

## Inpatient versus Outpatient Patient Considerations for Defibrillator, Pacemaker, and Cardiac Resynchronization Therapy (CRT) Implants – updated November 2005

To Our Partners in Healthcare:

With the ever-changing reimbursement payment methodologies implemented by the Centers for Medicare & Medicaid Services (CMS) and private payers, this guide is created to assist you in identifying key items to consider when determining whether a patient should be admitted to the hospital as an inpatient or be considered as an outpatient for their device implant. This same process can be used for other services as well.

It has been Medtronic's experience working with physicians and hospitals across the United States that there is considerable variation in the number of devices that are implanted in the inpatient and outpatient setting.

While there are no simple answers to the questions surrounding patient status, there are several things that can be done to help guide your program to a more formalized process that can help provide some direction on the topic. It is important to remember that:

1. The Centers for Medicare and Medicaid Services (CMS) currently does not dictate whether a device implant procedure is an inpatient or outpatient.
2. Patients must meet criteria for medical necessity of an admission.
3. Hospitals may use nationally based InterQual<sup>®</sup> or Milliman<sup>®</sup> criteria as a guideline. Hospitals may also develop written guidelines to support the setting-of-care decision. A medical necessity grid for procedures is also helpful.
4. Physician must write an admission order, which includes the reasons for admission.
5. Quality Improvement Organization by State ([www.medqic.org](http://www.medqic.org)) may have state criteria for deciding whether the admission was medically necessary.
6. Communication is key. Working with your clinical and business staff along with your physicians will help the process run smoothly and improve patient access. The utilization review or case management staff frequently maintains compliance of admissions with the medical necessity criteria.

## Before discussing more specific issues, it is important to understand the current Medicare National Coverage Determination (NCD) for Defibrillators, Pacemakers, and CRT:

**ICD therapy** is a lifesaving therapy for people with ventricular arrhythmias. Effective January 27, 2005, Medicare expanded its national coverage policy to include the SCD-HeFT (Sudden Cardiac Death in Heart Failure Trial) population. This current coverage policy identifies the following eight covered indications (this is not the entire policy). Please see 20.4 (previously 35-85) Implantable Automatic Defibrillators Manual (Chapter I, Part I (Sections 10-80.12) Coverage Determinations for a complete coverage policy.

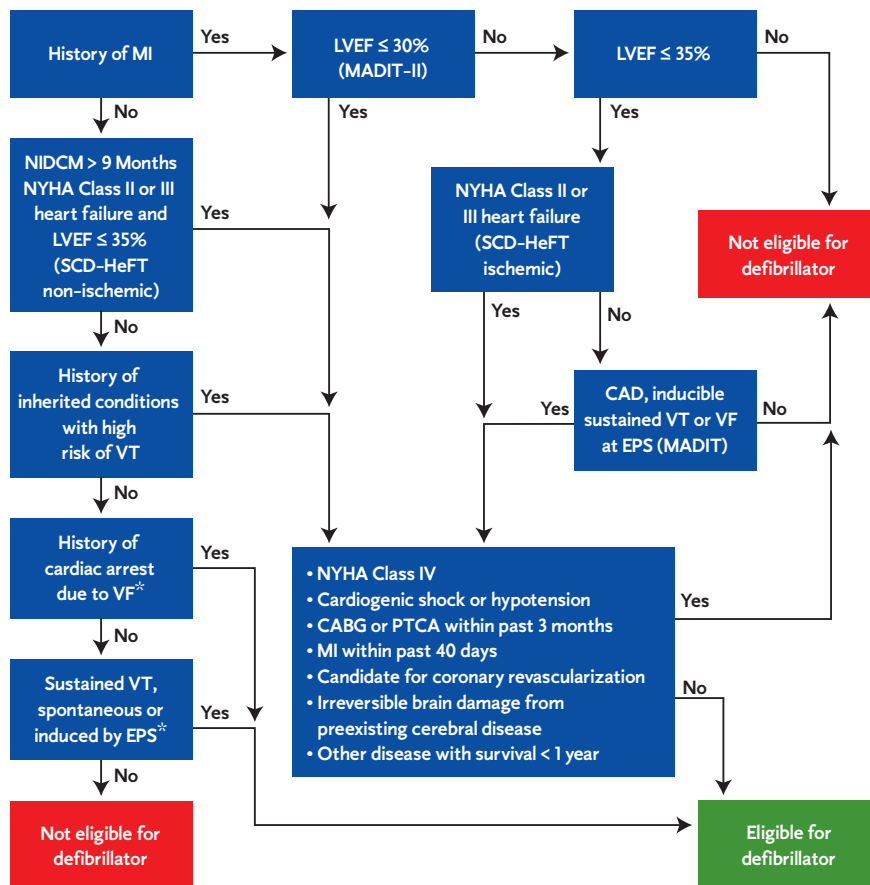
This current CMS coverage policy for ICD implants may be considered as suggested clinical indications for the procedure. Electrophysiological study (EPS) may also be indicated for some of the following patients.

