

To all beneficiaries enrolled in a Prepaid Health Plan (PHP): for questions about benefits and services available on or after November 1, 2019, please contact your PHP.

Table of Contents

1.0	Description of the Procedure, Product, or Service.....	1
1.1	Electrocardiography.....	1
1.1.1	Electrocardiogram.....	1
1.1.2	Cardiovascular Stress Test.....	1
1.1.3	Microvolt T-wave Alternans.....	1
1.1.4	Holter Monitor	1
1.1.5	Cardiac (Ambulatory) Event Monitors	1
1.2	Echocardiography	2
1.2.1	Transthoracic Echocardiography (TTE)	2
1.2.2	Transesophageal Echocardiography (TEE)	2
1.2.3	Doppler Echocardiography.....	2
1.2.4	Intracardiac Echocardiography	2
1.2.5	Fetal Echocardiography	2
1.3	Coronary Intravascular Ultrasound.....	2
2.0	Eligibility Requirements	3
2.1	Provisions.....	3
2.1.1	General.....	3
2.1.2	Specific	3
2.2	Special Provisions.....	3
2.2.1	EPSDT Special Provision: Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age	3
2.2.2	EPSDT does not apply to NCHC beneficiaries	4
2.2.3	Health Choice Special Provision for a Health Choice Beneficiary age 6 through 18 years of age	4
3.0	When the Procedure, Product, or Service Is Covered.....	5
3.1	General Criteria Covered	5
3.2	Specific Criteria Covered.....	5
3.2.1	Specific criteria covered by both Medicaid and NCHC	5
	Electrocardiography.....	5
a.	Electrocardiogram.....	5
	Echocardiography	6
a.	Transthoracic Echocardiography (TTE)	6
	Coronary Intravascular Ultrasound.....	7
3.2.2	Medicaid Additional Criteria Covered.....	8
	Fetal Echocardiography	8
3.2.3	NCHC Additional Criteria Covered	8
4.0	When the Procedure, Product, or Service Is Not Covered.....	8
4.1	General Criteria Not Covered	8
4.2	Specific Criteria Not Covered.....	9

**NC Medicaid
Electrocardiography,
Echocardiography, and
Intravascular Ultrasound**

**Medicaid and Health Choice
Clinical Coverage Policy No.: 1R-4
Amended Date: March 15, 2019**

4.2.1	Specific Criteria Not Covered by both Medicaid and NCHC.....	9
a.	Microvolt T-wave Alternans.....	9
b.	Other Procedures.....	9
c.	Coronary Intravascular Ultrasound.....	9
4.2.2	Medicaid Additional Criteria Not Covered.....	9
4.2.3	NCHC Additional Criteria Not Covered.....	9
5.0	Requirements for and Limitations on Coverage	10
5.1	Prior Approval	10
5.2	Prior Approval Requirements	10
5.2.1	General.....	10
5.3	Electrocardiography.....	10
5.2.1	Electrocardiogram.....	10
5.2.2	Microvolt T-Wave Alternans.....	10
5.2.3	Holter Monitor	10
5.2.4	Cardiac (Ambulatory) Event Monitors	10
5.4	Echocardiography	11
5.3.1	Transthoracic Echocardiography	11
5.3.2	Transesophageal Echocardiography	11
5.3.3	Doppler Echocardiography	11
5.3.4	Intracardiac Echocardiography	11
5.3.5	Fetal Echocardiography	11
5.5	Coronary Intravascular Ultrasound.....	12
6.0	Provider(s) Eligible to Bill for the Procedure, Product, or Service	12
6.1	Provider Qualifications and Occupational Licensing Entity Regulations.....	12
6.2	Provider Certifications	12
7.0	Additional Requirements	12
7.1	Compliance	12
8.0	Policy Implementation/Revision Information.....	13
Attachment A:	Claims-Related Information.....	14
A.	Claim Type	14
B.	International Classification of Diseases and Related Health Problems, Tenth Revisions, Clinical Modification (ICD-10-CM) and Procedural Coding System (PCS)	14
C.	Code(s).....	18
D.	Modifiers.....	19
E.	Billing Units.....	19
F.	Place of Service	19
G.	Co-payments	19
H.	Reimbursement	19

Related Clinical Coverage Policies

Refer to <https://medicaid.ncdhhs.gov/> for the related coverage policies listed below:

1E-4, *Fetal Surveillance*

1K-7, *Prior Approval for Imaging Services*

1.0 Description of the Procedure, Product, or Service

1.1 Electrocardiography

Electrocardiography is a procedure for recording electrical changes in the heart. The electrocardiogram (ECG or EKG) shows the series of waves that relate to the electrical impulses that occur during each beat of the heart. EKGs can evaluate and detect cardiac problems.

1.1.1 Electrocardiogram

Routine with at least 12 leads

Rhythm with 1 to 3 leads

1.1.2 Cardiovascular Stress Test

Cardiovascular stress testing includes exercising on a treadmill according to a standardized protocol, with progressive increases in the speed and elevation of the treadmill, while continually monitoring the EKG, heart rate, heart rhythm, and blood pressure.

