# Cardiac Ablation Procedure

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| **Approved By:** | Highmark Health Options – Market Leadership |
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| **Products:** | Medicaid |
| **Application:** | All participating hospitals and providers |
| **Page Number(s):** | 1 of 10 |

## Disclaimer

Highmark Health Options medical policy is intended to serve only as a general reference resource regarding coverage for the services described. This policy does not constitute medical advice and is not intended to govern or otherwise influence medical decisions.

### POLICY STATEMENT

Highmark Health Options may provide coverage under the medical-surgical benefits of the Company's Medicaid products for medically necessary benefits.

This policy is designed to address medical necessity guidelines that are appropriate for the majority of individuals with a particular disease, illness or condition. Each person's unique clinical circumstances warrant individual consideration, based upon review of applicable medical records.

The qualifications of the policy will meet the standards of the National Committee for Quality Assurance (NCQA) and the Delaware Department of Health and Social Services (DHSS) and all applicable state and federal regulations.

### DEFINITIONS

**Highmark Health Options (HHO)** – Managed care organization serving vulnerable populations that have complex needs and qualify for Medicaid. Highmark Health Options members include individuals and families with low income, expecting mothers, children, and people with disabilities. Members pay nothing to very little for their health coverage. Highmark Health Options currently serves Delaware Medicaid: Delaware Healthy Children Program (DHCP) and Diamond State Health Plan and Health Plan Plus members.

### POLICY POSITION

Prior authorization is required

Catheter ablation is a therapeutic technique using a tripolar electrode catheter or a cryoballoon to eliminate conduction defects.

Maze or Modified Maze Procedures, AKA surgical ablation are performed on a non-beating heart during cardiopulmonary bypass to destroy the arrhythmic area of the heart.

Hybrid catheter and surgical ablation (HyCASA) is a minimally invasive procedure for treatment of atrial fibrillation. The procedure combines thoracoscopic epicardial ablation performed by a surgeon and percutaneous endocardial ablation performed by an electrophysiologist as directed by the electrophysiology study. It is performed either as part of a single "joint" procedure or as two (2) separate ablation procedures.

**CATHETER ABLATION PROCEDURES**

Intracardiac catheter ablation of atrioventricular node (AV) function may be considered medically necessary for ANY of the following indications:

- Atrial ablation for elimination of atrial fibrillation; or
- Atrial tachycardia or atrial flutter; or
- Paroxysmal supraventricular tachycardia; or
- Radiofrequency catheter ablation or modification of the atrioventricular junction for ventricular rate control of symptomatic atrial tachyarrhythmias; or
- Symptomatic sustained atrioventricular nodal reentrant tachycardia.

Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters may be considered medically necessary for ANY of the following indications:

- For treatment of individuals with supraventricular tachycardia with ANY of the following indications:
    - Accessory bypass tract arrhythmia (Wolff-Parkinson-White Syndrome); or
    - Atrial ablation for elimination of atrial fibrillation; or
    - Atrial tachycardia or atrial flutter; or
    - Paroxysmal supraventricular tachycardia; or
    - Supraventricular tachycardia; or
    - Symptomatic sustained atrioventricular nodal reentrant tachycardia; or
- For treatment of individuals with ventricular tachycardia with ANY of the following indications:
    - Bundle branch reentrant ventricular tachycardia; or
    - Individuals without structural heart disease (i.e., ischemic or idiopathic cardiomyopathy) with symptomatic sustained monomorphic ventricular tachycardia; or
    - Ischemic or idiopathic cardiomyopathy with ventricular tachycardia.

A catheter ablation procedure not meeting the criteria as indicated in this policy is considered not medically necessary.

**TRANSCATHETER RADIOFREQUENCY ABLATION OR CRYOABLATION**

Transcatheter radiofrequency ablation or cryoablation to treat atrial fibrillation in individuals who have failed to respond to adequate trials of antiarrhythmic medications may be considered medically necessary for ANY of the following indications:

- As an alternative to atrioventricular nodal ablation and pacemaker insertion in individuals with class II or III congestive heart failure and symptomatic atrial fibrillation; or
- As an initial treatment for individuals with recurrent symptomatic paroxysmal atrial fibrillation (greater than one (1) episode, with less than or equal to four (4) episodes in the previous 6 months) in whom a rhythm-control strategy is desired; or
- Symptomatic paroxysmal atrial fibrillation; or
- Symptomatic persistent atrial fibrillation.

