# Coverage Summary

## Cardiovascular Diagnostic and Therapeutic Procedures

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<tr>
<td>Approved by:</td>
<td>UnitedHealthcare Medicare Benefit Interpretation Committee</td>
<td>Last Review Date: 08/18/2020</td>
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**Related Medicare Advantage Policy Guidelines:**

- Ambulatory Blood Pressure Monitoring (NCD 20.19)
- Biomarkers in Cardiovascular Risk Assessment
- Cardiac Output Monitoring by Thoracic Electrical Bioimpedance (TEB) (NCD 20.16)
- Cardiointegrgram (CIG) as an Alternative to Stress Test or Thallium Stress Test (NCD 20.27)
- Displacement Cardiography (NCD 20.24)
- Electrocardiographic Services (NCD 20.15)
- External Electrocardiographic Recording
- Microvolt T-Wave Alternans (MTWA) (NCD 20.30)
- Noninvasive Tests of Carotid Function (NCD 20.17)
- Percutaneous Coronary Interventions
- Plethysmography (NCD 20.14)

### INDEX TO COVERAGE SUMMARY

1. **COVERAGE**
   1. Diagnostic Endocardial Electrical Stimulation (EES)
   2. Digital Subtraction Angiography (DSA)
   3. Digoxin Therapeutic Drug Assay
   4. Electrocardiographic (EKG) Services
   5. HIS Bundle Study
   6. Cardiac Catheterization Performed Other Than a Hospital Setting
   7. Thoracic Electrical Bioimpedance (TEB)
   8. Displacement Cardiography (including Cardiokymography and Photokymography)
   9. Cardiointegrgram (CIG)
   10. Ambulatory Blood Pressure Monitoring
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   12. Plethysmography
   13. Microvolt T-wave Alternans
   14. Intravascular Coronary Ultrasound
   15. Arterial Compliance Testing, Using Waveform Analysis (CPT code 93050)
I. COVERAGE

Coverage Statement: Cardiovascular diagnostic procedures are covered when Medicare coverage criteria are met.

Guidelines/Notes:

The following is not an all-inclusive list of cardiac diagnostic procedures, but reflects diagnostic procedures based on the National Coverage Determinations (NCDs) listed below.

1. **Diagnostic Endocardial Electrical Stimulation (EES)**
   Diagnostic endocardial electrical stimulation is covered when criteria are met. See the NCD for Diagnostic Endocardial Electrical Stimulation (Pacing) (20.12). (Accessed January 3, 2020)

2. **Digital Subtraction Angiography (DSA)**
   Digital subtraction angiography is covered the same as conventional angiography. Payment for DSA should not exceed, and may be less than, that being paid for conventional angiographic techniques. See the NCD for Digital Subtraction Angiography (220.9). (Accessed January 3, 2020)

3. **Digoxin Therapeutic Drug Assay**
   Digoxin therapeutic drug assay is covered. For specific indications, see the NCD for Digoxin Therapeutic Drug Assay (190.24). (Accessed January 3, 2020)

4. **Electrocardiographic (EKG) Services**
   EKG services, including Electrocardiogram Ambulatory Electrocardiography (AECG) (Holter monitor or Real-time EKG), Cardiac Event Monitor or Event Recorders are covered when specific criteria are met. See the NCD for Electrocardiographic Services (20.15). (Accessed January 3, 2020)

   Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at [http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx](http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx)

5. **HIS Bundle Study**
   HIS Bundle Study is covered for selected patients. For specific indications, see the NCD for HIS Bundle Study (20.13). (Accessed January 3, 2020)
6. **Cardiac Catheterization Performed Other than a Hospital Setting**

Cardiac catheterization performed other than a hospital setting is a covered service. The procedure may also be covered when performed in a freestanding clinic when the carrier, in consultation with the appropriate Peer Review Organization (PRO), determines that the procedure can be performed safely in all respects in the particular facility.

In the absence of an NCD, local Medicare Contractors, UnitedHealthcare Medicare Advantage can determine whether a cardiac catheterization performed in a freestanding facility is reasonable and necessary.

