STRUCTURAL INTERVENTIONS CODING GUIDE

LEFT ATRIAL APPENDAGE CLOSURE (LAAC)
PFO CLOSURE

Effective January 1, 2025

STRUCTURAL INTERVENTIONS: LAAC AND PFO

Effective January 1, 2025

INTRODUCTION

The LAAC and PFO Coding Guide is intended to provide reference material related to the reimbursement of Abbott products when used consistently with their labeling.

REIMBURSEMENT HOTLINE

In addition, Abbott offers a reimbursement hotline, which provides live coding and reimbursement information from dedicated reimbursement specialists. Coding and reimbursement support is available from 8 a.m. to 5 p.m. Central Time, Monday through Friday at (855) 569-6430 or hce@abbott.com. This guide and all supporting documents are available at https://www.cardiovascular.abbott/us/en/hcp/reimbursement/sh.html. Coding and reimbursement assistance is provided subject to the disclaimers set forth in this guide.

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LEFT ATRIAL APPENDAGE CLOSURE (LAAC)

Effective January 1, 2025

LEFT ATRIAL APPENDAGE CLOSURE - LAAC

MEDICARE COVERAGE

CMS provides coverage for LAAC under Coverage with Evidence Development[6]. Among the coverage criteria specified in this National Coverage Determination (NCD):

LAAC devices are covered when the device has received Food and Drug Administration (FDA) Premarket Approval (PMA) for that device's FDA-approved indication and meet all of the conditions specified in the NCD.

The patient must have:

- A CHADS2 score ≥ 2 (Congestive heart failure, Hypertension, Age > 75, Diabetes, Stroke/transient ischemia attack/thromboembolism) or CHA2DS2-VASc score ≥ 3 (Congestive heart failure, Hypertension, Age ≥ 65, Diabetes, Stroke/transient ischemia attack/thromboembolism, Vascular disease, Sex category)
- A formal shared decision making interaction with an independent non-interventional physician using an evidence-based decision tool on oral anticoagulation in patients with NVAF prior to LAAC. Additionally, the shared decision making interaction must be documented in the medical record.
- A suitability for short-term warfarin but deemed unable to take long-term oral anticoagulation following the conclusion of shared decision making, as LAAC is only covered as a second line therapy to oral anticoagulants. The patient (preoperatively and postoperatively) is under the care of a cohesive, multidisciplinary team (MDT) of medical professionals. The procedure must be furnished in a hospital with an established structural heart disease (SHD) and/or electrophysiology (EP) program.

The procedure must be performed by an interventional cardiologist(s), electrophysiologist(s), or cardiovascular surgeon (s) that meet certain requirements.

The patient is enrolled in, and the multidisciplinary team (MDT) and hospital must participate in, a prospective, national, audited registry that: 1) consecutively enrolls LAAC patients and, 2) tracks the specific annual outcomes for each patient for a period of at least 4 years from the time of the LAAC.

PRIVATE PAYERS

- Private payer plans vary significantly in coverage and compliance requirement for LAAC.
- Private payers should be consulted in advance of the procedure to verify terms and conditions of coverage.
- Please check with your payer regarding appropriate coding and payment information.
- Commercial payer payment methods vary for reimbursing inpatient services including case rates, percent of billed charges, DRGs, and device carve outs.
- Commercial payer policies vary on details such as prior authorization requirements.

Please consult the private payer directly to ensure complete understanding of any relevant coverage polices and billing requirements.

MEDICARE ADVANTAGE

Medicare Advantage plans must cover LAAC therapy consistent with the National Coverage Determination (NCD):

- Medicare Advantage plans may not impose more restrictive coverage criteria than detailed in the NCD.
- Medicare Advantage plans may use prior authorization/precertification to ensure compliance with the NCD.

Please reach out directly to Medicare Advantage plan administrators to understand any specific prior authorization/pre-certification requirements that may apply.

