# Coverage Summary

## Cardiovascular Diagnostic Procedures

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved by:</td>
<td>UnitedHealthcare Medicare Benefit Interpretation Committee</td>
<td>Last Review Date: 01/21/2020</td>
</tr>
</tbody>
</table>

### 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)
- Cardiointegram (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)

This information is being distributed to you for personal reference. The information belongs to UnitedHealthcare and unauthorized copying, use, and distribution are prohibited. This information is intended to serve only as a general reference resource and is not intended to address every aspect of a clinical situation. Physicians and patients should not rely on this information in making health care decisions. Physicians and patients must exercise their independent clinical discretion and judgment in determining care. Each benefit plan contains its own specific provisions for coverage, limitations, and exclusions as stated in the Member’s Evidence of Coverage (EOC)/Summary of Benefits (SB). If there is a discrepancy between this policy and the member’s EOC/SB, the member’s EOC/SB provision will govern. The information contained in this document is believed to be current as of the date noted.

The benefit information in this Coverage Summary is based on existing national coverage policy, however, Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable.

There are instances where this document may direct readers to a UnitedHealthcare Commercial Medical Policy, Medical Benefit Drug Policy, and/or Coverage Determination Guideline (CDG). In the absence of a Medicare National Coverage Determination (NCD), Local Coverage Determination (LCD), or other Medicare coverage guidance, CMS allows a Medicare Advantage Organization (MAO) to create its own coverage determinations, using objective evidence-based rationale relying on authoritative evidence (Medicare IOM Pub. No. 100-16, Ch. 4, §90.5).

## INDEX TO COVERAGE SUMMARY

<table>
<thead>
<tr>
<th>I.</th>
<th>COVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Diagnostic Endocardial Electrical Stimulation (EES)</td>
</tr>
<tr>
<td>2.</td>
<td>Digital Subtraction Angiography (DSA)</td>
</tr>
<tr>
<td>3.</td>
<td>Digoxin Therapeutic Drug Assay</td>
</tr>
<tr>
<td>4.</td>
<td>Electrocardiographic (EKG) Services</td>
</tr>
<tr>
<td>5.</td>
<td>HIS Bundle Study</td>
</tr>
<tr>
<td>6.</td>
<td>Cardiac Catheterization Performed Other Than a Hospital Setting</td>
</tr>
<tr>
<td>7.</td>
<td>Thoracic Electrical Bioimpedance (TEB)</td>
</tr>
<tr>
<td>8.</td>
<td>Displacement Cardiography (including Cardiokymography and Photokymography</td>
</tr>
<tr>
<td>9.</td>
<td>Cardiointegram (CIG)</td>
</tr>
<tr>
<td>10.</td>
<td>Ambulatory Blood Pressure Monitoring</td>
</tr>
<tr>
<td>11.</td>
<td>Non-invasive Test of Carotid Function (Direct and Indirect)</td>
</tr>
<tr>
<td>12.</td>
<td>Plethysmography</td>
</tr>
<tr>
<td>13.</td>
<td>Microvolt T-wave Alternans</td>
</tr>
<tr>
<td>14.</td>
<td>Intravascular Coronary Ultrasound</td>
</tr>
<tr>
<td>15.</td>
<td>Arterial Compliance Testing, Using Waveform Analysis (CPT code 93050)</td>
</tr>
</tbody>
</table>
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.

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.

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 diagnostic testing is covered for the evaluation of patients at risk for SCD, only when the spectral analysis method is used.
Microvolt T-wave Alternans diagnostic testing is not covered for the evaluation of patients at risk for SCD if measurement is not performed employing the spectral analysis.

