber implantable defibrillator electrode(s); by transvenous extraction	Not reimbursed in ASC	Not reimbursed in ASC
33249	Insertion or replacement of permanent implantable defibrillator system, with transvenous lead(s), single or dual chamber	Y	\$27,319
33262	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; single lead system	Y	\$20,225
33263	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; dual lead system	Y	\$20,423
33264	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; multiple lead system	Y	\$27,212

Overview

Coverage

Coding

Payment

FAQ



Hospital inpatient payment¹⁴

Effective Oct.1 2021-Sept. 30, 2022

Medicare reimbursement for inpatient hospital services is based on a classification system known as Medicare severity diagnosis related groups (MS-DRGs). MS-DRG assignment is determined by patient diagnoses and procedures. Only one MS-DRG is assigned per hospital admission and one payment is made for all procedures and supplies related to that inpatient stay.

MS-DRG assignment may be affected when one or more secondary diagnoses that are included in the major complication or comorbidity (MCC) or complication or comorbidity (CC) lists, which are maintained by CMS. Each MS-DRG has a relative weight that is then converted to a flat payment amount. Only one MS-DRG is assigned for each inpatient stay, regardless of the number of procedures performed. If medical necessity criteria are met to support an inpatient admission for the defibrillator implant, the MS-DRG assignment may be:

MS-DRG ¹⁵	MS-DRG description	FY2022 MS-DRG Medicare national unadjusted rate ¹⁴
222	Cardiac defibrillator implant with cardiac catheterization with acute myocardial infarction/heart failure/shock with MCC	\$52,431
223	Cardiac defibrillator implant with cardiac catheterization with acute myocardial infarction/heart failure/shock without MCC	\$38,238
224	Cardiac defibrillator implant with cardiac catheterization without acute myocardial infarction/heart failure/shock with MCC	\$49,583
225	Cardiac defibrillator implant with cardiac catheterization without acute myocardial infarction/heart failure/shock without MCC	\$37,046
226	Cardiac defibrillator implant without cardiac catheterization with MCC	\$43,292
227	Cardiac defibrillator implant without cardiac catheterization without MCC	\$34,370
245	Automatic implantable cardiac defibrillator generator procedures	\$35,727
265	Automatic implantable cardiac defibrillator lead procedures	\$22,193

Medtronic

Overview

Coverage

Coding

Payment

FAQ



Frequently asked questions

01

Does Medicare grant prior authorization for services?

No. Traditional (fee-for-service) Medicare does not typically require or grant prior authorization for these services; however, some Medicare Advantage plans do require prior authorizations. Please contact your local Medicare contractor when you have questions on Medicare coverage.

02

How do non-Medicare payers determine coverage for ICD implants?

Non-Medicare payers typically determine coverage through the prior authorization process and specific coverage policies. It is recommended that you review the payer's coverage policy to verify that you have met all the criteria for coverage for your specific patient. Not all published policies apply to all patients covered by a specific payer. We recommend you contact the payer to obtain a prior authorization or prior approval.

03

When was the last time the Medicare NCD for ICDs was revised?

Medicare revised the NCD on February 15, 2018. Claims with a date of service on or after this date no longer have the registry requirement for primary prevention indications and added the requirement of shared decision making for primary prevention indications.¹

Frequently asked questions

04

Does Medicare cover ICD therapy for the treatment of atrial fibrillation in patients who do not have a corresponding ventricular indication?

No. As of October 1, 2003, Medicare coverage is not available for ICD therapy for the treatment of atrial fibrillation in patients who do not have a corresponding ventricular indication, unless the patients are receiving ICD therapy under category B IDE trial (42 CFR §405.201) or the CMS routine clinical trials policy (CIM 30-1, NCD 310.1).¹⁶

05

What are the documentation requirements for replacing ICDs?

The Medicare NCD does not discuss coverage criteria for replacing an ICD generator. In the absence of a policy, Medicare will determine coverage on a case by case basis, including a review of documented medical necessity.

06

What are the four NYHA (New York Heart Association) functional classifications?

The NYHA functional capacity is an estimation of a patient's limitation during physical activity as shown below.

- NYHA I: No limitation of physical activity. Ordinary physician activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath).
- NYHA II: Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea (shortness of breath).
- NYHA III: Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.
- NYHA IV: Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.

Source: <https://www.heart.org/en/health-topics/heart-failure/what-is-heart-failure/classes-of-heart-failure>



Frequently asked questions

07

Do secondary diagnosis codes make a difference in MS-DRG assignment?

Yes. The MS-DRG system is a severity-based system where if a secondary diagnosis that is reported is determined to be a CC or MCC, it could change the MS-DRG to one that reflects the CC or MCC severity level.

08

Can certain CC or MCC codes be excluded for MS-DRG assignment in particular situations?

Yes. Eight ICD-10 MCC diagnosis codes are only valid as an MCC if the patient is discharged alive. This list includes¹⁷:

I46.2	I46.8	I46.9	I49.01	R09.2	R57.0	R57.1	R57.8
Cardiac arrest due to underlying cardiac condition	Cardiac arrest due to underlying cardiac condition	Cardiac arrest, cause unspecified	Ventricular fibrillation	Respiratory arrest	Cardiogenic shock	Hypovolemic shock	Other shock

For additional information, please contact

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- ⁷ CPT copyright 2021 American Medical Association. All rights reserved. CPT is a registered trademark of the American Medical Association.
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- ⁹ 2022 ICD-10-CM <https://www.cms.gov/medicare/icd-10/2022-icd-10-cm>
- ¹⁰ The CMS ICD-10-Clinical Concepts for Cardiology file can be found at: <https://www.cms.gov/Medicare/Coding/ICD10/Downloads/ICD10ClinicalConceptsCardiology1.pdf>. Accessed January 31, 2022.
- ¹¹ The Medicare Physician Fee Schedule (MPFS) 2022 National payment rates based on information published in the MPFS final rule CMS-1751-F and updates from legislation signed

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- ¹⁶ Medicare National Coverage Determinations Manual Chapter 1, Part 4 (Sections 200-310.1) Coverage Determinations. 310.1 Routine Costs in Clinical Trials. Available at: https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/ncd103c1_Part4.pdf Accessed October 19, 2021.
- ¹⁷ Appendix C - Complications or Comorbidities Exclusion list included in the ICD-10-CM/PCS MS-DRG v39 Definitions Manual is available on the CMS website at: https://www.cms.gov/icd10m/version39-fullcode-cms/fullcode_cms/P0001.html Accessed October 19, 2021.

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Overview

Coverage

Coding

Payment

FAQ