*See the Decision Memo for Cardiac Catheterization Performed In Other Than A Hospital Setting (CAG-00166N). (Accessed January 3, 2020)*

**Note:** CMS repealed the NCD for Cardiac Catheterization Performed in Other than a Hospital Setting (20.25) effective January 12, 2006. (Accessed January 3, 2020)

7. **Thoracic Electrical Bioimpedance (TEB)**

TEB devices are covered when specific patient criteria are met. *See the NCD for Cardiac Output Monitoring by Thoracic Electrical Bioimpedance (20.16). (Accessed January 3, 2020)*

8. **Displacement Cardiography (including Cardiokymography and Photokymography)**

Displacement cardiography, including cardiokymography and photokymography, is a non-invasive diagnostic test used in evaluating coronary artery disease.

a) Cardiokymography is a covered service only when it is used as an adjunct to electrocardiographic stress testing in evaluating coronary artery disease and only when the following clinical indications are present:
   - For male patients, atypical angina pectoris or non-ischemic chest pain; or
   - For female patients, angina, either typical or atypical

b) Photokymography is not covered.

*See the NCD for Displacement Cardiography (20.24). (Accessed January 3, 2020)*

Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at [http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx](http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx).

9. **Cardiointegram (CIG)**

Cardiointegram (CIG) is not a covered benefit as it is considered by Medicare as investigational. *See the NCD for Cardiointegram (CIG) as an Alternative to Stress Test or Thallium Stress Test (20.27). (Accessed January 3, 2020)*

10. **Ambulatory Blood Pressure Monitoring**

Ambulatory blood pressure monitoring is covered when criteria are met. *See the NCD for Ambulatory Blood Pressure Monitoring (20.19). (Accessed January 3, 2020)*

*Note:* On July 2, 2019, the Centers for Medicare & Medicaid Services (CMS) issued a final decision memo which expands the coverage of ambulatory pressure monitoring (ABPM). *See the CMS Final Decision Memo for Ambulatory Blood Pressure Monitoring (ABPM) (CAG-00067R2). (Accessed January 3, 2020)*

11. **Non-invasive Test of Carotid Function (Direct and Indirect)**

Refer to the Coverage Summary for Carotid Procedures and Testing.

12. **Plethysmography**

Plethysmography is covered when Category I tests criteria are met. Category II tests are
considered experimental and therefore, not covered. See the NCD for Plethysmography (20.14). (Accessed January 3, 2020)

Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx.

13. Microvolt T-wave Alternans

Microvolt T-wave Alternans (MTWA) testing is a non-invasive diagnostic test that detects minute electrical activity in a portion of the electrocardiogram (ECG) known as the T-wave. MTWA testing has a role in the stratification of patients who may be at risk for sudden cardiac death (SCD) from ventricular arrhythmias.

**Effective for dates of service on and after March 21, 2006.** MTWA diagnostic testing is covered for the evaluation of patients at risk for SCD, only when the SA method is used.

**Effective for dates of service on and after January 13, 2015.** Medicare Administrative Contractors (MACs) acting within their respective jurisdictions may determine coverage of MTWA diagnostic testing for the evaluation of patients at risk for SCD using all other methods.

See the NCD for Microvolt T-Wave Alternans (MTWA) (20.30). (Accessed July 17, 2020)

14. Intravascular Coronary Ultrasound (CPT codes 92978 and 92979)

- Medicare does not have a National Coverage Determination (NCD) for intravascular coronary ultrasound.
- Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) exist and compliance with these policies is required where applicable. For specific LCDs/LCAs, refer to the LCD Availability Grid (Attachment A).
- For coverage guidelines for states/territories with no LCDs/LCAs, refer to the Wisconsin Physicians LCD for Percutaneous Coronary Interventions (L34761). (IMPORTANT NOTE: After checking the LCD/LCA Availability Grid and searching the Medicare Coverage Database, if no LCD/LCA is found, then use the above referenced policy.)
  - Committee approval date: July 21, 2020
  - Accessed September 17, 2020

15. Arterial Compliance Testing, Using Waveform Analysis (CPT code 93050)

- Medicare does not have a National Coverage Determination (NCD) for arterial compliance testing, using waveform analysis.
- Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) do not exist.
- For coverage guidelines, see the UnitedHealthcare Commercial Medical Policy for Cardiovascular Disease Risk Tests. (IMPORTANT NOTE: After searching the Medicare Coverage Database, if no LCD/LCA is found, then use the above referenced policy.)
  - Committee approval date: July 21, 2020
  - Accessed July 17, 2020

16. Lower Extremity Vascular Angiography, Performed at Time of an Interventional Procedure or as Pre-Procedural Assessment (CPT codes 75710 and 75716)

- Medicare does not have a National Coverage Determination (NCD) for lower extremity vascular angiography.
- Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) exist and
compliance with these policies is required where applicable. For specific LCDs/LCAs, refer to the LCD/LCA Availability Grid (Attachment B).