See the NCD for Microvolt T-Wave Alternans (20.30). (Accessed January 3, 2020)

**NCD Update:** On January 13, 2015, Centers for Medicare & Medicaid Services has decided that no National Coverage Determination (NCD) is appropriate at this time for microvolt T-wave alternans (MTWA) testing using the modified moving average (MMA) method for the evaluation of patients at risk for sudden cardiac death (SCD). National non-coverage will be removed. Medicare coverage of MTWA using the MMA method will be determined by the local contractors. The CMS final decision memo pertaining to this update is available at http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx. (Accessed January 3, 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 for all 50 states and compliance with these policies is required where applicable. For state-specific LCDs/LCAs, refer to the LCD Availability Grid (Attachment A).
   - **Committee approval date:** January 21, 2020
   - Accessed April 20, 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) exist and compliance with these policies is required where applicable. For state-specific LCDs/LCAs, refer to the LCD/LCA Availability Grid (Attachment B).
   - **Committee approval date:** January 21, 2020
   - Accessed April 20, 2020

16. **Lower Extremity Vascular Angiography (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 state-specific LCDs/LCAs, refer to the LCD/LCA Availability Grid (Attachment C).
   - **Committee approval date:** January 21, 2020
   - Accessed April 20, 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

01/21/2020 Guideline 10 (Ambulatory Blood Pressure Monitoring)
- Added reference link to the Centers for Medicare and Medicaid Services (CMS) final Decision Memo for Ambulatory Blood Pressure Monitoring (ABPM) (CAG-00067R2) dated July 2, 2019
- Removed reference link to the UnitedHealthcare Medicare Advantage Coverage Summary titled Durable Medical Equipment (DME), Prosthetics, Corrective Appliances/Orthotics (Non-Foot Orthotics) and Medical Supplies Grid

Attachments
Updated Local Coverage Determination (LCD) Availability Grids to reflect the most current reference links

V. ATTACHMENTS

<table>
<thead>
<tr>
<th>ID #</th>
<th>Title</th>
<th>Contractor Type</th>
<th>Contractor</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>L34761</td>
<td>Percutaneous Coronary Interventions</td>
<td>MAC-Part A</td>
<td>Wisconsin Physicians Service Insurance Corporation</td>
<td>AK, AL, AR, AZ, CA, CO, CT, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY</td>
</tr>
<tr>
<td>L34761 (A57479)</td>
<td>Percutaneous Coronary Interventions</td>
<td>MAC-Part A and B</td>
<td>Wisconsin Physicians Service Insurance Corporation</td>
<td>IA, IN, KS, MI, MO, NE</td>
</tr>
<tr>
<td>L33623 (A56823)</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>
</tr>
<tr>
<td>L33557 (A52850)</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>
<td>L33959 (A56500)</td>
<td>Cardiac Catheterization and Coronary Angiography</td>
<td>A and B MAC</td>
<td>CGS Administrators, LLC</td>
<td>KY, OH</td>
</tr>
</tbody>
</table>

End of Attachment A
### Attachment B–LCD/LCA Availability Grid

**Arterial Compliance Testing, Using Waveform Analysis**  
(CPT code 93050)  
CMS website accessed April 20, 2020

<table>
<thead>
<tr>
<th>ID #</th>
<th>Title</th>
<th>Contractor Type</th>
<th>Contractor</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>L36219</td>
<td>Non-Covered Services</td>
<td>A and B MAC</td>
<td>Noridian Healthcare Solutions, LLC</td>
<td>CA, HI, NV, AS, GU, MP</td>
</tr>
<tr>
<td>L36219</td>
<td>Non-Covered Services</td>
<td>A and B MAC</td>
<td>Noridian Healthcare Solutions, LLC</td>
<td>AK, AZ, ID, MT, ND, OR, SD, WA, UT, WY</td>
</tr>
<tr>
<td>L33777</td>
<td>Non-covered Services</td>
<td>A and B MAC</td>
<td>First Coast Service Options, Inc.</td>
<td>FL, PR, VI</td>
</tr>
<tr>
<td>L35094</td>
<td>Services That Are Not Reasonable and Necessary</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>
</tr>
</tbody>
</table>

End of Attachment B

### Attachment C–LCD/LCA Availability Grid

**Lower Extremity Vascular Angiography**  
(CPT codes 75710 and 75716)  
CMS website accessed April 20, 2020

<table>
<thead>
<tr>
<th>ID #</th>
<th>Title</th>
<th>Contractor Type</th>
<th>Contractor</th>
<th>States</th>
</tr>
</thead>
<tbody>
<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>
</tr>
</tbody>
</table>

End of Attachment C