1. Documented episode of cardiac arrest due to ventricular fibrillation (VF), not due to a transient or reversible cause (effective July 1, 1991).
2. Documented sustained ventricular tachyarrhythmia (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 (effective July 1, 1999).
3. Documented familial or inherited conditions with a high risk of life-threatening VT, such as long QT syndrome or hypertrophic cardiomyopathy (effective July 1, 1999).
4. Coronary artery disease with a documented prior MI, a measured left ventricular ejection fraction (LVEF)  $\leq 0.35$ , and inducible, sustained VT or VF at EP study. (The MI must have occurred more than 40 days prior to defibrillator insertion. The EP test must be performed more than 4 weeks after the qualifying MI.) (effective October 1, 2003).
5. Documented prior MI and a measured LVEF  $\leq 0.30$  and a QRS duration  $> 120$  milliseconds (effective October 1, 2003). NOTE: The QRS restriction does not apply to services performed on or after January 27, 2005. Patients must not have:
  - a. New York Heart Association (NYHA) classification IV;
  - b. Cardiogenic shock or symptomatic hypotension while in a stable baseline rhythm;
  - c. Had a coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA) within past 3 months;
  - d. Had an MI within past 40 days;
  - e. Clinical symptoms or findings that would make them a candidate for coronary revascularization; or
  - f. Any disease, other than cardiac disease (e.g., cancer, uremia, liver failure), associated with a likelihood of survival less than 1 year.

Additional indications effective for services performed on or after January 27, 2005:

6. Patients with ischemic dilated cardiomyopathy (IDCM), documented prior MI, NYHA Class II and III heart failure, and measured LVEF  $\leq 35\%$ ;
7. Patients with non-ischemic dilated cardiomyopathy (NIDCM)  $> 9$  months, NYHA Class II and III heart failure, and measured LVEF  $\leq 35\%$ ;
8. Patients who meet all current Centers for Medicare & Medicaid Services (CMS) coverage requirements for a cardiac resynchronization therapy (CRT) device and have NYHA Class IV heart failure.

**THE FOLLOWING CHART SUMMARIZES THE CURRENT INDICATIONS FOR ICD IMPLANTATION.**



\* Not due to transient or reversible causes.

**National Coverage Policy for Pacemakers:** please see detailed coverage at §20.8 National Coverage Determination Publication 100-03 Transmittal 16 dated June 25, 2004, effective April 30, 2004. This is not the entire policy.

Cardiac pacemakers are self-contained, battery-operated units that send electrical stimulation to the heart. They are generally implanted to alleviate symptoms of decreased cardiac output related to abnormal heart rate and/or rhythm. Pacemakers are generally used for persistent, symptomatic second- or third-degree atrioventricular (AV) block and symptomatic sinus bradycardia.

Cardiac pacemakers are covered as prosthetic devices under the Medicare program, subject to the following conditions and limitations. While cardiac pacemakers have been covered under Medicare for many years, there were no specific guidelines for their use other than the general Medicare requirement that covered services be reasonable and necessary for the treatment of the condition. Services rendered for cardiac pacing on or after the effective dates of this instruction are subject to these guidelines, which are based on certain assumptions regarding the clinical goals of cardiac pacing. While some uses of pacemakers are relatively certain or unambiguous, many other uses require considerable expertise and judgment.

Consequently, the medical necessity for permanent cardiac pacing must be viewed in the context of overall patient management. The appropriateness of such pacing may be conditional on other diagnostic or therapeutic modalities having been undertaken. Although significant complications and adverse side effects of pacemaker use are relatively rare, they cannot be ignored when considering the use of pacemakers for dubious medical conditions, or marginal clinical benefit.

These guidelines represent current concepts regarding medical circumstances in which permanent cardiac pacing may be appropriate or necessary. As with other areas of medicine, advances in knowledge and techniques in cardiology are expected. Consequently, judgments about the medical necessity and acceptability of new uses for cardiac pacing in new classes of patients may change as more conclusive evidence becomes available. This instruction applies only to permanent cardiac pacemakers, and does not address the use of temporary, non-implanted pacemakers.