LEFT ATRIAL APPENDAGE CLOSURE

Fiscal Year (FY) 2025 Hospital Inpatient Reimbursement - Medicare

NATIONAL AVERAGE REIMBURSEMENT INFORMATION

	FY 2025[2]
MS-DRG 273/274 (Percutaneous Intracardiac Procedure)	
With MCCs	$27,906
Without MCCs	$22,273
MS-DRG 317 (Concomitant Left Atrial Appendage Closure and Cardiac Ablation)	
All cases	$44,149

FY2025 Payment Rates Effective October 1, 2024 - September 30, 2025

INPATIENT ONLY PROCEDURE

The LAAC procedure is designated by CMS as an Inpatient-Only Procedure. This means there is no designated APC payment for the LAAC procedure nor a C-Code for the LAAC device. For non-Medicare Fee For Service payers who may request LAAC be done in the outpatient setting, consult with the payer on relevant billing instructions and the reimbursement.

LEFT ATRIAL APPENDAGE CLOSURE

PROCEDURE CODES

ICD-10-PCS PROCEDURE CODE[4]	DESCRIPTOR
02L73DK	Occlusion of Left Atrial Appendage with Intraluminal Device, Percutaneous Approach

DIAGNOSIS CODES

Below are the ICD-10-CM codes currently included in the NCD for LAAO.[6] It is the responsibility of the hospital and physician to determine the appropriate diagnosis code(s) for each patient. As discussed above, participation in the LAAO Registry is a requirement of LAAC coverage. Secondary ICD-10-CM Diagnosis Code Z00.6 should be used to denote clinical trial participation for these LAAC claims.[5]

ICD-10-CM DIAGNOSIS CODES [5, 9]	DESCRIPTOR
Z00.6	Encounter for exam for normal comparison and control in clinical research program
I48.0	Paroxysmal atrial fibrillation
I48.11	Longstanding persistent atrial fibrillation
I48.19	Other persistent atrial fibrillation
I48.20	Chronic atrial fibrillation, unspecified
I48.21	Permanent atrial fibrillation
I48.91	Unspecified atrial fibrillation

LEFT ATRIAL APPENDAGE CLOSURE

DOCUMENTATION OF PATIENT COMORBIDITIES

Patient complications and comorbidities should be identified on admission. Ensure the documentation addresses the acuity, treatment of the comorbidity while in the hospital, and the status on discharge. Always use the most detailed and appropriate code available versus defaulting to an "unspecified" code. It is the responsibility of the hospital or physician to determine appropriate coding for a particular patient and/or procedure.

For reference, below are the common major complications and comorbidities on LAAC claims[8].

ICD-10-CM	DESCRIPTOR
A41.9	Sepsis, unspecified organism
E43	Unspecified severe protein-calorie malnutrition
G93.41	Metabolic encephalopathy
I21.4	Non-ST elevation (NSTEMI) myocardial infarction
I50.23	Acute on chronic systolic (congestive) heart failure
I50.31	Acute diastolic (congestive) heart failure
I50.33	Acute on chronic diastolic (congestive) heart failure
I50.43	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure
J18.9	Pneumonia, unspecified organism
J69.0	Pneumonitis due to inhalation of food and vomit

ICD-10-CM	DESCRIPTOR
J96.01	Acute respiratory failure with hypoxia
J96.21	Acute and chronic respiratory failure with hypoxia
K25.4	Chronic or unspecified gastric ulcer with hemorrhage
K31.811	Angiodysplasia of stomach and duodenum with bleeding
K55.21	Angiodysplasia of colon with hemorrhage
N17.0	Acute kidney failure with tubular necrosis
N18.6	End stage renal disease
R57.0	Cardiogenic shock
R57.1	Hypovolemic shock
R57.8	Other shock

LEFT ATRIAL APPENDAGE CLOSURE

ADDITIONAL REQUIREMENTS

Additional coding requirements are necessary for LAAC cases enrolled in the LAAO Registry.

ADDITIONAL REQUIRED INFORMATION	NOTES
NCT 02699957	National Clinical Trial Number is required for cases enrolled in the TVT Registry. For Form UB-04 paper claims, enter 02699957 in the value amount, value code D4. For 837I electronic claims, enter 02699957 in Loop 2300 REF02 (REF01 = P4).
Condition Code 30	Condition Code is required for cases enrolled in the TVT Registry.
Revenue Code 278	Medical/Surgical supplies and devices: Other Implants. A revenue code must be included on all claims.
Place of Service 21	Inpatient Hospital

For additional considerations for private payer and Medicare Advantage plans, please reference the coverage section of this guide