- For coverage guidelines for states/territories with no LCDs/LCAs, see the UnitedHealthcare Commercial Medical Policy for Lower Extremity Invasive Diagnostic and Endovascular Procedures. (IMPORTANT NOTE: After checking the LCD/LCA Availability Grid and searching the Medicare Coverage Database, if no LCD/LCA is found, then use the above referenced policy.)

- Committee approval date: August 18, 2020
- Accessed September 17, 2020

17. Lower Extremity Vascular Angiography, Not Performed at Time of an Interventional Procedure or as Pre-Procedural Assessment (CPT codes 75710 and 75716)
   - Medicare does not have a National Coverage Determination (NCD) for lower extremity vascular angiography.
   - Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) do not exist at this time.
   - For coverage guidelines, see the UnitedHealthcare Commercial Medical Policy for Lower Extremity Invasive Diagnostic and Endovascular Procedures. (IMPORTANT NOTE: After searching the Medicare Coverage Database, if no LCD/LCA is found, then use the above referenced policy.)

- Committee approval date: August 18, 2020
- Accessed August 14, 2020

18. Lower Extremity Endovascular Interventions (CPT codes 37220 - 37235)
   - Medicare does not have a National Coverage Determination (NCD) for lower extremity endovascular interventions.
   - Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) exist and compliance with these policies is required where applicable. For specific LCDs/LCAs, refer to the LCD/LCA Availability Grid (Attachment C).
   - For coverage guidelines for states/territories with no LCDs/LCAs, see the UnitedHealthcare Commercial Medical Policy for Lower Extremity Invasive Diagnostic and Endovascular Procedures. (IMPORTANT NOTE: After checking the LCD/LCA Availability Grid and searching the Medicare Coverage Database, if no LCD/LCA is found, then use the above referenced policy.)

- Committee approval date: July 21, 2020
- Accessed September 17, 2020

19. Catheter Ablation
   a. Treatment of Atrial Fibrillation (CPT codes 93656 and 93657)
      - Medicare does not have a National Coverage Determination (NCD) for catheter ablation for treatment of atrial fibrillation.
      - Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) do not exist.
      - For coverage guidelines, see the UnitedHealthcare Commercial Medical Policy for Catheter Ablation for Atrial Fibrillation. (IMPORTANT NOTE: After searching the Medicare Coverage Database, if no LCD/LCA is found, then use the above referenced policy.)

      - Committee approval date: July 21, 2020
      - Accessed July 17, 2020

   b. Treatment of Supraventricular Tachycardia (SVT) (CPT code 93653 and 93655)
• Medicare does not have a National Coverage Determination (NCD) for catheter ablation for treatment of SVT.
• Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) do not exist.
• For coverage guidelines, see the UnitedHealthcare Commercial Medical Policy for Catheter Ablation for Atrial Fibrillation. (IMPORTANT NOTE: After searching the Medicare Coverage Database, if no LCD/LCA is found, then use the above referenced policy.)
• Committee approval date: July 21, 2020
• Accessed September 17, 2020

II. DEFINITIONS

Diagnostic Services: A service is "diagnostic" if it is an examination or procedure to which the patient is subjected, or which is performed on materials derived from a hospital outpatient, to obtain information to aid in the assessment of a medical condition or the identification of a disease. Among these examinations and tests are diagnostic laboratory services such as hematology and chemistry, diagnostic x-rays, isotope studies, EKGs, pulmonary function studies, thyroid function tests, psychological tests, and other tests given to determine the nature and severity of an ailment or injury. See the Medicare Benefit Policy Manual, Chapter 6, §20.4.1 – Diagnostic Services Defined. (Accessed January 3, 2020)

III. REFERENCES

See above.