1.1.3 Microvolt T-wave Alternans

Microvolt T-wave alternans is a diagnostic test using the spectral analytic method that is medically necessary for the evaluation of persons at risk of sudden cardiac death who meet the criteria for implantable cardioverter defibrillator placement. This is accomplished by placing high-resolution electrodes, designed to reduce electrical interference, on the chest prior to a period of controlled exercise.

1.1.4 Holter Monitor

A Holter monitor is used to evaluate the beneficiary's ambient heart rhythm during a full daily cycle, with EKG leads on the beneficiary's chest connected to a recorder for 24 to 48 hours. The generated report describes the overall rhythm and significant arrhythmias.

1.1.5 Cardiac (Ambulatory) Event Monitors

Event monitoring is diagnostic testing designed to capture episodic electrocardiographic data up to one month via beneficiary demand as single- or multiple-event pre-symptom memory loops.

1.2 Echocardiography

Echocardiography is a diagnostic test that uses ultrasound waves to create an image of the heart. Ultrasound waves rebound or echo off the heart to show the size, shape, and movement of the heart's valves and chambers. Each component is crucial to permit a full assessment of the heart and an accurate diagnosis of certain cardiovascular diseases.

1.2.1 Transthoracic Echocardiography (TTE)

Transthoracic echocardiography (TTE) uses a transducer (or probe) placed on the chest wall through which two-dimensional, color flow, and spectral Doppler images are taken of the heart.

1.2.2 Transesophageal Echocardiography (TEE)

Transesophageal echocardiography (TEE) uses a transducer (or probe) introduced into the beneficiary's esophagus through which two-dimensional, color flow, and spectral Doppler images are taken of the heart.

1.2.3 Doppler Echocardiography

Color Doppler or color flow mapping uses mean blood flow velocities to qualitatively show the flow of blood through the heart.

Spectral Doppler is used to quantitatively measure the velocity of blood flow across valves or chambers and estimate cardiac hemodynamics.

1.2.4 Intracardiac Echocardiography

Intracardiac echocardiography uses a transducer (or probe) introduced into the heart, typically via the femoral vein, during a cardiac catheterization to guide a catheter-based intervention. Two-dimensional, color flow, and spectral Doppler images are taken of the heart via this method.

1.2.5 Fetal Echocardiography

Fetal echocardiography is a diagnostic ultrasound test that evaluated the fetus's heart while the fetus is still in the uterus. This testing can diagnose most cardiac defects. Fetal echocardiography is performed using a two-dimensional (2-D) high-resolution ultrasound system. Color Doppler is used to identify abnormal connections or valve abnormalities, and spectral Doppler is used to assess fetal blood flow velocities and physiology. Additional imaging of the umbilical vessels, hepatic vessels and middle cerebral artery by spectral Doppler are commonly performed as part of a complete fetal echogram.

For further information on fetal surveillance using Doppler echocardiography color flow velocity mapping, refer to clinical coverage policy 1E-4, *Fetal Surveillance*, at <https://medicaid.ncdhhs.gov/>.

1.3 Coronary Intravascular Ultrasound

Intravascular ultrasound (IVUS) is a medical imaging methodology using a specially designed catheter with a miniaturized ultrasound probe attached to the distal end of a catheter. The proximal end of the catheter is attached to computerized ultrasound

equipment. It is inserted directly into the vasculature to produce images from inside the coronary arteries.

2.0 Eligibility Requirements

2.1 Provisions

2.1.1 General

(The term “General” found throughout this policy applies to all Medicaid and NCHC policies)

- a. An eligible beneficiary shall be enrolled in either:
 1. the NC Medicaid Program (*Medicaid is NC Medicaid program, unless context clearly indicates otherwise*); or
 2. the NC Health Choice (*NCHC is NC Health Choice program, unless context clearly indicates otherwise*) Program on the date of service and shall meet the criteria in **Section 3.0 of this policy**.
- b. Provider(s) shall verify each Medicaid or NCHC beneficiary’s eligibility each time a service is rendered.
- c. The Medicaid beneficiary may have service restrictions due to their eligibility category that would make them ineligible for this service.
- d. Following is only one of the eligibility and other requirements for participation in the NCHC Program under GS 108A-70.21(a): Children must be between the ages of 6 through 18.

2.1.2 Specific

(The term “Specific” found throughout this policy only applies to this policy)

- a. **Medicaid**
None Apply.
- b. **NCHC**
None Apply.

2.2 Special Provisions

2.2.1 EPSDT Special Provision: Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age

- a. **42 U.S.C. § 1396d(r) [1905(r) of the Social Security Act]**

Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) is a federal Medicaid requirement that requires the state Medicaid agency to cover services, products, or procedures for Medicaid beneficiary under 21 years of age **if** the service is **medically necessary health care** to correct or ameliorate a defect, physical or mental illness, or a condition [health problem] identified through a screening examination (includes any evaluation by a physician or other licensed practitioner).