Repeat transcatheter radiofrequency ablation or cryoablation may be considered medically necessary in individuals with ANY of the following:

- Development of atrial flutter following the initial procedure; or
- Recurrence of atrial fibrillation.

Transcatheter radiofrequency ablation or cryoablation not meeting the criteria as indicated in this policy is considered not medically necessary.

**OPERATIVE ABLATION PROCEDURES**

Operative ablation of supraventricular arrhythmogenic focus or pathway may be considered medically necessary to eliminate artrioventricular conduction defects.

Operative ablation of supraventricular arrhythmogenic focus or pathway not meeting the criteria as indicated in this policy is considered not medically necessary.

**MAZE PROCEDURE**

The maze and modified maze procedure performed on a nonbeating heart during cardiopulmonary bypass with concomitant cardiac surgery may be considered medically necessary for the treatment of individuals with atrial fibrillation or flutter.

The maze or modified maze procedure performed on a non–beating heart during cardiopulmonary bypass without concomitant cardiac surgery is considered not medically necessary for treatment of individuals with atrial fibrillation or flutter.

The use of an open maze or modified maze procedure not meeting the criteria as indicated in this policy is considered not medically necessary.

Stand-alone minimally invasive, off-pump maze procedures (i.e., modified maze procedures), including those done via mini-thoracotomy, for treatment of individuals with atrial fibrillation or flutter are considered experimental/investigational and therefore noncovered because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

**HYBRID AND SURGICAL ABLATION (HyCASA)**

HyCASA procedure may be considered medically necessary when ALL of the following criteria are met:

- The cardiothoracic (CT) surgeon has experience in treating arrhythmias surgically (at least 50 cases); and
- The facility has a suite that can accommodate the Hybrid procedure requirements; and
- The individual has one (1) of the following:
    - Inability to proceed with a standard PVI from an endocardial approach (i.e., esophageal heating); or
    - Previous failed pulmonary vein isolation (PVI); and
- The individual has persistent difficult-to-treat drug resistant atrial fibrillation greater than six (6) months; and
- The surgeon and electrophysiologist both agree that the individual would be an appropriate candidate for the procedure; and
- There is a presence of structural heart disease (e.g., left atrial enlargement and/or left ventricular dysfunction).

Hybrid catheter and surgical ablation (HyCASA) procedure not meeting the criteria as indicated in this policy is considered not medically necessary.

**PROFESSIONAL STATEMENTS AND SOCIETAL POSITIONS GUIDELINES**

**American College of Cardiology et al – 2019**

In 2014, the American College of Cardiology, American Heart Association, and Heart Rhythm Society (ACC/AHA/HRS) issued guidelines for the management of patients with AF. In 2019, the AHA/ACC/HRS conducted a focused update of areas for which new evidence had emerged since the 2014 publication. Together, the guidelines included the following recommendations for rate control and rhythm control:

- Rate Control:
  - AV nodal ablation with permanent ventricular pacing is reasonable to control heart rate when pharmacological therapy is inadequate and rhythm control is not achievable.
  - AV nodal ablation with permanent ventricular pacing should not be performed to improve rate control without prior attempts to achieve rate control with medications.
- Rhythm Control:
  - AF catheter ablation is useful for symptomatic paroxysmal AF refractory or intolerant to at least 1 class I or III antiarrhythmic medication when a rhythm-control strategy is desired.
  - Before consideration of AF catheter ablation, assessment of the procedural risks and outcomes relevant to the individual patient is recommended.
  - AF catheter ablation is reasonable for some patients with symptomatic persistent AF refractory or intolerant to at least 1 class I or III antiarrhythmic medication.
  - In patients with recurrent symptomatic paroxysmal AF, catheter ablation is a reasonable initial rhythm-control strategy before therapeutic trials of antiarrhythmic drug therapy, after weighing the risks and outcomes of drug and ablation therapy.
  - AF catheter ablation may be considered for symptomatic long-standing (greater than or equal to 12 months) persistent AF refractory or intolerant to at least 1 class I or III antiarrhythmic medication when a rhythm-control strategy is desired).
  - AF catheter ablation may be considered before initiation of antiarrhythmic drug therapy with a class I or III antiarrhythmic medication for symptomatic persistent AF when a rhythm-control strategy is desired.
  - AF catheter ablation should not be performed in patients who cannot be treated with anticoagulant therapy during and after the procedure.
  - AF catheter ablation to restore sinus rhythm should not be performed with the sole intent of obviating the need for anticoagulation."
  - AF catheter ablation may be reasonable in selected patients with symptomatic AF and HF with reduced left ventricular (LV) ejection fraction (HFrEF) to potentially lower mortality rate and reduce hospitalization for HF