The two groups of conditions outlined below deal with the necessity for cardiac pacing for patients in general. These groups do not specify if an outpatient or inpatient mode is indicated but just if pacing is indicated. These are intended as guidelines in assessing the medical necessity for pacing therapies, taking into account the particular circumstances in each case. These are conditions under which pacemaker claims may be considered covered without further claims development and conditions under which claims would be denied unless further claims development shows that they fall in the covered category, or special medical circumstances exist of the sufficiency to convince the contractor that the claim should be paid. The two groups include Group I Single-Chamber Cardiac Pacemakers and Group II Dual-Chamber Cardiac Pacemakers.

**The 2004 revision of the NCD transfers the focus from the actual pacemaker implantation procedure itself to the reasonable and necessary medical indications that justify cardiac pacing.** This is consistent with our findings that pacemaker implantation is no longer considered routinely harmful or an experimental procedure.

**Group I: Single-Chamber Cardiac Pacemakers (Effective March 16, 1983, and May 9, 1985, and October 1, 2001)**

**A. Nationally Covered Indications**

Conditions under which cardiac pacing is generally considered acceptable or necessary, provided that the conditions are chronic or recurrent and not due to transient causes such as acute myocardial infarction, drug toxicity, or electrolyte imbalance. (In cases where there is a rhythm disturbance, if the rhythm disturbance is chronic or recurrent, a single episode of a symptom such as syncope or seizure is adequate to establish medical necessity.)

**B. Nationally Noncovered Indications**

Conditions which, although used by some physicians as a basis for permanent cardiac pacing, are considered unsupported by adequate evidence of benefit and therefore should not generally be considered appropriate uses for single-chamber pacemakers in the absence of the above indications. Contractors should review claims for pacemakers with these indications to determine the need for further claims development prior to denying the claim, since additional claims development may be required. The object of such further development is to establish whether the particular claim actually meets the conditions in a) above. In claims where this is not the case or where such an event appears unlikely, the contractor may deny the claim

1. Syncope of undetermined cause.
2. Sinus bradycardia without significant symptoms.
3. Sino-atrial block or sinus arrest without significant symptoms.
4. Prolonged P-R intervals with atrial fibrillation (without third-degree AV block) or with other causes of transient ventricular pause.
5. Bradycardia during sleep.
6. Right bundle branch block with left axis deviation (and other forms of fascicular or bundle branch block) without syncope or other symptoms of intermittent AV block.
7. Asymptomatic second-degree AV block of Type I unless the QRS complexes are prolonged or electrophysiological studies have demonstrated that the block is at or beyond the level of the His bundle (a component of the electrical conduction system of the heart).
8. Asymptomatic bradycardia in post-myocardial infarction patients about to initiate long-term beta-blocker drug therapy.

### C. Other

All other indications for single-chamber cardiac pacing for which CMS has not specifically indicated coverage remain nationally noncovered, except for Category B Investigational Device Exemption (IDE) clinical trials, or as routine costs of single-chamber cardiac pacing associated with clinical trials, in accordance with section 310.1 of the NCD Manual.

### **Group II: Dual-Chamber Cardiac Pacemakers – (Effective May 9, 1985)**

#### A. Nationally Covered Indications

Conditions under dual-chamber cardiac pacing are considered acceptable or necessary in the general medical community unless conditions 1 and 2 under Group II. B., are present:

1. Patients in whom single-chamber (ventricular pacing) at the time of pacemaker insertion elicits a definite drop in blood pressure, retrograde conduction, or discomfort.
2. Patients in whom the pacemaker syndrome (atrial ventricular asynchrony), with significant symptoms, has already been experienced with a pacemaker that is being replaced.
3. Patients in whom even a relatively small increase in cardiac efficiency will importantly improve the quality of life, e.g., patients with congestive heart failure despite adequate other medical measures.
4. Patients in whom the pacemaker syndrome can be anticipated, e.g., in young and active people, etc.

Dual-chamber pacemakers may also be covered for the conditions, as listed in Group I. A., if the medical necessity is sufficiently justified through adequate claims development. Expert physicians differ in their judgments about what constitutes appropriate criteria for dual-chamber pacemaker use. The judgment that such a pacemaker is warranted in the patient meeting accepted criteria must be based upon the individual needs and characteristics of that patient, weighing the magnitude and likelihood of anticipated benefits against the magnitude and likelihood of disadvantages to the patient.

#### B. Nationally Noncovered Indications

Whenever the following conditions (which represent overriding contraindications) are present, dual-chamber pacemakers are not covered:

1. Ineffective atrial contractions (e.g., chronic atrial fibrillation or flutter, or giant left atrium).
2. Frequent or persistent supraventricular tachycardias, except where the pacemaker is specifically for the control of the tachycardia.
3. A clinical condition in which pacing takes place only intermittently and briefly, and which is not associated with a reasonable likelihood that pacing needs will become prolonged, e.g., the occasional patient with hypersensitive carotid sinus syndrome with syncope due to bradycardia and unresponsive to prophylactic medical measures.
4. Prophylactic pacemaker use following recovery from acute myocardial infarction during which there was temporary complete (third-degree) and/or Type II second-degree AV block in association with bundle branch block.

