Evolent Clinical Guideline 7299 for Hemodialysis Access Creation

Guideline Number: Evolent_CG_7299	Applicable Codes	
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STATEMENT

General Information

- ***It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.***
- ***Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.***
- ***The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.***

Purpose

Indications for determining medical necessity for Hemodialysis Access Creation.

Clinical Reasoning

All criteria are substantiated by the latest evidence-based medical literature. To enhance transparency and reference, Appropriate Use (AUC) scores, when available, are diligently listed alongside the criteria.

This guideline first defaults to AUC scores established by published, evidence-based guidance endorsed by professional medical organizations. In the absence of those scores, we adhere to a standardized practice of assigning an AUC score of 6. This score is determined by considering variables that ensure the delivery of patient-centered care in line with current guidelines, with a focus on achieving benefits that outweigh associated risks. This approach aims to maintain a robust foundation for decision-making and underscores our commitment to upholding the highest standards of care. [1–5]

General Considerations

- **Hemodialysis access can be achieved via a central venous catheter (CVC) or via creation of an arteriovenous fistula (AVF) or arteriovenous graft (AVG). For the most part, CVC(s) should be regarded as temporary procedures and avoided whenever possible. Except in rare circumstances a CVC should always be tunneled (CVTC) (see Definitions).**
- **If there is sufficient time for permanent access to be created an AVF is generally preferred over an AVG assuming suitable anatomy, local limb conditions and patient preference. The previous "fistula first" initiative is no longer appropriate.**

- **Providers must involve patients in a shared decision-making process involving reason(s) for, as well as the type of procedure(s) that could be used including their potential outcomes. This process should be reflected in notes provided.**

INDICATIONS (6)

Central Venous Catheters

- **Short Term indications include ANY of the following:**
  - **An AVF or AVG has been created but is not ready for use**
  - **Acute indication for hemodialysis such as acute transplant rejection**
  - **Peritoneal dialysis patients requiring a time limited period of rest or resolution of a complication.**
  - **Complications of an AVF or AVG that result in temporary non-use until the problem is resolved**
  - **Living donor confirmed within the next 90 days but dialysis required in the interim**
- **Long term indications include ANY of the following:**
  - **Multiple prior failed arteriovenous (AV) accesses with no available options**
  - **Limited life expectancy**
  - **Valid patient preference whereby use of an AV access will severely limit quality of life or achievement of life goals, and after the patient has been properly informed of patient specific risks and benefits of other potential and reasonable access options for that patient (if available)**
  - **Absence of an AV access creation option due to severe arterial inflow disease or outflow venous obstruction, or adverse local limb conditions**
  - **Diminutive patients or children with prohibitively small vessels**

AV Fistula or AV Graft

- **Dialysis-dependent renal failure expected to be of long-term duration**

Limitations

- **A CVC should not be inserted if dialysis can be delayed long enough for a functional AVF or AVG to be created**
- **An AVF should not be created in a terminally ill patient with life expectancy of less than 6 months unless specifically requested by the patient**

CODING AND STANDARDS

Codes

36005, 36010, 36011, 36800, 36810, 36815, 36818, 36819, 36820, 36821, 36825, 36830, 36835, 36836, 36837, 75820, 75822

Applicable Lines of Business

☒	**CHIP (Children's Health Insurance Program)**
☒	**Commercial**
☒	**Exchange/Marketplace**
☒	**Medicaid**
☒	**Medicare Advantage**

BACKGROUND

Definitions

Hemodialysis is a process of purifying the blood of a person whose kidneys are not working normally (renal failure). Hemodialysis requires vascular access to obtain blood for purifying in the dialysis machine and then to return blood to the body. This can be achieved via a centrally placed venous catheter (CVC) or an arteriovenous (AV) fistula (AVF) or AV graft. CVCs are preferably tunneled from the insertion site to another site from which it is inserted into a central vein (central vein tunneled catheter (CVTC)

An arteriovenous fistula (AV fistula) is a surgical or endovenous (minimally invasive radiologic) procedure where a vein is connected to an artery. This artificial connection allows the vein to become larger and for the walls of the vein to thicken, a process termed maturation. A mature fistula makes it easier for the vein to be punctured repeatedly for dialysis. Maturation typically takes three to six months to occur. An arteriovenous fistula is the preferred type of vascular access due to lower rate of infection and clot formation, resulting in greater longevity than other types of vascular access. However, not everyone is a good candidate for an arteriovenous fistula, particularly older patients, and patients with small veins.

An AV Graft is considered if the patient is not a suitable candidate for an AVF. An arteriovenous graft is an artificial tubing that is surgically attached on one end to an

artery, and on the other end to a vein. The tube is placed entirely under the skin. AVG are more prone to infection and clotting than AVF.

AUC Score

A reasonable diagnostic or therapeutic procedure can be defined as that for which the expected clinical benefits outweigh the associated risks, enhancing patient care and health outcomes in a cost-effective manner. [(2)]

- **Appropriate Care- Median Score 7-9**
- **May be Appropriate Care- Median Score 4-6**
- **Rarely Appropriate Care- Median Score 1-3**

Acronyms

AV: Arteriovenous

AVF: Arteriovenous fistula

AVG: Arteriovenous graft

CPT: Customary Procedural Terminology

CVC: Central venous catheter

CVTC: Central venous tunneled catheter

PTFE: Polytetrafluoroethylene

SUMMARY OF EVIDENCE

KDOQI Clinical Practice Guideline for Vascular Access: 2019 Update [(6)]

Study Design: The guideline update was conducted by the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative (KDOQI). The update involved a comprehensive review of the literature, including more than 4,600 articles, of which 286 were included in the evidence tables used to develop the 26 guideline sections. The evidence review was independently conducted using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach.

Target Population: The guidelines are intended for multidisciplinary practitioners who care for chronic kidney disease (CKD) patients and their vascular access. This includes nephrologists, surgeons, interventional radiologists, nurses, and other healthcare professionals involved in the management of hemodialysis vascular access.

Key Factors:

> **End-Stage Kidney Disease (ESKD) Life-Plan: The guidelines introduce the concept of an individualized ESKD Life-Plan, which maps out a comprehensive strategy for dialysis modalities and vascular access for the lifetime of the patient.**

Vascular Access Choice: The guidelines provide recommendations on the choice of vascular access, including arteriovenous fistulas (AVFs), arteriovenous grafts (AVGs), and central venous catheters (CVCs), based on patient circumstances and preferences.

Vascular Access Types and Locations: The guidelines discuss the indications for use, types, and locations of vascular access, emphasizing a patient-centered approach.

Preoperative and Postoperative Care: The guidelines include recommendations for preoperative vessel mapping, postoperative evaluation, and interventions to enhance AVF maturation and prevent complications.

Complications and Management: The guidelines address the prevention, monitoring, and treatment of complications related to vascular access, including infections, thrombosis, and stenosis.

ANALYSIS OF EVIDENCE

These guidelines provide a comprehensive framework for managing vascular access in hemodialysis patients, emphasizing a patient-centered approach and the importance of individualized care plans. The evidence-based recommendations aim to improve patient outcomes and reduce complications associated with vascular access. [6]

POLICY HISTORY

Date	Summary
June 2025	• Added a Summary of Evidence and Analysis of Evidence
May 2025	• Added new bullet-point to the General Statement section • No clinical changes
January 2025	• This guideline replaces UM CARDIO 1165 for Hemodialysis Access Creation • Added CPT codes 36836 and 36837 • Clinical indications were updated per societal guidance

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

REFERENCES

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