Although the guidelines did not make a specific recommendation on the use of cryoablation, they did state:

- Cryoballoon ablation is an alternative to point-by-point radiofrequency ablation to achieve pulmonary vein isolation.

**Society of Thoracic Surgeons – 2017**

In 2017, the Society of Thoracic Surgeons published guidelines on the surgical treatment of atrial fibrillation (AF). Recommendations are as follows:

- Surgical ablation for AF is recommended at the time of concomitant mitral operations to restore sinus rhythm.

- Surgical ablation for AF is recommended at the time of concomitant isolated aortic valve replacement, isolated CABG surgery, and aortic valve replacement plus CABG operations to restore sinus rhythm.
- Surgical ablation for symptomatic AF in the absence of structural heart disease that is refractory to class I/III antiarrhythmic drugs or catheter-based therapy of both is reasonable as a primary stand-alone procedure to restore sinus rhythm.

**ELIGIBLE PROCEDURE CODES**

| CPT codes | Description |
|---|---|
| 33250 | Operative ablation of supraventricular arrhythmogenic focus or pathway (e.g., Wolff-Parkinson-White, atrioventricular node re-entry), tract(s) and/or focus (foci); without cardiopulmonary bypass. |
| 33251 | Operative ablation of supraventricular arrhythmogenic focus or pathway (e.g., Wolff-Parkinson-White, atrioventricular node re-entry), tract(s) and/or focus (foci); with cardiopulmonary bypass. |
| 33254 | Operative tissue ablation and reconstruction of atria, limited (e.g., modified Maze Procedure). |
| 33255 | Operative tissue ablation and reconstruction of atria, extensive (e.g., modified Maze Procedure). |
| 33256 | Operative tissue ablation and reconstruction of atria, extensive (e.g., modified Maze Procedure); with cardiopulmonary bypass. |
| 33257 | Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), limited (e.g., modified Maze Procedure) (list separately in addition to code for primary procedure). |
| 33258 | Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (e.g., modified Maze Procedure) without cardiopulmonary bypass) (list separately in addition to code for primary procedure). |
| 33259 | Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (e.g., modified Maze Procedure) with cardiopulmonary bypass bypass) (list separately in addition to code for primary procedure). |
| 33261 | Operative ablation of ventricular arrhythmogenic focus with cardiopulmonary bypass. |
| 33265 | Endoscopy, surgical; operative tissue ablation and reconstruction of atria, (e.g., modified Maze Procedure), without cardiopulmonary bypass. |
| 33266 | Endoscopy, surgical; operative tissue ablation and reconstruction of atria, extensive (e.g., modified Maze Procedure), without cardiopulmonary bypass. |
| 93613 | Intracardiac electrophysiologic 3-dimensional mapping (list separately in addition to code for primary procedure). |
| 93650 | Intracardiac catheter ablation of atrioventicular node function atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement. |
| 93653 | Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrythmia with right atrial pacing and recording (when necessary), and his bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re-entry. |