### C. Other

All other indications for dual-chamber cardiac pacing for which CMS has not specifically indicated coverage remain nationally noncovered, except for Category B IDE clinical trials, or as routine costs of dual-chamber cardiac pacing associated with clinical trials, in accordance with section 310.1 of the NCD Manual.

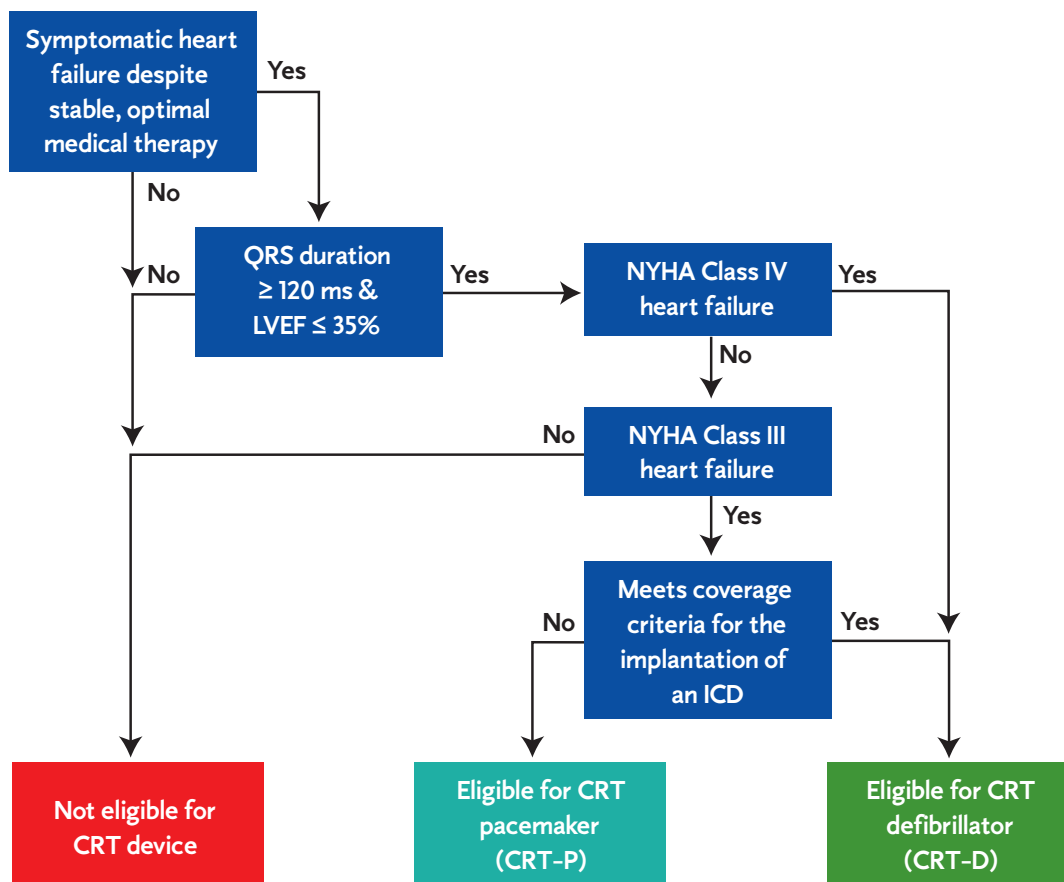
We suggest you check with your local Medicare payer for additional information regarding approved diagnosis and procedure coding information.

## Cardiac Resynchronization Therapy

Selected patients with moderate to severe heart failure may benefit from Cardiac Resynchronization Therapy (CRT). CRT, in combination with stable optimal medical therapy, may help the lower chambers of the heartbeat together and improve the heart's ability to supply blood and oxygen to the body. As part of an ICD or Pacemaker system, CRT is designed to help the two lower heart chambers, the right and left ventricles, beat at the same time in a normal sequence treating ventricular dysynchrony. Biventricular ICDs and pacemakers are implanted in patients with a more complex disease process of heart failure and therefore the severity of illness is greater.

There is currently no National Coverage Determination for CRT. However, some states have made Local Coverage Determinations (LCD) regarding Resynchronization Therapy. Some local policies require a QRS duration  $\geq 130$  ms.

