New Century Health

Cardio Policy:

Arterial PVR and Stress Arterial PVR

POLICY NUMBER UM CARDIO_1077	**SUBJECT** Arterial Pulse Volume Recording (PVR) and Stress Arterial PVR		**DEPT/PROGRAM** UM Dept	**PAGE 1 OF 4**
DATES COMMITTEE REVIEWED 04/01/11, 11/07/12, 03/10/14, 06/16/14, 08/12/15, 11/23/16, 12/21/16, 10/10/17, 03/07/18, 02/13/19, 02/21/19, 04/23/19, 12/11/19, 05/13/20, 02/10/21, 03/10/21, 08/11/21, 07/13/22	**APPROVAL DATE** July 13, 2022	**EFFECTIVE DATE** July 29, 2022	**COMMITTEE APPROVAL DATES** 04/01/11, 11/07/12, 03/10/14, 06/16/14, 08/12/15, 11/23/16, 12/21/16, 10/10/17, 03/07/18, 02/13/19, 02/21/19, 04/23/19, 12/11/19, 05/13/20, 02/10/21, 03/10/21, 08/11/21, 07/13/22	
PRIMARY BUSINESS OWNER: UM		**COMMITTEE/BOARD APPROVAL** Utilization Management Committee		
URAC STANDARDS HUM v8: UM 1-2; UM 2-1	**NCQA STANDARDS** UM 2		**ADDITIONAL AREAS OF IMPACT**	
CMS REQUIREMENTS	**STATE/FEDERAL REQUIREMENTS**		**APPLICABLE LINES OF BUSINESS** Commercial, Exchange, Medicaid	

I. PURPOSE

Indications for determining medical necessity for Arterial Pulse Volume Recording (PVR) and Stress Arterial PVR.

II. DEFINITIONS

A Pulse volume recording is a non-invasive test that measures the blood volume changes that occur in the legs. During this test, a blood pressure cuff is placed on the arm and multiple cuffs are placed on the legs. The cuffs are inflated slightly while the patient is lying down. As blood pulse s through the arteries, the blood vessels expand, causing an increase or decrease in the volume of air within the cuff. A recording device displays these pulse volume changes as a waveform on a monitor. Blood pressures are measured for the purpose of localizing the area of blockage in the extremities.

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. Arterial PVR

1. Patient with claudication with Ankle –Brachial Index (ABI) ≥ 1.3 and no prior PVR done within the last 12 months. **(AUC Score 7)**[1,2,3]
2. Patient with DM-2 presenting with claudication and absence of or diminished femoral-popliteal pulses or clinical presentation suggestive of chronic limb ischemia and no prior PVR done within the last 12 months. **(AUC Score 9)**[1,2,3]
3. Patient with rest pain associated with absent leg pulses and no prior PVR done within the last 12 months. **(AUC Score 9)**[1,2,3]
4. Patient with claudication with Ankle–Brachial Index (ABI) ≤ 0.9 no prior PVR done within the last 12 months. **(AUC Score 9)**[1,2,3]
5. Patient with no prior diagnosis of PAD but has decreased and/or absence of infra popliteal pulses and/ OR presence of ulcer(s)/ infection in lower extremity. **(AUC Score 9)**[1,2,3]
6. Patient with PAD and with/ or without prior lower extremity Percutaneous or Surgical Intervention, now presenting with a new or worsening lifestyle-limiting claudication despite being on pharmacological therapy and no prior PVR done since the onset of new signs and symptoms. **(AUC Score 9)**[1,2,3]
7. Asymptomatic patients with prior lower extremity Percutaneous or Surgical Intervention who did not have a postintervention baseline vascular surveillance testing done. **(AUC Score 7)**[1,2,3]
8. Surveillance PVR in asymptomatic patients after lower extremity Percutaneous or Surgical intervention can be done within 6 weeks after intervention, as a baseline. **(AUC Score 8)**[1,2,3]
9. Surveillance PVR in asymptomatic patients after lower extremity surgical intervention can be done at 6 months after baseline study. **(AUC Score 7)**[1,2,3]
10. Surveillance PVR in asymptomatic patients after lower extremity Percutaneous or Surgical Intervention is appropriate annually, after the baseline study. **(AUC Score 7)**[1,2,3]
11. Evaluation of upper extremity with PVR is appropriate in presence of claudication, ulcer, suspected thoracic outlet syndrome, trauma, re-op radial artery harvest for CABG, presence of pulsatile mass or evidence of ischemia or bruit after vascular access with no prior PVR done within the last 12 months. **(AUC Score 8)**[1,2,3]
12. Evaluation of a patient who has undergone upper extremity Percutaneous or Surgical Intervention, presenting with new or worsening lifestyle-limiting claudication despite being on pharmacological therapy with no PVR done since onset of symptoms. **(AUC Score 8)**[1,2,3]
13. Surveillance of upper extremity PAD after revascularization is appropriate if done within one month of procedure as baseline. **(AUC Score 8)**[1,2,3]
14. Surveillance duplex in asymptomatic patients after upper extremity surgical intervention can be done at 6 months following baseline study post intervention. **(AUC Score 7)**[1,2,3]
15. Surveillance duplex in asymptomatic patients after upper extremity Percutaneous or Surgical intervention can be done annually for 3 years provided there is no change in clinical status, after baseline study post intervention. **(AUC Score 7)**[1,2,3]