LEFT ATRIAL APPENDAGE CLOSURE

PHYSICIAN IMPLANTER[1]

CPT‡ CODE	DESCRIPTION	WORK RVU	NATIONAL MEDICARE RATE FACILITY
LEFT ATRIAL APPENDAGE CLOSURE			
33340	Percutaneous transcatheter closure of the left atrial appendage with endocardial implant, including fluoroscopy, transseptal puncture, catheter placement(s), left atrial angiography, left atrial appendage angiography, when performed, and radiological supervision and interpretation	14.00	$740
INTRACARDIAC ECHOCARDIOGRAPHY (ICE)			
+93662	Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)	1.44	$67

(+) = Indicates add-on code. List add-on code separately in addition to code for primary procedure.

CODING MODIFIERS AND ADDITIONAL REQUIREMENTS

REQUIREMENTS FOR BILLING [3, 5]	NOTES
Modifier -Q0	Use for physician claims for cases enrolled in the LAAO Registry
Modifier -62	Use for physician claims for LAAO procedure to indicate participation of two surgeons/co-surgeons
Place of Service 21	Inpatient hospital
NCT02699957	National Clinical Trial Number is required for cases enrolled in the LAAO Registry. For Form CMS-1500 paper claims, enter 'CT' followed by 02699957 in Field 19. For 837P electronic claims, enter 02699957 (no 'CT') in Loop 2300 REF02 (REF01 = P4).
Diagnosis code = Z00.6	Z00.6 – Encounter for the examination for normal comparison and control in clinical research program – required for inclusion in LAAO Registry

Note for combined procedures mapping to DRG 317, the multiple procedure payment reduction may apply.

LEFT ATRIAL APPENDAGE CLOSURE

ICD-10-CM DIAGNOSIS CODES[3]

It is the responsibility of the physician to determine the appropriate diagnosis code(s) for each patient. As discussed above, participation in the LAAO Registry is a requirement of LAAC coverage. Secondary diagnosis code Z00.6 should be used to denote clinical trial participation for these LAAC claims.

ICD-10-CM DIAGNOSIS CODE	CODE DESCRIPTOR
Z00.6	Encounter for exam for normal comparison and control in clinical research program
I48.0	Paroxysmal atrial fibrillation
I48.11	Longstanding persistent atrial fibrillation
I48.19	Other persistent atrial fibrillation
I48.20	Chronic atrial fibrillation, unspecified
I48.21	Permanent atrial fibrillation
I48.91	Unspecified atrial fibrillation

LEFT ATRIAL APPENDAGE CLOSURE

PROCEDURAL IMAGING[1]

CPT‡ CODE	DESCRIPTION	WORK RVU	NATIONAL MEDICARE RATE FACILITY	NATIONAL MEDICARE RATE NON FACILITY
TRANSEOPHAGEAL ECHOCARDIOLOGY (TEE)				
93355*	Echocardiography, transesophageal (TEE) for guidance of a transcatheter intracardiac or great vessel(s) structural intervention(s) (e.g., TAVR, transcathether pulmonary valve replacement, mitral valve repair, paravalvular regurgitation repair, left atrial appendage occlusion/closure, ventricular septal defect closure) (peri-and intra-procedural), real-time image acquisition and documentation, guidance with quantitative measurements, probe manipulation, interpretation, and report, including diagnostic transesophageal echocardiography and, when performed, administration of ultrasound contrast, Doppler, color flow, and 3D	4.66	$213	NA

* Note that 93355 is bundled and not separately payable when reported on the same physician claim as the primary procedure or with anesthesia services[6]

LEFT ATRIAL APPENDAGE CLOSURE

PRIOR AUTHORIZATION CHECKLIST FOR IMPLANTING PHYSICIAN(S)

This checklist is provided as a summary of the information used to process Prior Authorization Requests for Left Atrial Appendage Closure (LAAC) Intervention procedures. This list of codes is not all-inclusive. Please check your patient's benefit administrator's prior authorization requirements before submitting a prior authorization request. Please do not include this form in your submission to the payer.

CPT‡ CODES	DESCRIPTION	INCLUDED
33340	Percutaneous transcatheter closure of the left atrial appendage with endocardial implant, including fluoroscopy, transseptal puncture, catheter placement(s), left atrial angiography, left atrial appendage angiography, when performed, and radiological supervision and interpretation	☐

The following clinical information may be required when submitting a prior authorization request for the aforementioned CPT‡ codes. This information is subject to change. Please check your patient's benefit administrator's prior authorization requirements before submitting a prior authorization request.

