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Clinical Appropriateness Guidelines

Cardiovascular

Appropriate Use Criteria: Electrophysiological Studies

Proprietary

Table of Contents

Description and Application of the Guidelines

The Carelon Clinical Appropriateness Guidelines (hereinafter “the Carelon Clinical Appropriateness Guidelines” or the “Guidelines”) are designed to assist providers in making the most appropriate treatment decision for a specific clinical condition for an individual. The Guidelines establish objective and evidence-based criteria for medical necessity determinations, where possible, that can be used in support of the following:

- To establish criteria for when services are medically necessary
- To assist the practitioner as an educational tool
- To encourage standardization of medical practice patterns
- To curtail the performance of inappropriate and/or duplicate services
- To address patient safety concerns
- To enhance the quality of health care
- To promote the most efficient and cost-effective use of services

The Carelon guideline development process complies with applicable accreditation and legal standards, including the requirement that the Guidelines be developed with involvement from appropriate providers with current clinical expertise relevant to the Guidelines under review and be based on the most up-to-date clinical principles and best practices. Resources reviewed include widely used treatment guidelines, randomized controlled trials or prospective cohort studies, and large systematic reviews or meta-analyses. Carelon reviews all of its Guidelines at least annually.

Carelon makes its Guidelines publicly available on its website. Copies of the Guidelines are also available upon oral or written request. Additional details, such as summaries of evidence, a list of the sources of evidence, and an explanation of the rationale that supports the adoption of the Guidelines, are included in each guideline document.

Although the Guidelines are publicly available, Carelon considers the Guidelines to be important, proprietary information of Carelon, which cannot be sold, assigned, leased, licensed, reproduced or distributed without the written consent of Carelon.

Carelon applies objective and evidence-based criteria, and takes individual circumstances and the local delivery system into account when determining the medical appropriateness of health care services. The Carelon Guidelines are just guidelines for the provision of specialty health services. These criteria are designed to guide both providers and reviewers to the most appropriate services based on a patient’s unique circumstances. In all cases, clinical judgment consistent with the standards of good medical practice should be used when applying the Guidelines. Guideline determinations are made based on the information provided at the time of the request. It is expected that medical necessity decisions may change as new information is provided or based on unique aspects of the patient’s condition. The treating clinician has final authority and responsibility for treatment decisions regarding the care of the patient and for justifying and demonstrating the existence of medical necessity for the requested service. The Guidelines are not a substitute for the experience and judgment of a physician or other health care professionals. Any clinician seeking to apply or consult the Guidelines is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient’s care or treatment.

The Guidelines do not address coverage, benefit or other plan specific issues. Applicable federal and state coverage mandates take precedence over these clinical guidelines, and in the case of reviews for Medicare Advantage Plans, the Guidelines are only applied where there are not fully established CMS criteria. If requested by a health plan, Carelon will review requests based on health plan medical policy/guidelines in lieu of the Carelon Guidelines. Pharmaceuticals, radiotracers, or medical devices used in any of the diagnostic or therapeutic interventions listed in the Guidelines must be FDA approved or conditionally approved for the intended use. However, use of an FDA approved or conditionally approved product does not constitute medical necessity or guarantee reimbursement by the respective health plan.

The Guidelines may also be used by the health plan or by Carelon for purposes of provider education, or to review the medical necessity of services by any provider who has been notified of the need for medical necessity review, due to billing practices or claims that are not consistent with other providers in terms of frequency or some other manner.

General Clinical Guideline

Clinical Appropriateness Framework

Critical to any finding of clinical appropriateness under the guidelines for a specific diagnostic or therapeutic intervention are the following elements:

- Prior to any intervention, it is essential that the clinician confirm the diagnosis or establish its pretest likelihood based on a complete evaluation of the patient. This includes a history and physical examination and, where applicable, a review of relevant laboratory studies, diagnostic testing, and response to prior therapeutic intervention.
- The anticipated benefit of the recommended intervention is likely to outweigh any potential harms, including from delay or decreased access to services that may result (net benefit).
- Widely used treatment guidelines and/or current clinical literature and/or standards of medical practice should support that the recommended intervention offers the greatest net benefit among competing alternatives.
- There exists a reasonable likelihood that the intervention will change management and/or lead to an improved outcome for the patient.

Providers may be required to submit clinical documentation in support of a request for services. Such documentation must a) accurately reflect the clinical situation at the time of the requested service, and b) sufficiently document the ordering provider's clinical intent.

If these elements are not established with respect to a given request, the determination of appropriateness will most likely require a peer-to-peer conversation to understand the individual and unique facts that would justify a finding of clinical appropriateness. During the peer-to-peer conversation, factors such as patient acuity and setting of service may also be taken into account to the extent permitted by law.