This means EPSDT covers most of the medical or remedial care a child needs to improve or maintain his or her health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

Medically necessary services will be provided in the most economic mode, as long as the treatment made available is similarly efficacious to the service requested by the beneficiary's physician, therapist, or other licensed practitioner; the determination process does not delay the delivery of the needed service; and the determination does not limit the beneficiary's right to a free choice of providers.

EPSDT does not require the state Medicaid agency to provide any service, product or procedure:

1. that is unsafe, ineffective, or experimental or investigational.
2. that is not medical in nature or not generally recognized as an accepted method of medical practice or treatment.

Service limitations on scope, amount, duration, frequency, location of service, and other specific criteria described in clinical coverage policies may be exceeded or may not apply as long as the provider's documentation shows that the requested service is medically necessary "to correct or ameliorate a defect, physical or mental illness, or a condition" [health problem]; that is, provider documentation shows how the service, product, or procedure meets all EPSDT criteria, including to correct or improve or maintain the beneficiary's health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

b. EPSDT and Prior Approval Requirements

1. If the service, product, or procedure requires prior approval, the fact that the beneficiary is under 21 years of age does **NOT** eliminate the requirement for prior approval.
2. **IMPORTANT ADDITIONAL INFORMATION** about EPSDT and prior approval is found in the *NCTracks Provider Claims and Billing Assistance Guide*, and on the EPSDT provider page. The Web addresses are specified below.

NCTracks Provider Claims and Billing Assistance Guide:

<https://www.nctracks.nc.gov/content/public/providers/provider-manuals.html>

EPSDT provider page: <https://medicaid.ncdhhs.gov/>

2.2.2 EPSDT does not apply to NCHC beneficiaries

2.2.3 Health Choice Special Provision for a Health Choice Beneficiary age 6 through 18 years of age

NC Medicaid shall deny the claim for coverage for an NCHC beneficiary who does not meet the criteria within **Section 3.0** of this policy. Only services included under the NCHC State Plan and the NC Medicaid clinical coverage policies, service definitions, or billing codes are covered for an NCHC beneficiary.

3.0 When the Procedure, Product, or Service Is Covered

Note: Refer to Subsection 2.2.1 regarding EPSDT Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age.

3.1 General Criteria Covered

Medicaid and NCHC shall cover the procedure, product, or service related to this policy when medically necessary, and:

- a. the procedure, product, or service is individualized, specific, and consistent with symptoms or confirmed diagnosis of the illness or injury under treatment, and not in excess of the beneficiary's needs;
- b. the procedure, product, or service can be safely furnished, and no equally effective and more conservative or less costly treatment is available statewide; and
- c. the procedure, product, or service is furnished in a manner not primarily intended for the convenience of the beneficiary, the beneficiary's caretaker, or the provider.

3.2 Specific Criteria Covered

3.2.1 Specific criteria covered by both Medicaid and NCHC

Electrocardiography

a. Electrocardiogram

Medicaid and NCHC shall cover electrocardiograms:

1. for the evaluation of signs and symptoms related to, and disorders of, cardiac rhythm, anatomy, coronary blood flow, and myocardial function; or
2. as an adjunct in the assessment of certain drug toxicities and metabolic disorders.

b. Cardiovascular Stress Test

Medicaid and NCHC shall cover cardiovascular stress testing:

1. in the screening for coronary atherosclerosis and myocardial ischemia;
2. in the follow-up of post-myocardial infarction (MI), post-percutaneous transluminal coronary angioplasty (PTCA), or post-coronary artery bypass graft (CABG) to assess functional improvement during cardiac rehabilitation;
3. in the follow-up of beneficiaries with palliated or unpalliated congenital heart disease;
4. in the follow-up of pediatric and adult beneficiaries with dilated cardiomyopathy, regardless of etiology;
5. in the follow-up of pediatric and adult beneficiaries with hypertrophic cardiomyopathy;
6. in the pre-operative assessment of beneficiaries considered for valve replacement; or
7. in the follow-up of beneficiaries after valve replacement.

c. Microvolt T-Wave Alternans

Medicaid and NCHC shall cover microvolt T-wave alternans testing when:

1. used to identify the risk of ventricular arrhythmias and sudden cardiac death;
and
2. the beneficiary meets the criteria for implantable cardioverter defibrillator placement; **and**
3. the spectral analytic method is used.

Note: See **Attachment A**, letter B, for a listing of allowed diagnosis codes.

d. Holter Monitor

Medicaid and NCHC shall cover Holter monitoring when:

1. the physician suspects cardiac etiology for the beneficiary's symptoms (e.g., palpitations, dizziness, or syncope); **and**
2. the symptoms are frequent enough to expect them to be captured during the Holter monitor tracing time period.