### THE FOLLOWING CHART SUMMARIZES THE CURRENT INDICATIONS FOR CARDIAC RESYNCHRONIZATION THERAPY



Reference CMS Local Coverage Decision and Bulletins for any specific coverage requirements specific to your region or state. Some local policies require a QRS duration  $\geq 130$  ms.

## Areas for Consideration in Assessing Inpatient versus Outpatient Status

In review of clinical criteria it is important for facilities to consider the following items for patient classification.

1. Quality Improvement Organizations (QIOs) have contracts with CMS to perform various functions. The Medicare Quality Improvement Community (MedQIC, pronounced med-quick) is a national knowledge forum for healthcare and quality improvement professionals. It provides easy access to quality improvement resources and a community of professionals sharing knowledge and experiences to accelerate healthcare quality improvement across the nation. MedQIC is sponsored by the Centers for Medicare & Medicaid Services (CMS) to support and promote its Medicare Quality Improvement Program and its contractors, the QIOs, in helping Medicare providers deliver the right care to every Medicare beneficiary, every time. The website address is [www.medqic.org](http://www.medqic.org). Your local QIO can be a valuable resource in describing their process for assessing patient status.
2. Patient must meet criteria for medical necessity of admission (InterQual<sup>®</sup>, Milliman<sup>®</sup>, or hospital specific criteria) and an established standard of care will be important to support your decision-making. In addition, companies like InterQual<sup>®</sup> will provide on-site education regarding their criteria.
3. Physicians must write an admission order that includes the reason for admission; therefore, this makes them an important part of the education process.
4. In various regions the inpatient and outpatient status has been under scrutiny and one-day stay admission may be subject to audit.

Inpatient status is recommended for patients with complicated or co-morbid medical conditions (potential or history). It is important to remember that physician documentation should reflect specific reasons for inpatient status or continued monitoring.

The following should be considered, but not limited to, for inpatient admission.

1. Acute renal failure
2. Severe cardiovascular compromised patients
3. Volume/electrolyte abnormalities
4. Safety issues for patient after discharge
5. Bacteremia
6. Uncontrolled hypertension
7. Anemia–unspecified
8. NIDDM–uncontrolled
9. IDDM–uncontrolled
10. Acute respiratory distress
11. Chronic respiratory failure
12. Cardiogenic shock
13. Cardiac arrest
14. Pacer/lead complications
15. Pacer/lead infection
16. Pericardial disease
17. Septic, hypovolemic shock

The best approach to understand your QIOs medical criteria is to contact your representative and schedule an in-service. This educational training should include both physicians and hospital personnel.

In reviewing a hospital's opportunity to either update or develop specific inpatient and outpatient criteria, it is important to use a multidisciplinary team consisting of operational, compliance-related, and financial staff.

This may include:

Utilization Review	Case Management	Finance
Compliance Officer	Admitting and Scheduling	Quality Improvement
Cath/EP Lab Management	CV Services/Administration	Medical Director

After the hospital has determined their internal process, to ensure proper communication, it is important to incorporate physician input and provide specific physician and staff training.

- Develop a matrix indicating which procedures should typically be performed in which setting
- Develop pre-printed order forms to show how to document the proper setting of care
- Educate nurses and physicians on both the criteria and documentation for the medical necessity of inpatient admission
- Inform both physician's office personnel and hospital registration personnel of this criteria and the appropriate setting for each procedure type
- Move medical necessity determinations into the scheduling department when appropriate. It is very important that the person making the designation should read the physicians order and know how to interpret the criteria.
- Perform a utilization review analysis to review cases upon admission to assure the documentation is appropriate for the acute admission
- Educate coders on inpatient versus outpatient procedures and overall outpatient reimbursement policies
- Review post procedure documentation to assure adequacy of documentation in determining if inpatient care is warranted
- Review all medical necessity claims denials and implement claims denial appeals program

### **Things to Consider Moving Forward**

To ensure the proper care was provided in the appropriate setting, you may want to review the following suggestions. **Appendix A** identifies diagnosis codes that may meet inpatient criteria and **Appendix B** identifies CPT codes for EP studies, Ablation, ICD, Pacing, Biventricular Systems, Patient Activated Loop Recorders, and some Miscellaneous Procedures.

**CMS has issued a transmittal that outlines the process for changing a patient's status from Inpatient to Outpatient**

The Centers for Medicare & Medicaid Services (CMS) Manual System Transmittal 299 dated September 10, 2004 with an effective date of April 1, 2004 is summarized below.

Background: Payment is made under the Hospital Outpatient Prospective Payment System (OPPS) for Medicare Part B Payment Services. Outpatient means a person who has not been admitted as an inpatient but who is registered on the hospital or critical access hospital (CAH) records as an outpatient and receives services (rather than supplies alone) directly from the hospital or CAH.

