Circulation: Population Health and Outcomes

PERFORMANCE AND QUALITY MEASURES

2026 ACC/AHA Clinical Performance and Quality Measures for Patients With Peripheral Artery Disease: A Report of the American College of Cardiology/American Heart Association Joint Committee on Performance Measures

Developed in Collaboration With the American Association of Cardiovascular and Pulmonary Rehabilitation, American Podiatric Medical Association, Association of Black Cardiologists, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine, Society for Vascular Nursing, Society for Vascular Surgery, Society of Interventional Radiology, and the Vascular and Endovascular Surgery Society

Writing Committee Members*

Philip P. Goodney, MD, MS, FAHA, Chair†; Elsie G. Ross, MD, MS, RPVI, FAHA, Vice Chair; Jeffrey T. Bruckel, MD, MPH, FACC, FSCAI, JCPM Liaison‡; Olamide Alabi, MD, MS; S. Elissa Altin, MD, FACC, FSCAI§; Karen Bauer, DNP, APRN-FNP, CWSI‖; Rebecca L. Diekemper, MPH¶; Marie D. Gerhard-Herman, MD, FACC; Lily E. Johnston, MD, MPH, FSVS#; Victoria T. Martin, MD, MSCI**; Amanda M. Morrison, MD, RPVI; Parag J. Patel, MD, MS, FSIR††; Paula Rodriguez-Miguelez, PhD, FAHA; Jennifer A. Rymer, MD, MBA, FACC, FAHA; Kerry J. Stewart, EdD, FAHA, MAACVPR‡‡; Dyane E. Tower, DPM, MPH, MS, CAE§§; Diane J. Treat-Jacobson, PhD, RN, FAHA, MSVM‖‖; Gabriela Velazquez, MD, FACS, DFSVS, RPVI¶¶; Jose Wiley, MD, MPH, FACC, FSCAI

ABSTRACT: This document describes the 2026 ACC/AHA Clinical Performance and Quality Measures for Patients With Peripheral Artery Disease, which were developed to guide clinicians, researchers, quality assurance personnel, payers, and regulatory agencies in the care of individuals with peripheral artery disease. The measures are designed to enable the assessment of the effects of treatment decisions, such as which medications should be used for individuals with peripheral artery disease and which tests are appropriate for follow-up after treatment interventions. The goal of this document is to help ensure that evidence-based care is offered to individuals with peripheral artery disease, and this care can be measured reliably and reproducibly across myriad care settings and populations.

Key Words: AHA Scientific Statements ■ performance measures ■ peripheral artery disease ■ quality indicators ■ quality measures

*Writing committee members are required to recuse themselves from voting on measures to which their specific relationships with industry may apply. †ACC/AHA Peripheral Artery Disease Guideline liaison. ‡ACC/AHA Joint Committee on Performance Measures. §Society for Cardiovascular Angiography and Interventions representative. ‖Society for Vascular Nursing representative. ¶AHA/ACC joint staff representative. #Society for Vascular Surgery representative. **Association of Black Cardiologists representative. ††Society of Interventional Radiology representative. ‡‡American Association of Cardiovascular and Pulmonary Rehabilitation representative. §§American Podiatric Medical Association representative. ‖‖Society for Vascular Medicine representative. ¶¶Vascular and Endovascular Surgery Society representative.

ACC/AHA Joint Committee on Performance Measures, see page __.

The American Heart Association requests that this document be cited as follows: Goodney PP, Ross EG, Bruckel JT, Alabi O, Altin SE, Bauer K, Diekemper RL, Gerhard-Herman MD, Johnston LE, Martin VT, Morrison AM, Patel PJ, Rodriguez-Miguelez P, Rymer JA, Stewart KJ, Tower DE, Treat-Jacobson DJ, Velazquez G, Wiley J. 2026 ACC/AHA clinical performance and quality measures for patients with peripheral artery disease: a report of the American College of Cardiology/American Heart Association Joint Committee on Performance Measures. *Circ Popul Health Outcomes*. 2025;18:e000142. doi: 10.1161/HCQ.0000000000000142

Circulation: Population Health and Outcomes is available at http://www.ahajournals.org/journal/circoutcomes

TABLE OF CONTENTS

TOP 10 TAKE-HOME MESSAGES FOR PERIPHERAL ARTERY DISEASE

1. This document describes performance measures for peripheral artery disease (PAD) that are appropriate for public reporting or pay-for-performance programs.
2. The performance measures are selected from the strongest recommendations (Class 1 or 3) from the "2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease."[1]
3. Quality measures, some of which are based on Class 2 recommendations, are also provided. These measures are not yet ready for public reporting or pay-for-performance programs but will be useful to clinicians and health care organizations for quality improvement.
4. Four new performance measures have been added to the document that are related to medical therapies for individuals with PAD (blood pressure management, use of angiotensin-converting enzyme inhibitors, diabetes management, and use of antithrombotic therapy).
5. Five new quality measures have also been added: preventive foot care, lipid lowering with novel drugs, evaluation of health disparities, saphenous vein assessment prior to revascularization, and multidisciplinary treatment for individuals with chronic limb-threatening ischemia.
6. For all but 2 measures (ie, PM-6 Tobacco Use and PM-7 Exercise Therapy), if the clinician determines the care is inappropriate for the patient, that patient is excluded from the measure.
7. For all measures, patients who decline treatment or care are excluded.
8. To reflect the increasing importance of evaluation of disparities faced by patients with PAD, a quality measure highlighting the role of disparities in the identification and treatment of PAD is introduced.