Note: See **Attachment A**, letter B, for a listing of allowed diagnosis codes.

e. Cardiac (Ambulatory) Event Monitors

Medicaid and NCHC shall cover event monitoring when:

1. the physician suspects cardiac etiology for the beneficiary's symptoms (e.g., palpitations, dizziness, or syncope); **and**
2. the events are so unpredictable or infrequent that a Holter monitor may not capture them, but frequent enough that event monitoring would capture; **and**
3. the symptoms are of such severity, even if infrequent, that documenting a cardiac etiology for beneficiary symptoms will alter clinical management; **and**
4. the beneficiary (or parent/guardian if the beneficiary is a child) is capable of identifying symptoms and activating the event monitor.

Note: See **Attachment A**, letter B, for a listing of allowed diagnosis codes.

Echocardiography

Note: The following lists are not all-inclusive.

a. Transthoracic Echocardiography (TTE)

Medicaid and NCHC shall cover TTE for:

1. Assessment of cardiac chamber sizes;
2. Evaluation of left ventricular hypertrophy;
3. Evaluation of stenotic or insufficient valves;
4. Identification of atrial or ventricular masses or thrombi;
5. Identification of pericardial disorder;s
6. Identification and assessment of congenital heart defects;
7. Identification and assessment of abnormal physiology (e.g. pulmonary hypertension); and
8. Guidance of percutaneous interventions directly affecting the heart.

b. Transesophageal Echocardiography(TEE)

Medicaid and NCHC shall cover TEE for:

1. Evaluation of bacterial endocarditis;
2. Identification of left atrial pathology;
3. Evaluation of valvular prosthesis;
4. Evaluation of the aortic arch and descending thoracic aorta for dissection, thrombi, or friable plaques;
5. Evaluation of cardiac structure in critically ill beneficiaries on ventilators;
6. Identification and assessment of congenital heart defects; and
7. Assessment of cardiac anatomy and function before and after cardiac surgery.

c. Doppler or Color Doppler Echocardiography

Medicaid and NCHC shall cover Doppler or color Doppler echocardiography for:

1. Evaluation of septal defects;
2. Evaluation of the severity of valve stenosis or regurgitation;
3. Evaluation of site of left-to-right or right-to-left shunts;
4. Assessment of diseases of the aorta;
5. Evaluation of prosthetic valves; and
6. Assessment of congenital heart defects.

d. Intracardiac Echocardiography

Medicaid and NCHC shall cover intracardiac echocardiography for:

1. Evaluation of septal defects;
2. Evaluation of the severity of valve stenosis or regurgitation;
3. Evaluation of site of left-to-right or right-to-left shunts;
4. Assessment of diseases of the aorta;
5. Evaluation of prosthetic valves;
6. Assessment of congenital heart defects; and
7. Guidance of therapeutic catheter-based interventions.

Coronary Intravascular Ultrasound

Medicaid and NCHC shall cover coronary IVUS for:

- a. Assessment of the adequacy of deployment of coronary artery stents, including the extent of stent apposition and determination of the minimum luminal diameter within the stent;
- b. Determination of the mechanism of coronary artery stent restenosis and selection of appropriate therapy;
- c. Evaluation of coronary obstruction at a location difficult to image by angiography in a beneficiary with a suspected flow-limiting stenosis;
- d. Assessment of suboptimal angiographic result following percutaneous artery interventions;

- e. Establishment of the presence and distribution of coronary arterial calcium in beneficiaries for whom adjunctive rotational atherectomy is contemplated;
- f. Determination of plaque location and circumferential distribution for guidance of directional coronary artery atherectomy; and
- g. Determination of the extent of atherosclerosis in beneficiaries with characteristic anginal symptoms and a positive functional study with no focal stenosis or mild coronary artery disease on angiography.

Note: See **Attachment A**, letter B, for listing of allowed diagnosis codes.

3.2.2 Medicaid Additional Criteria Covered

Fetal Echocardiography

Medicaid shall cover fetal echocardiography for:

- a. Suspected congenital heart disease based on Obstetrical screening;
- b. Elevated risk for congenital heart disease based on fetal risk factors (e.g. abnormal nuchal thickness, chromosomal abnormality, other fetal structural abnormalities);
- c. Elevated risk for congenital heart disease based on maternal risk factors (e.g. pregestational diabetes, fetal teratogen exposure);
- d. Elevated risk for congenital heart disease based on family risk factors (e.g. previous child with congenital heart disease, first degree relative with congenital heart disease); and
- e. Elevated risk for acquired fetal heart disease (e.g. maternal autoimmune disease, maternal infectious exposure, maternal non-infectious illness)

For further information on fetal surveillance using Doppler echocardiography color flow velocity mapping, refer to clinical coverage policy 1E-4, *Fetal Surveillance*, at <https://medicaid.ncdhhs.gov/>.

3.2.3 NCHC Additional Criteria Covered

None Apply.

4.0 When the Procedure, Product, or Service Is Not Covered

Note: Refer to Subsection 2.2.1 regarding EPSDT Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age.

