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| CMS Manual System | Department of Health & Human Services (DHHS) |
| Pub 100-03 Medicare National Coverage Determinations | Centers for Medicare & Medicaid Services (CMS) |
| Transmittal 13800 | Date: May 28, 2026 |
| | Change Request 14149 |

Transmittal 13427 issued September 22, 2025, is being rescinded and replaced by Transmittal 13800, dated May 28, 2026, to revise the Pub.100-04 Claims Processing Manual (CPM) Table of Contents and chapter section/sub-section number(s), transmittal, NCD 20.37 TTVR spreadsheet and Business Requirements (BR) 14149 - 04.1 that were erroneously misnumbered. In Pub 100-03, business requirement 14149 - 03.1 the reference to the (CPM) is being updated to the correct chapter and section. There are no changes to the policy. All other information remains the same.

SUBJECT: NCD 20.37 - Transcatheter Tricuspid Valve Replacement (TTVR)

I. SUMMARY OF CHANGES: The purpose of this Change Request (CR) is to make contractors aware of coverage for Transcatheter Tricuspid Valve Replacement (TTVR) on March 19, 2025.

EFFECTIVE DATE: March 19, 2025

**Unless otherwise specified, the effective date is the date of service.*

IMPLEMENTATION DATE: January 5, 2026

Disclaimer for manual changes only: The revision date and transmittal number apply only to red italicized material. Any other material was previously published and remains unchanged. However, if this revision contains a table of contents, you will receive the new/revised information only, and not the entire table of contents.

II. CHANGES IN MANUAL INSTRUCTIONS: (N/A if manual is not updated)

R=REVISED, N=NEW, D=DELETED-Only One Per Row.

| R/N/D | CHAPTER / SECTION / SUBSECTION / TITLE |
|--------------|--|
| R | 1/Table of Contents/Transcatheter Tricuspid Valve Replacement (TTVR) |
| N | 1/20.37/Transcatheter Tricuspid Valve Replacement (TTVR) |

III. FUNDING:

For Medicare Administrative Contractors (MACs):

The Medicare Administrative Contractor is hereby advised that this constitutes technical direction as defined in your contract. CMS does not construe this as a change to the MAC Statement of Work. The contractor is not obligated to incur costs in excess of the amounts allotted in your contract unless and until specifically authorized by the Contracting Officer. If the contractor considers anything provided, as described above, to be outside the current scope of work, the contractor shall withhold performance on the part(s) in question and immediately notify the Contracting Officer, in writing or by e-mail, and request formal directions regarding continued performance requirements.

IV. ATTACHMENTS:

**Business Requirements
Manual Instruction**

Attachment - Business Requirements

| | | | |
|--------------------|---------------------------|---------------------------|------------------------------|
| Pub. 100-03 | Transmittal: 13800 | Date: May 28, 2026 | Change Request: 14149 |
|--------------------|---------------------------|---------------------------|------------------------------|

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IMPLEMENTATION DATE: January 5, 2026

I. SUMMARY OF CHANGES: The purpose of this Change Request (CR) is to make contractors aware of coverage for Transcatheter Tricuspid Valve Replacement (TTVR) on March 19, 2025.

II. GENERAL INFORMATION

A. Background: TTVR is used in the treatment of Tricuspid Regurgitation (TR).

B. Policy: Effective March 19, 2025, the Centers for Medicare & Medicaid Services (CMS) covers TTVR for the treatment of symptomatic TR under Coverage with Evidence Development (CED) according to the criteria outlined in the NCD manual, Chapter 1, Section 20.37.