In some instances, a physician may order a beneficiary to be admitted to an inpatient bed, but upon reviewing the case later, the hospital's utilization review committee determines that an inpatient level of care does not meet the hospital's admission criteria.

CMS has obtained Condition Code **44 - Inpatient Admission Changed To Outpatient**

For use on outpatient claims only, when the physician ordered inpatient services, but upon internal review performed before the claim was initially submitted, the hospital determined the services did not meet its inpatient criteria. This policy is as follows:

1. In cases where a hospital utilization review committee determines that an inpatient admission does not meet the hospital's inpatient criteria, the hospital may change the beneficiary's status from inpatient to outpatient and submit an outpatient claim (TOBs 13X, 85X) for medically necessary Medicare Part B services that were furnished to the beneficiary, provided **all** of the following conditions are met:
  - a. The change in patient status from inpatient to outpatient is made prior to discharge or release, while the beneficiary is still a patient of the hospital;
  - b. The hospital has not submitted a claim to Medicare for the inpatient admission;
  - c. A physician concurs with the utilization review committee's decision; and
  - d. The physician's concurrence with the utilization review committee's decision is documented in the patient's medical record.
  
2. When the hospital has determined that it may submit an outpatient claim according to the conditions described above, the entire episode of care should be treated as though the inpatient admission never occurred and should be billed as an outpatient episode of care.

Additional comments to the Fiscal Intermediaries (FI) include the following:

When the hospital submits a 13X or 85X for services furnished to a beneficiary whose status was changed from inpatient to outpatient, the hospital is required to report Condition Code 44 in one of Form Locators 24-30, or in the ANSI X12N 837 I in Loop 2300, HI segment, with qualifier BG, on the outpatient claim.

## Appendix A:

Please indicate the PRIMARY DIAGNOSIS and number all diagnosis in order of acuteness. Up to 4 may be marked for today's services (1500 limits 4 diagnosis codes).

SIGNS AND SYMPTOMS	ICD-9-CM DX Code	SIGNS AND SYMPTOMS	ICD-9-CM DX Code
Abdominal pain, generalized	78907	Edema	7823
Abnl Chest x-ray	7932	Elevated BP (NOT HTN)	7962
Abnl CV function study	79430	Fatigue/malaise	78079
Abnl Calcium score/Echo	7932	Fatigue/chronic syndrome	78071
Abnl EKG	79431	Fever	7806
Abnl Glucose tolerance	7902	Flushing	78262
Abnl Heart tones	7853	Heartburn	7871
Abnl Physical findings	7964	Hepatomegaly	7891
Ascites	7895	Limb pain	7295
Bacteremia	7907	Mass/lump in chest	7866
Bruit	7859	Murmur	7852
Cardiogenic shock	78551	Numbness	7820
Chest pain, precordial	78651	Orthopnea	78602
Chest pain, unspecified	78650	Palpitations	7851
Chest tightness/pressure	78659	Septic/hypovolemic shock	78559
Cough	7862	Sleep apnea	78057
Cyanosis	7825	Swollen limb	72981
Diaphoresis	7808	Syncope and collapse	7802
Dizziness	7804	Syncope, carotid sinus	3370
Dyspnea	78605	Tachycardia	7850
<b>CORONARY ARTERY DISEASE</b>			
Angina – stable, exertional	4139	Angina – Prinzmetal	4131
Angina, unstable	4111		
The FIFTH DIGIT FOR 410: MI < 8 weeks is: 1-INITIAL EPISODE OF CARE or 2-SUBSEQ EPISODE OF CARE			
MI – anterior wall	4101	Lt vent mural thrombus	42979
MI – inferior wall	4104	Post MI septal defect	42971
MI – lateral wall	4105	CAD–native vessel	41401
MI – nontransmural	4107	CAD–SVG	41402
MI – posterior wall	4106	CAD–artery bypass graft	41404
Old MI > 8 weeks	412	Dissection of coronary artery	41412
Lt vent aneurysm	41410		