4.1 General Criteria Not Covered

Medicaid and NCHC shall not cover the procedure, product, or service related to this policy when:

- a. the beneficiary does not meet the eligibility requirements listed in **Section 2.0**;
- b. the beneficiary does not meet the criteria listed in **Section 3.0**;
- c. the procedure, product, or service duplicates another provider's procedure, product, or service; or

- d. the procedure, product, or service is experimental, investigational, or part of a clinical trial.

4.2 Specific Criteria Not Covered

4.2.1 Specific Criteria Not Covered by both Medicaid and NCHC

Other service exclusions or limitations may apply. Refer to *A Consumer's Guide to North Carolina Health Care Coverage Programs for Families and Children: North Carolina Health Choice and Medicaid*].

a. Microvolt T-wave Alternans

Microvolt T-wave alternans is not covered for the general assessment of a beneficiary with atherosclerotic heart disease, congestive heart failure, or pre-surgical evaluation.

This procedure is not covered as part of a routine physical examination or as part of stress testing on a screening basis.

b. Other Procedures

Cardiovascular stress testing includes rhythm EKG, so rhythm EKG is not separately reimbursable.

Holter monitoring is not covered for less than a 24-hour monitored period.

Home-based telemetry systems are not covered by N.C. Medicaid and NCHC.

c. Coronary Intravascular Ultrasound

Coronary IVUS is not covered for

- a. Pre-interventional assessment of lesional characteristics and vessel dimensions as a means to select an optimal revascularization device
- b. Diagnosis of coronary disease after cardiac transplantation

4.2.2 Medicaid Additional Criteria Not Covered

None Apply.

4.2.3 NCHC Additional Criteria Not Covered

- a. NCGS § 108A-70.21(b) "Except as otherwise provided for eligibility, fees, deductibles, copayments, and other cost sharing charges, health benefits coverage provided to children eligible under the Program shall be equivalent to coverage provided for dependents under North Carolina Medicaid Program except for the following:
 - 1. No services for long-term care.
 - 2. No nonemergency medical transportation.
 - 3. No EPSDT.
 - 4. Dental services shall be provided on a restricted basis in accordance with criteria adopted by the Department to implement this subsection."

5.0 Requirements for and Limitations on Coverage

Note: Refer to Subsection 2.2.1 regarding EPSDT Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age.

5.1 Prior Approval

Prior approval is required for Medicaid beneficiaries for fetal echocardiography.

For further information on prior approval for fetal echocardiography refer to clinical coverage policy 1K-7, *Prior Approval for Imaging Services*, at <https://medicaid.ncdhhs.gov/>.

5.2 Prior Approval Requirements

5.2.1 General

The provider(s) shall submit to the Department of Health and Human Services (DHHS) Utilization Review Contractor the following:

- a. the prior approval request; and
- b. all health records and any other records that support the beneficiary has met the specific criteria in **Subsection 3.2.1 or 3.2.2** of this policy.

5.3 Electrocardiography

5.2.1 Electrocardiogram

A maximum of four, 12-lead EKGs is allowed per day.

5.2.2 Microvolt T-Wave Alternans

Microvolt T-wave alternans is limited to once per day, regardless of whether it is performed while the beneficiary is at rest, during stress, or in a combination thereof.

The equipment used must be FDA approved for this indication and able to detect as little as 1 microvolt of T-wave alternans.

5.2.3 Holter Monitor

The Holter monitor test is limited to one per 24-hour period.

5.2.4 Cardiac (Ambulatory) Event Monitors

- a. Event monitoring is limited to once per 30 days, regardless of the number of transmissions.
- b. In order to bill any of the services that include 24-hour attended monitoring, the provider must be available during the entire 24-hour period.
- c. The provider of the service must be capable of receiving and recording transmissions, including receipt of the EKG signal as well as voice transmission relaying any associated symptoms.
- d. The person receiving the transmission must be a technician, nurse, or physician trained in interpreting EKGs and clinical responses to abnormal EKGs.
- e. The transmission is reviewed for significant symptoms or EKG abnormalities.

- f. Technicians should have immediate 24-hour access to a physician to review transmitted data and make clinical decisions regarding the beneficiary.
- g. The provider must be capable of immediately notifying the beneficiary with emergency instructions from the supervising or the attending physician, when appropriate.
- h. The emergency instructions for the beneficiary, as well as when and how to contact available facilities to assist the beneficiary in case of emergencies, should be included by the attending physician in the referral for the monitoring.

5.4 Echocardiography

5.3.1 Transthoracic Echocardiography

TTE is limited to one per day. A repeat test is allowed only when medically necessary and the code is amended with modifier 76 or 77. A repeat test might be medically necessary if, for example, the beneficiary is transferred to a tertiary hospital for further specialized evaluation, the beneficiary has a change in clinical status, or guidance is needed during an interventional procedure.

5.3.2 Transesophageal Echocardiography

TEE is limited to one per day for screening purposes.