III. BUSINESS REQUIREMENTS TABLE

"Shall" denotes a mandatory requirement, and "should" denotes an optional requirement.

| Number | Requirement | Responsibility | | | | | | | | |
|--------------|---|----------------|---|-----|------------|---------------------------|-----|-----|-----|-------|
| | | A/B MAC | | | DME MAC | Shared-System Maintainers | | | | Other |
| | | A | B | HHH | | FISS | MCS | VMS | CWF | |
| 14149 - 03.1 | Effective for claims with Dates of Service (DOS) on or after March 19, 2025, contractors shall cover TTVR for the treatment of symptomatic TR under CED according to the criteria outlined above. Please refer to the NCD Manual, Pub. 100-03, Chapter 1, Section 20.37 and Pub. 100-04, Chapter 32, Section 414 for | X | X | | | | | | | |

| Number | Requirement | Responsibility | | | | | | | | |
|--------|---------------------------------|----------------|---|-----|------------|---------------------------|-----|-----|-----|-------|
| | | A/B MAC | | | DME MAC | Shared-System Maintainers | | | | Other |
| | | A | B | HHH | | FISS | MCS | VMS | CWF | |
| | claims processing instructions. | | | | | | | | | |

IV. PROVIDER EDUCATION

Medicare Learning Network® (MLN): CMS will develop and release national provider education content and market it through the MLN Connects® newsletter shortly after we issue the CR. MACs shall link to relevant information on your website and follow IOM Pub. No. 100-09 Chapter 6, Section 50.2.4.1 for distributing the newsletter to providers. When you follow this manual section, you don't need to separately track and report MLN content releases. You may supplement with your local educational content after we release the newsletter.

Impacted Contractors: A/B MAC Part A, A/B MAC Part B

V. SUPPORTING INFORMATION

Section A: Recommendations and supporting information associated with listed requirements: N/A

"Should" denotes a recommendation.

| X-Ref Requirement Number | Recommendations or other supporting information: |
|--------------------------|--|
| | |

Section B: All other recommendations and supporting information: N/A

VI. CONTACTS

Post-Implementation Contact(s): Contact your Contracting Officer's Representative (COR).

VII. FUNDING

Section A: For Medicare Administrative Contractors (MACs):

The Medicare Administrative Contractor is hereby advised that this constitutes technical direction as defined in your contract. CMS does not construe this as a change to the MAC Statement of Work. The contractor is not obligated to incur costs in excess of the amounts allotted in your contract unless and until specifically authorized by the Contracting Officer. If the contractor considers anything provided, as described above, to be outside the current scope of work, the contractor shall withhold performance on the part(s) in question

and immediately notify the Contracting Officer, in writing or by e-mail, and request formal directions regarding continued performance requirements.

ATTACHMENTS: 0

Medicare National Coverage Determinations Manual

Chapter 1, Part 1 (Sections 10 – 80.12)

Coverage Determinations

Table of Contents
(Rev. 13800; Issued: 05-28-26)

20.37 – Transcatheter Tricuspid Valve Replacement (TTVR)

20.37 – Transcatheter Tricuspid Valve Replacement (TTVR)
(Rev. 13800; Issued:05-28-26; Effective: 03-19-25; Implementation: 01-05-26)

A. General

Transcatheter Tricuspid Valve Replacement (TTVR) is used in the treatment of tricuspid regurgitation.

B. Nationally Covered Indications

The Centers for Medicare & Medicaid Services (CMS) covers transcatheter tricuspid valve replacement (TTVR) for the treatment of symptomatic tricuspid regurgitation (TR) under Coverage with Evidence Development (CED) according to the provisions below:

Coverage Criteria:

TTVR is covered when furnished according to a Food and Drug Administration (FDA) market-authorized indication and all the following conditions are met:

1. Patient Criteria

Despite optimal medical therapy (OMT), patients must have symptomatic TR with tricuspid valve replacement being considered as appropriate by a heart team.

2. Physician Criteria

The patient (preoperatively and postoperatively) is under the care of a heart team, which includes, at minimum, the following:

- a) Cardiac surgeon;*
- b) Interventional cardiologist;*
- c) Cardiologist with training and experience in heart failure management;*
- d) Electrophysiologist;*
- e) Multi-modality imaging specialists; and*
- f) Interventional echocardiographer*

All of the specialists listed above must have experience in the care and treatment of TR.