IV. REVISION HISTORY

08/18/2020 Guideline 16 [Lower Extremity Vascular Angiography, Performed at time of an Interventional Procedure or as Pre-Procedure Assessment (CPT codes 75710 and 75716)]
• Changed guideline title, previously titled Lower Extremity Vascular Angiography

Guideline 17 [Lower Extremity Vascular Angiography, not performed at time of an Interventional Procedure or as Pre-Procedure Assessment (CPT codes 75710 and 75716)] (new to policy)
• Added coverage guidelines to indicate:
  o Medicare does not have a National Coverage Determination (NCD) for Lower Extremity Vascular Angiography
  o Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) do not exist at this time
  o For coverage guidelines, refer to the UnitedHealthcare Commercial Medical Policy titled Lower Extremity Invasive Diagnostic and Endovascular Procedures
### V. ATTACHMENTS

#### Attachment A – LCD/LCA Availability Grid
**Intravascular Coronary Ultrasound**
CMS website accessed September 17, 2010

<table>
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<tr>
<th>ID #</th>
<th>Title</th>
<th>Contractor Type</th>
<th>Contractor</th>
<th>States/Territories</th>
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<tbody>
<tr>
<td>L33959</td>
<td>Cardiac Catheterization and Coronary Angiography</td>
<td>A and B MAC</td>
<td>CGS Administrators, LLC</td>
<td>KY, OH</td>
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<tr>
<td>L33623</td>
<td>Percutaneous Coronary Intervention</td>
<td>A and B MAC</td>
<td>National Government Services, Inc.</td>
<td>IL, MN, CT, MA, ME, NH, NY, RI, VT, WI</td>
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<tr>
<td>L33557</td>
<td>Cardiac Catheterization and Coronary Angiography</td>
<td>A and B MAC</td>
<td>National Government Services, Inc.</td>
<td>IL, MN, CT, MA, ME, NH, NY, RI, VT, WI</td>
</tr>
<tr>
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<td>(Note: States notated with an asterisk should follow the other available state-specific LCD/LCA listed on this grid. This WPS LCD/LCA only applies to states without asterisk.)</td>
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**End of Attachment A**

#### Attachment B – LCD/LCA Availability Grid
**Lower Extremity Vascular Angiography**
CMS website accessed September 17, 2010

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<tr>
<th>ID #</th>
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<tr>
<td>L36767</td>
<td>Aortography and Peripheral Angiography</td>
<td>A and B MAC</td>
<td>First Coast Service Options, Inc.</td>
<td>FL, PR, VI</td>
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<tr>
<td>L35092</td>
<td>Diagnostic Abdominal Aortography and Renal Angiography</td>
<td>A and B MAC</td>
<td>Novitas Solutions, Inc.</td>
<td>AR, CO, DC, DE, LA, MD, MS, NJ, NM, OK, PA, TX</td>
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**End of Attachment B**

#### Attachment C – LCD/LCA Availability Grid
**Lower Extremity Endovascular Interventions**
CMS website accessed September 17, 2010

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<th>States/Territories</th>
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<tr>
<td>L33763</td>
<td>Vascular Stenting of Lower Extremity Arteries</td>
<td>A and B MAC</td>
<td>First Coast Service Options, Inc.</td>
<td>FL, PR, VI</td>
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<td>L37893</td>
<td>Endovenous Stenting</td>
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<td>Novitas Solutions, Inc.</td>
<td>AR, CO, DC, DE, LA, MD, MS, NJ, NM, OK, PA, TX</td>
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<td>L35084</td>
<td>Non-Coronary Vascular Stents</td>
<td>MAC-Part A and B</td>
<td>Novitas Solutions, Inc.</td>
<td>AR, CO, DC, DE, LA, MD, MS, NJ, NM, OK, PA, TX</td>
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</tbody>
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UHC MA Coverage Summary: Cardiovascular Diagnostic and Therapeutic Procedures
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<th>Contractor</th>
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<td>L35998 (A57590)</td>
<td>Non-Coronary Vascular Stents</td>
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<td>Wisconsin Physicians Service Insurance Corporation</td>
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</tr>
<tr>
<td>L35998 (A57590)</td>
<td>Non-Coronary Vascular Stents</td>
<td>MAC-Part A and B</td>
<td>Wisconsin Physicians Service Insurance Corporation</td>
<td>IA, IN, KS, MI, MO, NE</td>
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End of Attachment C