Two intraoperative TEEs are allowed per day when performed during cardiac surgery as long as performed as part of the operative procedure. The pre-operative (or pre-bypass) and post-operative (or post-bypass) components must be documented. Only the first intraoperative TEE can include the code for probe placement.

5.3.3 Doppler Echocardiography

Doppler echocardiography procedures are add-on codes and must be listed separately in addition to the primary procedure. They are not to be reported as a stand-alone code and must be reported by the same physician. The primary codes are identified in the CPT Manual for each add-on code.

5.3.4 Intracardiac Echocardiography

Intracardiac echocardiography is limited to one procedure per day for guidance of a catheter-based intervention. Intracardiac echocardiography is an add-on code and must be listed separately in addition to the primary procedure. It is not to be reported as a stand-alone code and must be reported by the same physician. The primary codes are identified in the CPT Manual for each add-on code.

5.3.5 Fetal Echocardiography

Fetal Echocardiography is limited to one per day. A repeat test is allowed only when medically necessary and the code is amended with modifier 76 or 77. A repeat test might be medically necessary if, for example, the pregnant mother (fetus is the beneficiary) is transferred to a tertiary hospital for further specialized evaluation, the fetus has a change in clinical status, or guidance is needed during an interventional procedure.

For further information on fetal surveillance using Doppler echocardiography color flow velocity mapping, refer to clinical coverage policy 1E-4, *Fetal Surveillance*, at <https://medicaid.ncdhhs.gov/>.

5.5 Coronary Intravascular Ultrasound

Coronary IVUS includes all transducer manipulations and repositioning within the specific vessel being examined, both before and after therapeutic intervention.

IVUS is an add-on code and must be listed separately in addition to the primary procedure. It is not to be reported as a stand-alone code and must be reported by the same physician. The primary codes are identified in the CPT Manual for each add-on code.

One IVUS, initial vessel, is allowed per day. Three additional vessels are allowed per day, with the initial vessel IVUS.

6.0 Provider(s) Eligible to Bill for the Procedure, Product, or Service

To be eligible to bill for the procedure, product, or service related to this policy, the provider(s) shall:

- a. meet Medicaid or NCHC qualifications for participation;
- b. have a current and signed Department of Health and Human Services (DHHS) Provider Administrative Participation Agreement; and
- c. bill only for procedures, products, and services that are within the scope of their clinical practice, as defined by the appropriate licensing entity.

6.1 Provider Qualifications and Occupational Licensing Entity Regulations

None Apply.

6.2 Provider Certifications

None Apply.

7.0 Additional Requirements

Note: Refer to Subsection 2.2.1 regarding EPSDT Exception to Policy Limitations for a Medicaid Beneficiary under 21 Years of Age.

7.1 Compliance

Provider(s) shall comply with the following in effect at the time the service is rendered:

- a. All applicable agreements, federal, state and local laws and regulations including the Health Insurance Portability and Accountability Act (HIPAA) and record retention requirements; and
- b. All NC Medicaid's clinical (medical) coverage policies, guidelines, policies, provider manuals, implementation updates, and bulletins published by the Centers for Medicare and Medicaid Services (CMS), DHHS, DHHS division(s) or fiscal contractor(s).

8.0 Policy Implementation/Revision Information

Original Effective Date: January 1, 1985

Revision Information:

Date	Section Revised	Change
01/01/2009	Attachment A, letter B	CPT code updates to table headings for Holter monitoring and ambulatory cardiac event recorders.
01/01/2009	Attachment A, letter C	Description updates to codes 93224 through 93233; 93235 through 93237; 93268; 93270 through 93272; 93306 through 93308; and 93350 through 93352.
07/01/2010	Throughout	Policy Conversion: Implementation of Session Law 2009-451, Section 10.32 “NC HEALTH CHOICE/PROCEDURES FOR CHANGING MEDICAL POLICY.”
01/01/2012	Attachment A	Procedure codes 93230 through 93237 were end-dated 12/31/2011 per CMS and AMA.
07/01/2012	Subsection 1.1.3	Removed “note” for implantable cardioverter defibrillator policy.
07/01/2012	Subsection 3.3.5	Added criteria related to Fetal Echocardiography, referenced from policy 1E-4 Fetal Surveillance.
07/01/2012	Throughout	Removed all references to Signal-Averaged Electrocardiography (SAECG) and applicable code 93278 as considered investigational and not covered.
07/01/2012	Throughout	Technical changes to merge Medicaid and NCHC current coverage into one policy.
10/01/2015	All Sections and Attachments	Updated policy template language and added ICD-10 codes to comply with federally mandated 10/1/2015 implementation where applicable.
03/15/2019	Table of Contents	Added, “To all beneficiaries enrolled in a Prepaid Health Plan (PHP): for questions about benefits and services available on or after November 1, 2019, please contact your PHP.”
03/15/2019	All Sections and Attachments	Updated policy template language.

