

# Cardio Policy:

## Duplex Scan of Hemodialysis Access

<b>POLICY NUMBER</b> UM CARDIO_1079	<b>SUBJECT</b> Duplex Scan of Hemodialysis Access		<b>DEPT/PROGRAM</b> UM Dept	<b>PAGE 1 OF 3</b>
<b>DATES COMMITTEE REVIEWED</b> 04/01/11, 11/07/12, 12/17/13, 12/15/14, 05/19/15, 08/12/15, 11/28/16, 12/21/16, 10/23/17, 02/13/19, 02/20/19, 12/11/19, 05/13/20, 05/28/21, 07/14/21, 08/11/21, 07/13/22, 01/11/23, 05/10/23, 12/20/23	<b>APPROVAL DATE</b> December 20, 2023	<b>EFFECTIVE DATE</b> December 22, 2023	<b>COMMITTEE APPROVAL DATES</b> 04/01/11, 11/07/12, 12/17/13, 12/15/14, 05/19/15, 08/12/15, 11/28/16, 12/21/16, 10/23/17, 02/13/19, 02/20/19, 12/11/19, 05/13/20, 05/28/21, 07/14/21, 08/11/21, 07/13/22, 01/11/23, 05/10/23, 12/20/23	
<b>PRIMARY BUSINESS OWNER:</b> UM		<b>COMMITTEE/BOARD APPROVAL</b> Utilization Management Committee		
<b>URAC STANDARDS</b> HUM v8: UM 1-2; UM 2-1	<b>NCQA STANDARDS</b> UM 2		<b>ADDITIONAL AREAS OF IMPACT</b>	
<b>CMS REQUIREMENTS</b>	<b>STATE/FEDERAL REQUIREMENTS</b>		<b>APPLICABLE LINES OF BUSINESS</b> Commercial, Exchange, Medicaid	

### I. PURPOSE

Indications for determining medical necessity for duplex scan of hemodialysis (HD) access.

### II. DEFINITIONS

Duplex scan of hemodialysis access (including arterial inflow, body of access and venous outflow). Combines Doppler and conventional ultrasound, to see the structure of blood vessels, how the blood is flowing through the vessels, and whether there is any obstruction in the vessels. Combining spectral Doppler analysis and color flow doppler images provide anatomic and hemodynamic information.

An appropriate diagnostic or therapeutic procedure is one in which the expected clinical benefit exceeds the risks or negative consequences of the procedure by a sufficiently wide margin such that the procedure is generally considered acceptable or reasonable care. The ultimate objective of AUC is to improve patient care and health outcomes in a cost-effective manner but is not intended to ignore ambiguity and nuance intrinsic to clinical decision making.

Appropriate Care- Median Score 7-9

May be Appropriate Care- Median Score 4-6

Rarely Appropriate Care- Median Score 1-3

### III. POLICY

**Indications for approving a request for medical necessity are:**

- A. Duplex scan may be appropriate after access placement, for any signs or symptoms of HD access vascular compromise and complications (e.g. infections, pseudo aneurysm, AVF/Graft)

stenosis, or fluid collection). The results are necessary to determine the clinical course of treatment. **(AUC Score 8)**<sup>1,2,3,4</sup>

- B. There is elevated venous pressure greater than 200 mmHg on a 300 cc/min pump during dialysis **(AUC Score 8)**<sup>1,2,3,4</sup>
- C. There is elevated recirculation of time of 15% or greater and low urea reduction rate less than 60% **(AUC Score 8)**<sup>1,2,3,4</sup>
- D. HD access demonstrates a palpable “water hammer” pulse or decreased or absent thrill or abnormal bruit over fistula on examination. **(AUC Score 8)**<sup>1,2,3,4</sup>
- E. Difficult cannulation, thrombus aspiration or prolonged bleeding (greater than 20 minutes) from access needle sites after dialysis despite local pressure. **(AUC Score 8)**<sup>1,2,3,4</sup>
- F. Patients with prolonged immaturity (greater than 6 weeks) of a surgically created AVF. **(AUC Score 8)**<sup>1,2,3,4</sup>
- G. A baseline duplex post-op within 6 weeks after AVF/AVG creation, is reasonable to perform in order to validate maturation of newly created AVF/AVG. **(AUC Score 7)**<sup>1,2,3,4</sup>

**Limitations:**

- A. The routine use of Duplex scan following creation of A-V communication is not appropriate in the absence of symptoms, abnormal physical exam findings, or other suspicion of a complication, as documented in the medical notes.
- B. Requests for services that are part of a surveillance protocol for patients who are involved in a clinical trial are considered out of scope (OOS) for New Century Health and cannot be reviewed.

## **IV. PROCEDURE**

- A. In order to review a request for medical necessity, the following items must be submitted for review:
  - 1. Cardiologist/Vascular Surgeon/Nephrologist progress note that prompted request
  - 2. All previous vascular studies performed
- B. Primary codes appropriate for this service:  
93990

## **V. APPROVAL AUTHORITY**

- A. Review – Utilization Management Department
- B. Final Approval – Utilization Management Committee

## **VI. ATTACHMENTS**

- A. None

## **VII. REFERENCES**

- 1. Centers for Medicare and Medicaid Services. Michigan Local Coverage Determination (LCD) (L35751). Non-Invasive Evaluation of Extremity Veins. Retrieved from <https://www.cms.gov> [Accessed December 19, 2023].

2. Centers for Medicare and Medicaid Services. Illinois Local Coverage Determination (LCD) (L33627). Non-Invasive Evaluation of Extremity Veins. Retrieved from <https://www.cms.gov> [Accessed December 19, 2023].
3. Gornik HL, et al. ACCF/ACR/AIUM/ASE/IAC/SCAI/SCVS/SIR/SVM/SVS/SVU 2013 Appropriate Use Criteria for Peripheral Vascular Ultrasound and Physiological Testing Part II: Testing for Venous Disease and Evaluation of Hemodialysis Access: A Report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force. The American College of Radiology, American Institute of Ultrasound in Medicine, American Society of Echocardiography, American Society of Nephrology, Inter-Societal Accreditation Commission, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, Society of Interventional Radiology, Society for Vascular Medicine, Society for Vascular Surgery. Journal of the American College of Cardiology Aug 2013; Volume 62 Issue 7, Pages 649-665.
4. Robert C. Hendel MD, FACC, FAHA, et al. Appropriate use of cardiovascular technology: 2013 ACCF appropriate use criteria methodology update: a report of the American College of Cardiology Foundation appropriate use criteria task force. Journal of the American College of Cardiology. March 2013, Volume 61, Issue 12, Pages 1305-1317.
5. NCQA UM 2023 Standards and Elements.