SUGGESTED INFORMATION TO INCLUDE WITH PRIOR AUTHORIZATION	
ICD Diagnosis and indication for procedure	☐
Relevant history and physical to include member symptoms and pertinent findings due to atrial fibrillation	☐
Treatments tried, failed and/or contraindicated, including pharmacologic therapy, if applicable	☐
CHADS2 or CHA2DS2-VASC score	☐
Diagnostic images (e.g., angiography, transesophageal echocardiography (TEE), intracardiac echocardiography (ICE), or pre-procedural cardiac CT) to rule out the presence of intracardiac thrombus and presence of pericardial effusion, or to measure the left atrial appendage.	☐

Note for combined procedures mapping to DRG 317, the multiple procedure payment reduction may apply.

+ denotes an add-on code. List separately in addition to primary procedure.

LEFT ATRIAL APPENDAGE CLOSURE

FOR ECHOCARDIOGRAPHER

This checklist is provided as a summary of the information used to process claims for LAAC per CMS's NCD 20.34.[1] It is the responsibility of the hospital and/or physician to determine appropriate coding for a particular patient and / or procedure. Any claim should be coded appropriately and supported with adequate documentation in the medical record.

CODES / MODIFIERS / OTHER	WHEN USED?	INCLUDED	NA
DIAGNOSIS CODES[2]			
Z00.6: Examination of a participant in a clinical trial	All cases	☐	☐
I48.0 Paroxysmal atrial fibrillation	When appropriate	☐	☐
I48.11 Longstanding persistent atrial fibrillation	When appropriate	☐	☐
I48.19 Other persistent atrial fibrillation	When appropriate	☐	☐
I48.20 Chronic atrial fibrillation, unspecified	When appropriate	☐	☐
I48.21 Permanent atrial fibrillation	When appropriate	☐	☐
I48.91 Unspecified atrial fibrillation	When appropriate	☐	☐
CPT‡ CODES			
93355: TEE for intraprocedural monitoring	All cases	☐	☐
CPT‡ CODE MODIFIERS			
-Q0: Investigational / Routine clinical service provided in a clinical research study that is in an approved clinical research study.	All cases	☐	☐
NCT NUMBER			
02699957	All cases	☐	☐

PFO CLOSURE

Effective January 1, 2025

PFO CLOSURE

FY 2025 Hospital Inpatient Reimbursement - Medicare

NATIONAL AVERAGE REIMBURSEMENT INFORMATION

PFO procedures are assigned to MS-DRG 273/274: Percutaneous Intracardiac Procedures. The rates in the table below are the national average reimbursement rates. For hospital specific rates, please contact your local Abbott representative.

	FY 2025[2]
MS-DRG	273/274
With MCCs	$27,906
Without MCCs	$22,273

FY2025 Payment Rates Effective October 1, 2024 - September 30, 2025

PFO CLOSURE

PROCEDURE CODES

ICD-10-PCS PROCEDURE CODE[4]	DESCRIPTOR
02U53JZ	Supplement atrial septum with synthetic substitute, percutaneous approach

DIAGNOSIS CODES

ICD-10-CM DIAGNOSIS CODES[3]	DESCRIPTOR
Q21.1	Atrial septal defect
Q21.12	Patent Foramen Ovale (NEW Effective October 2022)

While there are no ICD-10-CM diagnosis codes to specifically describe cryptogenic stroke (CS) as a secondary condition, there is only one generic ICD-10-CM diagnosis code for ischemic stroke with no specification as to the type of the cerbrovascular condition which could be used for reporting of the CS:

- I63.9, Cerebral infarction, unspecified

Claims submission to a majority of U.S. private insurance companies is often driven by the existence of specific coding to explain the services requested. Payers will often require additional information on the claim form, or in addition to the claim form, in order to adjudicate the claims. Documentation requirements may vary by payer, however, at minimum, the following documentation should be provided.