Attachment A: Claims-Related Information

Provider(s) shall comply with the, *NCTracks Provider Claims and Billing Assistance Guide*, Medicaid bulletins, fee schedules, NC Medicaid’s clinical coverage policies and any other relevant documents for specific coverage and reimbursement for Medicaid and NCHC:

A. Claim Type

Professional (CMS-1500/837P transaction)
 Institutional (UB-04/837I transaction)

B. International Classification of Diseases and Related Health Problems, Tenth Revisions, Clinical Modification (ICD-10-CM) and Procedural Coding System (PCS)

Provider(s) shall report the ICD-10-CM and Procedural Coding System (PCS) to the highest level of specificity that supports medical necessity. Provider(s) shall use the current ICD-10 edition and any subsequent editions in effect at the time of service. Provider(s) shall refer to the applicable edition for code description, as it is no longer documented in the policy.

ICD-10-CM Code(s)		
93025, Microvolt T-Wave Alternans—Primary Diagnosis Allowed		
I09.9	I47.2	I50.32
I42.0	I47.9	I50.33
I42.1	I49.01	I50.40
I42.5	I49.02	I50.41
I42.8	I49.2	I50.42
I42.9	I49.9	I50.43
I45.81	I50.1	I50.9
I46.2	I50.20	I51.9
I46.8	I50.22	I97.120
I46.9	I50.23	I97.121
I47.0	I50.30	I97.130
I47.1	I50.31	I97.131

ICD-10-CM Code(s)		
93224 through 93227 Holter Monitoring—Primary Diagnosis Allowed		
E10.40	I25.5	I47.0 -
E10.41	I25.6	I47.1
E10.42	I25.700	I47.2
E10.43	I25.701	I48.0
E10.44	I25.708	I48.1
E10.610	I25.709	I48.2
E10.65	I25.710	I48.3
E10.69	I25.711	I48.4
E11.40	I25.718	I48.91
E11.41	I25.719	I49.01
E11.42	I25.720	I49.1
E11.43	I25.721	I49.3
E11.44	I25.728	I49.40
E11.610	I25.729	I49.49
E11.65	I25.730	I60.4
E13.40	I25.731	I67.841
E13.41	I25.738	I67.848
E13.42	I25.739	I97.120
E13.43	I25.750	I97.121
E13.44	I25.751	R00.0
E13.610	I25.758	R00.1
F45.0	I25.759	R00.2
F45.1	I25.760	R07.1
F45.8	I25.761	R07.2
F45.9	I25.768	R07.81
G45.0	I25.769	R07.82
G45.1	I25.790	R07.89
G45.2	I25.791	R07.9
G45.8	I25.798	R42
G45.9	I25.89	R55
G46.0	I25.9	Z09
G46.1	I42.0	Z95.0
G46.2	I42.1	Z95.810
G99.0	I42.5	Z95.818
I20.0	I42.8	Z95.9
I20.1	I42.9	I25.82
I20.8	I44.0	I25.83
I21.01	I44.1	E11.49
I21.02	I44.2	E13.49
I21.09	I44.30	E10.49
I21.11	I44.39	I20.9
I21.19	I44.4	I21.4
I21.21	I44.5	I22.9
I21.29	I44.60	I21.4

I21.3	I44.69	I25.119
I22.0	I45.0	I25.799
I22.1	I45.6	I44.7
I22.2	I45.89	I45.9
I22.8	I45.10	I47.9
I23.3	I45.19	I48.92
I23.8	I45.2	I49.9
I24.0	I45.3	
I24.1	I45.4	
I24.8	I45.5	
I24.9	I46.2	
I25.110	I46.8	
I25.111	I46.9	
I25.118		

ICD-10-CM Code(s)		
93228, 93229, 93268 through 93272		
Ambulatory Cardiac Event Recorders—Primary Diagnosis Allowed		
I21.01	I25.760	I48.91
I21.02	I25.761	I48.92
I21.09	I25.768	I49.01
I21.11	I25.769	I49.1
I21.19	I25.790	I49.3
I21.21	I25.791	I49.40
I21.29	I25.798	I49.49
I21.3	I25.799	I49.5
I21.4	I25.89	I49.8
I22.0	I25.9	I49.9
I22.1	I44.0	I97.120
I22.2	I44.1	I97.121
I22.8	I44.2	R00.0
I22.9	I44.30	R00.1
I23.3	I44.39	R00.2
I23.8	I44.4	R04.2
I25.110	I44.5	R04.81
I25.111	I44.60	R04.89
I25.118	I44.69	R04.9
I25.119	I44.7	R05
I25.5	I45.0	R06.01
I25.6	I45.10	R06.02
I25.700	I45.19	R06.1
I25.701	I45.2	R06.2
I25.708	I45.3	R06.3
I25.709	I45.4	R06.4
I25.710	I45.5	R06.81
I25.711	I45.6	R06.82
I25.718	I45.89	R06.9
I25.719	I45.9	R07.1