3. CED Study Criteria

The TTVR items and services are furnished in the context of a CMS-approved CED study. CMS-approved CED study protocols must: include only those patients who meet the criteria in section B.1; furnish items and services only through practitioners who meet the criteria in section B.2; and include all of the following:

a) Primary outcomes of all-cause mortality, hospitalizations, or a composite of these, through a minimum of 24 months. For composite outcome measures, physiologic, patient-reported, and other relevant health outcomes should be co-directional (i.e., all outcomes comprising the composite outcome should demonstrate movement in the same direction). Each component of a composite outcome must be individually reported.

b) An active comparator.

c) A care management plan that includes the experience and role of each member of the heart team described in section B.2.

d) Design sufficient for subgroup analyses by:

- Age;
- Sex;
- Race and ethnicity;
- Practitioner and facility level variables that predict the primary outcomes of the study;
- Left ventricular ejection fraction (by guideline-defined subgroups);
- Previous tricuspid surgery or intervention;
- Severe aortic or mitral stenosis or regurgitation;
- Patients with chronic kidney disease;
- Patients with indwelling cardiac implantable electronic devices;

e) CMS-approved CED studies must adhere to the following scientific standards (criteria 1-17 below) that have been identified by the Agency for Healthcare Research and Quality (AHRQ) as set forth in Section VI. of CMS' Coverage with Evidence Development Guidance Document, published August 7, 2024.

<https://www.cms.gov/medicare-coverage-database/view/medicare-coverage-document.aspx?mcid=38>

1. *Sponsor/Investigator: The study is conducted by sponsors/investigators with the resources and skills to complete it successfully.*

2. *Milestones: A written plan is in place that describes a detailed schedule for completion of key study milestones, including study initiation, enrollment progress, interim results reporting, and results reporting, to ensure timely completion of the CED process.*

3. *Study Protocol: The CED study is registered with ClinicalTrials.gov and a complete final protocol, including the statistical analysis plan, is delivered to CMS prior to study initiation. The published protocol includes sufficient detail to allow a judgment of whether the study is fit-for-purpose and whether reasonable efforts will be taken to minimize the risk of bias. Any changes to approved study protocols should be explained and publicly reported.*

4. *Study Context: The rationale for the study is supported by scientific evidence and study results are expected to fill the specified CMS-identified evidence deficiency and provide evidence sufficient to assess health outcomes.*

5. *Study Design: The study design is selected to safely and efficiently generate valid evidence of health outcomes. The sponsors/investigators minimize the impact of confounding and biases on inferences through rigorous design and appropriate statistical techniques. If a contemporaneous comparison group is not included, this choice should be justified, and the sponsors/investigators discuss in detail how the design contributes useful information on issues such as durability or adverse event frequency that are not clearly answered in comparative studies.*

6. *Study Population: The study population reflects the demographic and clinical diversity among the Medicare beneficiaries who are the intended population of the intervention, particularly when there is good clinical or scientific reason to expect that the results observed in premarket studies might not be observed in older adults or subpopulations identified by other clinical or demographic factors. At a minimum, this includes attention to the intended population's racial and ethnic backgrounds, sex, age, disabilities, important comorbidities, and, dependent on data availability, relevant health related social needs. For instance, more than half of Medicare beneficiaries are women so study designs should, as appropriate, consider the prevalence in women of the condition being studied as well as in the clinical trial and subsequent data reporting and analyses.*

7. *Subgroup Analyses: The study protocol explicitly discusses beneficiary subpopulations affected by the item or service under investigation, particularly traditionally underrepresented groups in clinical studies, how the inclusion and exclusion requirements effect enrollment of these populations, and a plan for the retention and*

reporting of said populations in the trial. In the protocol, the sponsors/investigators describe plans for analyzing demographic subpopulations as well as clinically relevant subgroups as identified in existing evidence. Description of plans for exploratory analyses, as relevant subgroups emerge, are also included.