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| 93654 | Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), and his bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of ventricular tachycardia or focus of ventricular ectopy including intracardiac electrophysiologic 3d mapping, when performed, and left ventricular pacing and recording. |
| 93655 | Intracardiac catheter ablation of a discrete mechanism of arrhythmia which is distinct from the primary ablated mechanism, including repeat diagnostic maneuvers to treat a spontaneous or induced arrhythmia (list separately in addition to code for primary procedure). |
| 93656 | Comprehensive electrophysiologic evaluation including transseptal catheterizations, insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia including left or right atrial pacing/recording when necessary, right ventricular pacing and recording when necessary, his bundle recording (when necessary) with intracardiac catheter ablation of atrial fibrillation by pulmonary vein isolation. |
| 93657 | Additional linear or focal intracardiac catheter ablation of the left or right atrium for treatment of atrial fibrillation remaining after completion of pulmonary vein isolation (list separately in addition to code for primary procedure). |
| 93662 | Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (list separately in addition to code for primary procedure). |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODE 93613**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I48.11 | I48.19 | I48.20 | I48.21 | I49.01 | I49.02 | I49.1 |
| I49.2 | I49.3 | I49.49 | I49.9 | I50.1 | I51.7 | |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODE 93650**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I45.89 | I47.1 | I47.9 | I48.0 | I48.11 | I48.19 | I48.20 |
| I48.21 | I49.2 | I49.8 | R00.1 | I48.91 | | |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODE 93653**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I25.5 | I25.6 | I25.89 | I25.9 | I42.0 | I42.2 | I42.5 |
| I42.8 | I42.9 | I45.6 | I45.81 | I45.89 | I47.1 | I47.9 |
| I48.0 | I48.11 | I48.19 | I48.20 | I48.21 | I48.3 | I48.4 |
| I48.91 | I48.92 | I49.2 | I49.8 | R00.1 | | |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODE 93654**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I25.5 | I25.6 | I25.89 | I25.9 | I42.0 | I42.2 | I42.5 |
| I42.8 | I42.9 | I47.0 | I47.20 | I49.1 | I49.3 | I49.40 |
| I49.49 | I47.29 | I48.91 | I49.1 | I49.3 | | |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODE 93655**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I45.6 | I45.89 | I47.0 | I47.1 | I47.20 | I47.29 | I48.0 |
| I48.11 | I48.19 | I48.20 | I48.21 | I49.01 | I48.3 | I48.4 |
| I48.91 | I48.92 | I49.02 | I49.1 | I49.2 | I49.3 | I49.49 |
| I49.9 | I49.5 | I49.8 | I50.1 | I51.7 | | |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODES 93656 AND 93657**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I25.5 | I45.6 | I47.0 | I47.1 | I47.2 | I48.0 | I48.11 |
| I48.19 | I48.20 | I48.21 | I48.3 | I48.4 | I48.91 | I48.92 |
| I49.01 | I49.02 | I49.1 | I49.2 | I49.3 | I49.49 | I49.9 |
| I45.89 | I47.20 | I47.29 | I49.5 | I49.8 | I50.1 | I51.7 |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODES 93662**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I48.11 | I48.19 | I48.20 | I48.21 | I49.01 | I49.02 | I49.1 |
| I49.2 | I49.3 | I49.49 | I49.9 | I50.1 | I51.7 | |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODES 33250, 33251, AND 33261**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I44.0 | I44.1 | I44.2 | I44.30 | | | |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODES 33254, 33255, 33256, 33257, AND 33259**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I48.0 | I48.11 | I48.19 | I48.20 | I48.21 | I48.3 | I48.4 |
| I48.91 | I48.92 | I45.6 | I47.1 | I48.8 | I49.2 | I49.3 |
| I49.40 | I49.49 | I49.8 | | | | |

**ELIGIBLE DIAGNOSIS CODES FOR PROCEDURE CODES 33265 AND 33266**

| Codes | | | | | | |
|---|---|---|---|---|---|---|
| I48.11 | I48.19 | I48.20 | I48.21 | I49.01 | I49.02 | I49.1 |
| I49.2 | I49.3 | I49.49 | I49.9 | I50.1 | I51.7 | |

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**POLICY UPDATE HISTORY**

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|---|---|
| 10/26/2022 | Approved in Medical Policy Committee |
| 11/2022 | Approved in QI/UM |