I25.720	I46.2	R07.2
I25.721	I46.8	R07.81
I25.728	I46.9	R07.82
I25.729	I47.0	R07.89
I25.730	I47.1	R07.9
I25.731	I47.2	R09.3
I25.738	I47.9	R42
I25.739	I48.0	R55
I25.750	I48.1	Z09
I25.751	I48.2	I25.3
I25.758	I48.3	I25.82
I25.759	I48.4	I25.83

ICD-10-CM Code(s)		
92978 through 92979 Coronary Intravascular Ultrasound—Primary Diagnosis Allowed		
I09.81	I25.709	I51.9
I09.9	I25.710	I97.0
I20.0	I25.711	I97.110
I20.1	I25.718	I97.111
I20.8	I25.719	I97.190
I20.9	I25.720	I97.191
I21.01	I25.721	I97.710 -
I21.02	I25.728	I97.711
I21.09	I25.729	I97.790
I21.11	I25.730	I97.791
I21.19	I25.731	I97.88
I21.21	I25.738	I97.89
I21.29	I25.739	R07.1
I21.3	I25.750	R07.2
I21.4	I25.751	R07.81
I22.0	I25.758	R07.82
I22.1	I25.759	R07.89
I22.2	I25.760	R07.9
I22.8	I25.761	R57.0
I22.9	I25.768	R57.8
I23.3	I25.769	R07.89
I23.8	I25.790	R57.9
I24.0	I25.791	R94.30
I24.1	I25.798	R94.31
I24.8	I25.799	R94.39
I24.9	I25.810	T81.10xA
I25.10	I25.811	T81.11xA
I25.110	I25.812	T81.12xA
I25.111	I25.89	T81.19xA
I25.118	I25.9	T86.20
I25.119	I50.1	T86.21
I25.2	I50.20	T86.22

I25.41	I50.21	T86.23
I25.42	I50.22	T86.290
I25.5	I50.23	T86.298
I25.6	I50.30	T86.30
I25.3	I50.31	T86.31
I25.82	I50.32	T86.32
I25.83	I50.33	T86.33
I25.84	I50.40	T86.39
I51.3	I50.41	
I25.700	I50.42	
I25.701	I50.43	
I25.708	I50.9	

C. Code(s)

Provider(s) shall report the most specific billing code that accurately and completely describes the procedure, product or service provided. Provider(s) shall use the Current Procedural Terminology (CPT), Health Care Procedure Coding System (HCPCS), and UB-04 Data Specifications Manual (for a complete listing of valid revenue codes) and any subsequent editions in effect at the time of service. Provider(s) shall refer to the applicable edition for the code description, as it is no longer documented in the policy.

If no such specific CPT or HCPCS code exists, then the provider(s) shall report the procedure, product or service using the appropriate unlisted procedure or service code.

CPT Code(s)		
Electrocardiography Codes		
93000	93042	93232
93005	93224	93233
93010	93225	93235
93015	93226	93236
93016	93227	93237
93017	93228	93268
93018	93229	93270
93025	93230	93271
93040	93231	93272
93041		

CPT Code(s)		
Echocardiography Codes		
93303	93314	93321+
93304	93315	93325+
93306	93316	93350
93307	93317	93351
93308	93318	93352+
93312	93320+	93662+
93313		

CPT Code(s)		
Fetal Echocardiography Codes		
76820	76826	76828
76821	76827	93325+
76825		
76820, 76821, 76825, 76826, 76827 and 76828 require prior approval. For further information on prior approval for fetal echocardiography refer to Clinical Coverage Policy 1K-7, Prior Approval for Imaging Services, on DMA's Web site at http://www.ncdhhs.gov/dma/mp/ .		

CPT Code(s)		
Coronary Intravascular Ultrasound Codes		
92978+	92979+	

Add-on codes are indicated with the “+” sign.

Unlisted Procedure or Service

CPT: The provider(s) shall refer to and comply with the Instructions for Use of the CPT Codebook, Unlisted Procedure or Service, and Special Report as documented in the current CPT in effect at the time of service.

HCPCS: The provider(s) shall refer to and comply with the Instructions For Use of HCPCS National Level II codes, Unlisted Procedure or Service and Special Report as documented in the current HCPCS edition in effect at the time of service.

D. Modifiers

Provider(s) shall follow applicable modifier guidelines.

E. Billing Units

Provider(s) shall report the appropriate code(s) used which determines the billing unit(s).

F. Place of Service

Inpatient, Outpatient, Office, Home, Intermediate care facility, Skilled nursing facility.

G. Co-payments

For Medicaid refer to Medicaid State Plan:

<https://medicaid.ncdhhs.gov/get-involved/nc-health-choice-state-plan>

For NCHC refer to NCHC State Plan:

<https://medicaid.ncdhhs.gov/get-involved/nc-health-choice-state-plan>

H. Reimbursement

Provider(s) shall bill their usual and customary charges.

For a schedule of rates, refer to: <https://medicaid.ncdhhs.gov/>