Simultaneous Ordering of Multiple Diagnostic or Therapeutic Interventions

Requests for multiple diagnostic or therapeutic interventions at the same time will often require a peer-to-peer conversation to understand the individual circumstances that support the medical necessity of performing all interventions simultaneously. This is based on the fact that appropriateness of additional intervention is often dependent on the outcome of the initial intervention.

Additionally, either of the following may apply:

- Current literature and/or standards of medical practice support that one of the requested diagnostic or therapeutic interventions is more appropriate in the clinical situation presented; or
- One of the diagnostic or therapeutic interventions requested is more likely to improve patient outcomes based on current literature and/or standards of medical practice.

Repeat Diagnostic Intervention

In general, repeated testing of the same anatomic location for the same indication should be limited to evaluation following an intervention, or when there is a change in clinical status such that additional testing is required to determine next steps in management. At times, it may be necessary to repeat a test using different techniques or protocols to clarify a finding or result of the original study.

Repeated testing for the same indication using the same or similar technology may be subject to additional review or require peer-to-peer conversation in the following scenarios:

- Repeated diagnostic testing at the same facility due to technical issues
- Repeated diagnostic testing requested at a different facility due to provider preference or quality concerns

- Repeated diagnostic testing of the same anatomic area based on persistent symptoms with no clinical change, treatment, or intervention since the previous study
- Repeated diagnostic testing of the same anatomic area by different providers for the same member over a short period of time

Repeat Therapeutic Intervention

In general, repeated therapeutic intervention in the same anatomic area is considered appropriate when the prior intervention proved effective or beneficial and the expected duration of relief has lapsed. A repeat intervention requested prior to the expected duration of relief is not appropriate unless it can be confirmed that the prior intervention was never administered. Requests for on-going services may depend on completion of previously authorized services in situations where a patient's response to authorized services is relevant to a determination of clinical appropriateness.

Electrophysiological Studies

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Specific CPT codes for services should be used when available. Nonspecific or not otherwise classified codes may be subject to additional documentation requirements and review.

CPT/HCPCS

93600	Bundle of His recording
93602	Intra-atrial recording
93603	Right ventricular recording
93609	Intraventricular and/or intra-atrial mapping of tachycardia site(s) with catheter manipulation to record from multiple sites to identify origin of tachycardia (List separately in addition to code for primary procedure)
93610	Intra-atrial pacing
93612	Intraventricular pacing
93613	Intracardiac electrophysiologic 3-dimensional mapping (List separately in addition to code for primary procedure)
93618	Induction of arrhythmia by electrical pacing
93619	Comprehensive electrophysiologic evaluation with right atrial pacing and recording, right ventricular pacing and recording, His bundle recording, including insertion and repositioning of multiple electrode catheters, without induction or attempted induction of arrhythmia
93620	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with right atrial pacing and recording, right ventricular pacing and recording, His bundle recording
93621	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with left atrial pacing and recording from coronary sinus or left atrium (List separately in addition to code for primary procedure)
93622	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with left ventricular pacing and recording (List separately in addition to code for primary procedure)
93623	Programmed stimulation and pacing after intravenous drug infusion (List separately in addition to code for primary procedure)
93624	Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia
93642	Electrophysiologic evaluation of single or dual chamber transvenous pacing cardioverter-defibrillator (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters)
93644	Electrophysiologic evaluation of subcutaneous implantable defibrillator (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters)
93662	Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)

Coding/billing/preauthorization considerations

When an electrophysiology study (EPS) is followed by ablation (on the same date of service), the EPS is considered an integral part of the ablation procedure and thus should not be billed separately. The extent of an EPS depends on the clinical situation prompting the study. When a comprehensive EPS is performed, the comprehensive code (93619-93622) reflecting the combination of rendered services should be reported. If a comprehensive EPS is not performed, providers should report codes for the individual components of the service rendered. Occasionally, an individual authorized for ablation may undergo EPS but not proceed to ablation. In this scenario, it will be assumed that the individual has met authorization criteria for EPS.

General Information

Description

A cardiac electrophysiology study (EPS) is an invasive procedure which evaluates the cardiac conduction system and attempts to uncover the substrate for and location of arrhythmias. Catheters placed at various locations within the heart, with both pacing and recording capability, facilitate evaluation of each component of the conduction system. The EPS may also include attempts to induce arrhythmia or to map the source of an arrhythmia with a view to ablation. Broadly speaking, EPS is performed in two situations, risk stratification of patients without documented arrhythmias, and the evaluation of patients with known rhythm abnormalities.