SIGNS AND SYMPTOMS	ICD-9-CM DX Code	SIGNS AND SYMPTOMS	ICD-9-CM DX Code
<b>CARDIOMYOPATHY</b>			
<b>HEART FAILURE</b>			
Right heart failure	4281	Chronic combined	42842
Acute diastolic	42831	Acute on chronic diastolic	42833
Acute systolic	42821	Acute on chronic systolic	42823
Acute combined	42841	Acute on chronic combined	42843
Chronic diastolic	42832	Cardiomegaly	4293
Chronic systolic	42822		
<b>MYOCARDITIS</b>			
Acute	42290	Toxic	42293
Septic	42292		
<b>MYOPATHY</b>			
Primary dilated/HCM/ Idiopathic	4254	Secondary	4259
Alcoholic	4255	HOCM	4251
Post Partum – other	6748	Ischemic	4148
Amyloid	2773/4257		
<b>HYPERTENSION</b>			
Benign hypertension	4011	Renal HTN/BN	40511
Malignant hypertension	4010	Chronic hypotension	4581
Hypertensive HT Dse/BN		Orthostatic hypotension	4580
w/o CHF	40210	Specified hypotension	4588
w/CHF	40211		
Hypertensive HT Dse/MN			
w/o CHF	40200		
w/CHF	40201		
<b>PACEMAKERS/ICD</b>			
Cardiac Pacemaker in situ	V4501	ICD in situ	V4502
Pacer/Lead Mech Compl	99601	ICD mech compl	99604
Pacer or Lead Infection	99661	ICD Infection	99661
Pacemaker Reprogramming	V5331	ICD reprogramming	V5332
<b>RHYTHM</b>			
<b>BLOCK</b>			
AV block complete	4260	LBBB	4263
1st Degree AV block	42611	RBBB	4264
2nd Degree AVB Mobitz I	42613	RBBB/LAFB	42652
2nd Degree AVB Mobitz II	42612	RBBB/LPFB	42651
Left hemiblock	4262	Trifascicular block	42654
		Long QT Syndrome	42682

SIGNS AND SYMPTOMS	ICD-9-CM DX Code	SIGNS AND SYMPTOMS	ICD-9-CM DX Code
<b>RHYTHM (Cont.)</b>			
<b>SUPRAVENT</b>			
Atrial Fibrillation	42731	WPW	4267
Atrial Flutter	42732	SSS/tachybrady syndrome	42781
Supraven PB	42761	Bradycardia	42789
SVT	4270		
<b>VENTRICULAR</b>			
Cardiac arrest	4275	Ventricular flutter	42742
Ventricular PB	42769	Ventricular tachycardia	4271
Ventricular Fibrillation	42741		
<b>PERICARDIAL DISEASE</b>			
Acute Idiopathic pericarditis	42091	Effusion	4239
Constrictive pericarditis	4232	Tamponade	4239
<b>VASCULAR</b>			
<b>CEREBROVASCULAR</b>			
TIA	4359	CVA (III Defined)	436
Vertebral syndrome	4351	Cerebral embolism	43411
Basilar syndrome	4350	Dissection of carotid artery	44321
Subclavian steal	4352		
<b>OCCLUSION &amp; STENOSIS</b>			
The FIFTH DIGIT FOR 433: 0-Without infarction; 1-With infarction			
Carotid	4331	Multiple, bilateral	4333
Vertebral	4332		
<b>PERIPHERAL VASCULAR</b>			
Claudication	4439	Dissection	
Pseudoaneurysm		Iliac	44322
Iliac	4422	Renal	44323
Femoral	4423		
Hematoma			
Common Femoral	9040		
Superficial Femoral	9041		
<b>ATHEROSCLEROSIS</b>			
Aorta	4400	Renal	4401
<b>Of NATIVE ARTERIES:</b>			
Extremity, unspec	44020	Extremity w/ ulceration	44023
Extremity w/ claudication	44021	Extremity w/ gangrene	44024
Extremity w/ rest pain	44022		
<b>Of EXTREMITY GRAFTS:</b>			
Unspecified graft	44030	Nonautologous biological	44032
Autologous vein graft	44031	Embolism – Lower extremity	44422
<b>AORTIC ANEURYSM</b>			
Thoracic	4412	Dissecting; thoracic	44101
Abdominal	4414	Dissecting; abdominal	44102
Iliac	4422		

SIGNS AND SYMPTOMS	ICD-9-CM DX Code	SIGNS AND SYMPTOMS	ICD-9-CM DX Code
<b>VENOUS</b>			
Chronic insufficiency	45981	Postphlebitic syndrome	4591

<b>PHLEBITIS/THROMBOPHLEBITIS</b>			
Superficial	4510	Popliteal	45119
Iliac	45181	Other	45189
Femoral	45111		

<b>RX MANAGEMENT</b>			
Anticoagulants	V5861	High risk medication	V5869
Dig toxicity E9421	9721		