- Description of test results performed to confirm PFO
- Description of test results confirming CS and likelihood of PFO involvement (other causes of stroke should be ruled out)

PFO CLOSURE

CY 2025 Hospital Outpatient Reimbursement - Medicare

NATIONAL AVERAGE REIMBURSEMENT INFORMATION

The rate in the table below is the national average reimbursement rate. For hospital specific rates, please contact your local Abbott representative.

CPT‡ CODE	DESCRIPTOR	STATUS INDICATOR	APC	NATIONAL MEDICARE RATE
93580	Percutaneous transcatheter closure of congenital interatrial communication (i.e., fontan fenestration, atrial septal defect) with implant	J1	5194	$17,957

J1 = Hospital Part B services paid through a comprehensive APC

PFO CLOSURE

HCPCS DEVICE CATEGORY C- CODES

C-CODES	DESCRIPTOR
C1817	Septal defect implant system, intracardiac
C1769	Guidewire

DIAGNOSIS CODES

ICD-10-CM CODES[3]	DESCRIPTOR
Q21.1	Atrial septal defect
Q21.12	Patent Foramen Ovale (NEW Effective October 2022)

While there are no ICD-10-CM diagnosis codes to specifically describe cryptogenic stroke (CS) as a secondary condition, there is only one generic ICD-10-CM diagnosis code for ischemic stroke with no specification as to the type of the cerbrovascular condition which could be used for reporting of the CS:

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- Description of test results performed to confirm PFO
- Description of test results confirming CS and likelihood of PFO involvement (other causes of stroke should be ruled out).

PFO CLOSURE

CLINICAL DOCUMENTATION CHECKLIST

Diagnosis of cryptogenic ischemic stroke
It is recommended that the comprehensive evaluation follow the latest professional society guidelines for diagnosing a cryptogenic ischemic stroke. The following assessments are identified in the device Instructions for Use (IFU) which should be included in the patient's documentation at a minimum:

- ☐ MRI or CT scanning of the head to rule out small vessel disease or lacunar infarct
- ☐ TEE to rule out non-PFO intra-cardioembolic sources or conditions or aortic arch atheroma
- ☐ ECG and prolonged cardiac rhythm monitoring (~ 30 days) to rule out atrial fibrillation and other heart rhythm disturbances that may be associated with stroke
- ☐ Intra and extracranial artery imaging: MRA, CT angiography, or contrast angiography to rule out an ischemic stroke associated with atherosclerotic plaque, arterial dissection or other vascular diseases
- ☐ Hematological evaluation to rule out underlying hypercoagulable state

This list is not an exhaustive list of all conditions to consider. It is the responsibility of the provider to determine the proper assessments to determine the diagnosis of a cryptogenic stroke.

PFO CLOSURE

PHYSICIAN IMPLANTER[1]

CPT‡ CODE	DESCRIPTION	WORK RVU	NATIONAL MEDICARE RATE FACILITY	NATIONAL MEDICARE RATE NON-FACILITY
PATENT FORAMEN OVALE				
93580	Percutaneous transcatheter closure of congenital interatrial communication (i.e., Fontan fenestration, atrial septal defect) with implant	17.97	$923	NA
INTRACARDIAC ECHOCARDIOGRAPHY (ICE)				
+93662	Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)	1.44	$67	NA

PROCEDURAL IMAGING[1]

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TRANSEOPHAGEAL ECHOCARDIOLOGY (TEE)				
93355*	Echocardiography, transesophageal (TEE) for guidance of a transcatheter intracardiac or great vessel(s) structural intervention(s) (e.g., TAVR, transcathether pulmonary valve replacement, mitral valve repair, paravalvular regurgitation repair, left atrial appendage occlusion/closure, ventricular septal defect closure) (peri-and intra-procedural), real-time image acquisition and documentation, guidance with quantitative measurements, probe manipulation, interpretation, and report, including diagnostic transesophageal echocardiography and, when performed, administration of ultrasound contrast, Doppler, color flow, and 3D	4.66	$213	NA

(+) = Indicates add-on code. List add-on code separately in addition to code for primary procedure.

* Note that 93355 is bundled and not separately payable when reported on the same physician claim as the primary procedure or with anesthesia services[6]

Effective Dates: January 1, 2025 - December 31, 2025

References

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Abbott
3200 Lakeside Dr., Santa Clara, CA 95054 USA Tel: 1.800.227.9902

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