Patients without documented arrhythmia include those with syncope or sudden cardiac death of unknown etiology who are at increased risk of tachyarrhythmia or bradyarrhythmia. Patients with known rhythm abnormalities most often undergo EPS as a prelude to cardiac ablation (if feasible)—in which case the EPS and ablation are performed at the same sitting. Less frequently, EPS is used in patients with known bradyarrhythmia to determine candidacy for pacemaker therapy.

Guideline Scope

This guideline addresses the appropriateness of EPS when performed separate from a cardiac ablation procedure. For the appropriateness of ablation procedures (which include EPS as part of the service), see the following Carelon Guidelines: Transcatheter Ablation for Management of Atrial Fibrillation and Transcatheter Ablation for Management Supraventricular and Ventricular Arrhythmias.

Definitions

Complex congenital heart disease – Congenital cardiac disease other than the following: patent foramen ovale, small atrial or ventricular septal defects, mitral valve prolapse, bicuspid aortic valve, or successfully repaired (or spontaneously closed) patent ductus arteriosus

Documented arrhythmia – An arrhythmia is considered documented when there is an electronic or paper record of the abnormal rhythm which can be submitted (if requested)

Preexcitation – Conduction of atrial electrical impulses to the ventricles via an accessory pathway usually manifests on the surface EKG as shortening of the PR interval and widening of the QRS complex due to the presence of a delta wave. Preexcitation can also include retrograde atrial activation from the ventricles via an accessory pathway.

Recurrent syncope or presyncope – Two (2) or more episodes within the past five (5) years

Wolff-Parkinson-White pattern – Electrocardiographic evidence of preexcitation without documented arrhythmia involving the accessory pathway

Wolff-Parkinson-White syndrome – Electrocardiographic evidence of preexcitation with documented arrhythmia involving the accessory pathway

Abbreviations

AV – atrioventricular

EKG – electrocardiogram

EPS – electrophysiology study

ICD – implantable cardioverter defibrillator

LBBB – left bundle branch block

LV – left ventricular

LVEF – left ventricular ejection fraction

MI – myocardial infarction

NSVT – non-sustained ventricular tachycardia

RBBB – right bundle branch block

SCD – sudden cardiac death

SVT – supraventricular tachycardia

VT – ventricular tachycardia

WPW – Wolff-Parkinson-White

Clinical Indications

For individuals WITHOUT documented arrhythmia

EPS is considered medically necessary for individuals with no clear indication for ICD in ANY of the following scenarios:

- **Syncope without an obvious cause following standard evaluation and ANY of the following:**
  - LVEF ≤ 35%
  - Prior MI (or myocardial scar related to other conditions)
  - Bifascicular block (either complete LBBB, or RBBB with hemi-fascicular block)
  - Cardiac sarcoidosis
  - Complex congenital heart disease
  - Myotonic dystrophy
  - Recurrent syncope or presyncope when arrhythmic etiology is suspected, and prior noninvasive testing is inconclusive or equivocal
  - Preexcitation (for example, WPW pattern on surface EKG)
- **Survivors of sudden cardiac death and ANY of the following:**
  - No cause of SCD has been established by standard evaluation
  - Myotonic dystrophy
  - Preexcitation (for example, WPW pattern on surface EKG)
- **Preexcitation and BOTH of the following:**

    - Asymptomatic individuals younger than 35 years with preexcitation (for example, WPW pattern on surface EKG)
    - Preexcitation is not an intermittent finding
- **Cardiac sarcoidosis**
    - To determine candidacy for ICD
- **Congenital heart disease and ANY of the following:**
    - Ebstein anomaly with preexcitation
    - Ebstein anomaly prior to surgical intervention on the tricuspid valve
    - Tetralogy of Fallot with QRS duration greater than 180 msec
    - Tetralogy of Fallot with left ventricular dysfunction
- **Myotonic dystrophy and ANY of the following:**
    - Palpitation
    - Syncope
    - Survival of SCD
    - PR interval 240 msec or longer
    - QRS duration 120 msec or longer
    - Individual is age 40 years or older and has significant late gadolinium enhancement on cardiac MRI

For individuals WITH documented arrhythmia

EPS is considered medically necessary for individuals with no clear indication for ICD in ANY of the following scenarios:

- **Syncope with EITHER of the following:**
    - Sinus bradycardia when, despite ambulatory monitoring, temporal correlation with syncope cannot be established
    - Preexcitation (for example, WPW syndrome)
- **Evaluation of spontaneous non-sustained ventricular tachycardia following myocardial infarction and BOTH of the following apply:**
    - LVEF ≤ 40%
    - NSVT was noted > 96 hours following MI
- **Myotonic dystrophy in an individual age 40 years or older and EITHER of the following:**
    - Documented SVT
    - Documented VT
- **Congenital heart disease**
    - With NSVT

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History

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