8. *Care Setting:* When feasible and appropriate for answering the CED question, data for the study should come from beneficiaries in their expected sites of care.

9. *Health Outcomes:* The primary health outcome(s) for the study are those important to patients and their caregivers and that are clinically meaningful. A validated surrogate outcome that reliably predicts these outcomes may be appropriate for some questions. Generally, when study sponsors propose using surrogate endpoints to measure outcomes, they should cite validation studies published in peer-reviewed journals to provide a rationale for assuming these endpoints predict the health outcomes of interest. The cited validation studies should be longitudinal and demonstrate a statistical association between the surrogate endpoint and the health outcomes it is thought to predict.

10. *Objective Success Criteria:* In consultation with CMS and AHRQ, sponsors/investigators establish an evidentiary threshold for the primary health outcome(s) so as to demonstrate clinically meaningful differences with sufficient precision.

11. *Data Quality:* The data are generated or selected with attention to provenance, bias, completeness, accuracy, sufficiency of duration of observation to demonstrate durability of health outcomes, and sufficiency of sample size as required by the question.

12. *Construct Validity:* Sponsors/investigators provide information about the validity of drawing warranted conclusions about the study population, primary exposure(s) (intervention, control), health outcome measures, and core covariates when using either primary data collected for the study about individuals or proxies of the variables of interest, or existing (secondary) data about individuals or proxies of the variables of interest.

13. *Sensitivity Analyses:* Sponsors/investigators will demonstrate robustness of results by conducting pre-specified sensitivity testing using alternative variable or model specifications as appropriate.

14. *Reporting:* Final results are provided to CMS and submitted for publication or reported in a publicly accessible manner within 12 months of the study's primary completion date. Wherever possible, the study is submitted for peer review with the goal of publication using a reporting guideline appropriate for the study design and structured to enable replication. If peer-reviewed publication is not possible, results may also be published in an online publicly accessible registry dedicated to the dissemination of clinical trial information such as ClinicalTrials.gov, or in journals willing to publish in abbreviated format (e.g., for studies with incomplete results).

15. *Sharing:* The sponsors/investigators commit to making study data publicly available by sharing data, methods, analytic code, and analytical output with CMS or with a CMS-approved third party. The study should comply with all applicable laws regarding subject privacy, including 45 CFR § 164.514 within the regulations promulgated under the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and 42 CFR, Part 2: Confidentiality of Substance Use Disorder Patient Records.

16. *Governance:* The protocol describes the information governance and data security provisions that have been established to satisfy Federal security regulations issued pursuant to HIPAA and codified at 45 CFR Parts 160 and 164 (Subparts A & C), United States Department of Health and Human Services (HHS) regulations at 42 CFR, Part 2: Confidentiality of Substance Use Disorder Patient and HHS regulations at 45 CFR Part 46, regarding informed consent for clinical study involving human subjects. In addition to the requirements under 42 CFR and 45 CFR, studies that are subject to FDA regulation must also comply with regulations at 21 CFR Parts 50 and 56 regarding the protection of human subjects and institutional review boards, respectively.

17. Legal: The study is not designed to exclusively test toxicity or disease pathophysiology in healthy individuals, although it is acceptable for a study to test a reduction in toxicity of a product relative to standard of care or an appropriate comparator. For studies that involve researching the safety and effectiveness of new drugs and biological products aimed at treating life-threatening or severely debilitating diseases, refer to additional requirements set forth in 21 CFR § 312.81(a).

Consistent with section 1142 of the Social Security Act, AHRQ supports clinical research studies that CMS determines meet all the criteria and standards identified above.

C. Other Uses of TTVR

- 1. Transcatheter tricuspid valve replacement (TTVR) is not covered for patients outside of a CMS-approved study.*
- 2. Nothing in this NCD would preclude coverage of TTVR through NCD 310.1 (Clinical Trial Policy) or through the Investigational Device Exemption (IDE) Policy.*

(This NCD last reviewed March 2025.)