<b>MISC</b>			
Anemia–unspecified	2859	Hypokalemia	2768
NIDDM–Controlled	25000	Hyponatremia	2761
Uncontrolled	25002	Hyperthyroidism	24290
IDDM–Controlled	25001	Hypothyroidism	2449
Uncontrolled	25003	Metabolic syndrome	2777
Electrolyte disorder	2769	Obesity	27800
Erectile dysfunction	60784	Obesity, morbid	27801
Hypercholesterolemia	2720	PostOP cardiac Complication	9971
Hypertriglyceridemia	2721	Renal Failure – Chronic	585
Mixed Hyperlipidemia	2722	Renal insufficiency	5939
Hyperkalemia	2767	Smoker (tobacco abuse)	3051

<b>PULMONARY DISEASES</b>			
Acute resp distress	51881	Cor Pulmonale, chronic	4169
Asthma w/o status	49390	Pleural effusion	5119
Bronchitis	490	Pneumonia	486
Chronic Resp Failure	51883	Pulmonary HTN	4168
COPD	496	Pulmonary HTN, primary	4160
Cor Pulmonale, acute	4150	Pulmonary embolus	41519

<b>PERSONAL HISTORY OF:</b>			
Status post CABG	V4581	Status post PTCA	V4582

<b>FAMILY HISTORY OF:</b>			
Diabetes mellitus	V180	Other cv disease	V174
Ischemic heart dis	V173		

<b>SCREENING FOR:</b>			
Ischemic heart dis	V810	Observation for cv dis	V717
Unspec cv condition	V812	Pre-op cv exam	V7281

## Appendix B:

<b>EP STUDIES</b>	<b>CPT<sup>1,2</sup> Codes</b>
Comp EPS w/o Induction	93619-26
Comp EPS w/Induction or Attempt Induction	93620-26
Comp EPS w/Cor Sinus/LA Mark 93620 First	93621-26
Comp EPS W/LV Mark 93620 First	93622-26
PS After Drug Infusion	93623-26
Catheter Mapping	93609-26
3-D Mapping	93613-26
Bundle of His Recording	93600-26
Intra-Atrial Recording	93602-26
Intra-Atrial Pacing	93610-26
RV Recording	93603-26
Intraventricular Pacing	93612-26
Arrhythmia Induction or Attempt	93618-26
FU EPS +/- Induction or Attempted Induction	93624-26
Esophageal recording with pacing	93616-26
Tilt Table +/- Drugs	93660-26
Arterial Line Placement for Tilt Table	36620
<b>ABLATION</b>	
AV Node, +/- Temp Pacer	93650
For Supraventricular Tachycardia	93651
For Ventricular Tachycardia	93652
<b>ICD</b>	
Insert/Replace leads & ICD–nonthoracotomy	33249/71090-26
DFTs & Pace sense function At Implant	
–w/device testing w/induction	93641-26
Insert/Replace pulse generator	33240
Removal of pulse generator	
*Mark This for Replacement	33241
Removal of leads–nonthoracotomy	33244
EPS Via ICD w/Defib (NIPS)	93642-26
Insert/Replace single lead	33216/71090-26
Insert/Replace dual leads	33217/71090-26
Repositioning of lead	33215/71090-26
Repair of single lead	33218
Revision of pocket for ICD	33223

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<b>PACING</b>	<b>CPT Codes</b>
Insert/Replace perm pacer; A w/fluor	33206/71090-26
Insert/Replace perm pacer; V w/fluor	33207/71090-26
Insert/Replace perm pacer; A & V	33208/71090-26
Insert/Replace generator only, single	33212
Insert/Replace generator only, dual	33213
Removal perm pacer generator	
*Mark This for Replacement	33233
Removal perm pacer single lead	
Lead only	33234
Removal perm pacer dual leads	
Leads Only	33235
Insert/Replace perm lead	
Single	33216/71090-26
Insert/Replace perm lead	
Dual	33217/71090-26
Repositioning of lead	33215/71090-26
Upgrade pacer w/removal & testing	33214/71090-26
Repair single chamber leads	33218
Revision/Relocation of pocket for pacemaker	33222
<b>BIVENTRICULAR SYSTEMS</b>	
Insertion of LV lead to existing system	
Includes removal/pocket revision	33224/71090-26
Insertion of LV lead at implant	
**Bill with either ICD or pacing system	33225**
Repositioning of LV lead	
Includes removal/insertion/replacement of generator	33226/71090-26
<b>PATIENT ACTIVATED LOOP RECORDERS</b>	
Implantation of loop recorder	33282
Removal of loop recorder	33284
<b>MISCELLANEOUS PROCEDURES</b>	
Contrast injection for venography	36005
Venography, extremity supervision/interp	75820-26
Cardioversion, elective, electrical EXTERNAL	92960
Cardioversion, elective, electrical INTERNAL	92961
Intracardiac echocardiography	93662-26

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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.

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