B. Stress Arterial PVR

1. Patients with leg pain and/or claudication with border line abnormal ABI (between 0.91-0.99). **(AUC Score 7)**[1,2,3]
2. Patients with a resting ABI that is within normal limits, however they continue to describe ambulatory symptoms that are typical for claudication or have physical characteristics that suggest peripheral arterial insufficiency. **(AUC Score 7)**[1,2,3]

Limitations:

A. Continuous burning of the feet is considered to be a neurologic and not a vascular symptom. Non-specific leg pain or pain in limb is considered to general to warrant vascular testing.

B. Edema rarely occurs with arterial occlusive disease. The absence of pulses is not an indication to proceed beyond the physical examination unless it is related to other signs and/or symptoms.

C. Arterial PVR is not to be utilized to follow non-invasive medical treatment regimens.

D. Stress arterial PVR is not appropriate once an abnormal resting ABI study or a prior abnormal stress arterial PVR study has been obtained.

E. The use of non-invasive physiologic and imaging studies for post catheter-based or surgical intervention surveillance as per #8-10 and #13-15 above is limited to one modality i.e., either ABI or PVR or duplex ultrasound. Utilization of that chosen modality must be consistent throughout the surveillance period. Additional modalities may be utilized only if clinical or symptomatic changes are documented.

F. 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. Progress note that prompted request,
   2. All previous vascular studies preformed,
   3. Progress notes from Vascular Surgeon (if seen previously by a surgeon)

B. Primary codes appropriate for this service: 93923, 93924

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. Local Coverage Determination (LCD) (L33696). Noninvasive Physiologic Studies or Upper or Lower Extremity Arteries. Retrieved from https://www.cms.gov April 23rd, 2019.
2. Heather L.Gornik MD, FACC, et al. ACCF/ACR/AIUM/ASE/ASN/ICAVL/SCAI/SCCT/SIR/SVM/SVS2012 Appropriate Use Criteria for

Peripheral Vascular Ultrasound and Physiological Testing Part I: Arterial Ultrasound and Physiological Testing :A Report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force, American College of Radiology, American Institute of Ultrasound in Medicine, American Society of Echocardiography, American Society of Nephrology, Inter-societal Commission for the Accreditation of Vascular Laboratories ,Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, Society for Interventional Radiology, Society for Vascular Medicine, and Society for Vascular Surgery. Journal of the American College of Cardiology. July 2012, Volume 60, Issue 3, Pages 242-276.

3. Robert C. Hendel MD, FACC, 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.
4. NCQA UM 2022 Standards and Elements.