9. A patient-centered discussion of the benefits and risks of treatments for PAD, especially involving a multidisciplinary care team, is included as a quality measure.
10. Areas for further measurement and development of future performance measures are discussed.

PREAMBLE

The American College of Cardiology (ACC)/American Heart Association (AHA) performance measurement sets serve as vehicles to accelerate the translation of scientific evidence into clinical practice. Measure sets developed by the ACC/AHA are intended to provide practitioners and institutions that deliver cardiovascular services with tools to measure the quality of care and identify opportunities for improvement.

Writing committees are instructed to follow the methodology for performance development[2,3] and to ensure that the measures developed are aligned with ACC/AHA clinical practice guidelines. The writing committees are also charged with constructing measures that maximally capture important aspects of care quality, including timeliness, safety, effectiveness, efficiency, equity, and patient-centeredness, while minimizing, when possible, the reporting burden imposed on hospitals, practices, and practitioners.

Potential challenges related to performance measure implementation may lead to unintended consequences. How recommended measures are implemented depends on several factors, including the measure's design, data collection method, performance attribution, baseline performance rates, reporting methods, and incentives linked to these reports.

The ACC/AHA Joint Committee on Performance Measures (Joint Committee) distinguishes performance measures from quality measures. Performance measures are generally selected from the highest Level of Evidence, usually from Class 1 or 3 recommendations of clinical practice guidelines. They are commonly used for national quality improvement efforts, public reporting, and pay-for-performance programs. In contrast, quality measures have weaker or growing evidence for benefit (eg, Class 2a or 2b) and therefore *may* be useful for local quality improvement but are not yet appropriate for public reporting or pay-for-performance programs. New measures are initially evaluated for potential inclusion as performance measures. For those measures where evidence may be weak or further evaluation or testing is required to understand implementation challenges, the ACC/AHA writing committee members may recommend classifying them as quality measures. Over time and with more research and validation, quality measures may then be promoted to performance measure status. The published ACC/AHA guideline sets for performance measurement are important implementation tools for the transformation and dissemination of advancements in cardiovascular care.

Boback Ziaeian, MD, PhD, FACC, FAHA
Chair, ACC/AHA Joint Committee on Performance Measures

1. INTRODUCTION

In 2024, the Joint Committee convened the writing committee to begin the process of updating the measures from the "ACCF/AHA/ACR/SCAI/SIR/SVM/SVN/SVS 2010 Performance Measures for Adults With Peripheral Artery Disease."[4] The writing committee was also tasked with developing new measures to evaluate the care of patients with peripheral artery disease (PAD) in accordance with the "2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease."[1]

This performance measures set addresses the care of PAD in the inpatient and outpatient settings, consistent with the PAD guidelines from which the measures were abstracted. The definition of lower limb PAD includes asymptomatic atherosclerosis in the peripheral arteries; chronic symptomatic PAD, which includes claudication and other exertional leg disorders; acute limb ischemia; and chronic limb-threatening ischemia.[1] All Class 1 (strong) and Class 3 (no benefit or harmful, and should be avoided) guideline-recommended processes were considered for inclusion as performance measures. The current Class of Recommendation and Level of Evidence guideline classification scheme used by the ACC and AHA in their clinical practice guidelines is shown in Table 1.

The writing committee developed a comprehensive PAD measure set that includes 15 measures: 7 performance measures and 8 quality measures. Four of the 7 performance measures and 5 of the 8 quality measures are new. The measures for PAD included in the measure set are briefly summarized in Table 2, which provides information on the measure number, measure title, and care setting. Detailed measure specifications can be found in the measure tables in Appendix A. The tables in Appendix A not only provide the information included in Table 2, they also provide more detailed information, including the measure description, numerator, denominator (including denominator exclusions and exceptions), rationale for the measure, guideline recommendation that supports the measure, measurement period, source of data, and attribution. The numerator of a measure refers to the subset of the eligible patient population receiving the care being measured. The denominator refers to the patient population that is eligible for being included in the measure.[3] Denominator exclusions and exceptions give providers more flexibility in meeting measure requirements for certain patients. Denominator

Table 1. Applying American College of Cardiology/American Heart Association Class of Recommendation and Level of Evidence to Clinical Strategies, Interventions, Treatments, or Diagnostic Testing in Patient Care* (Updated December 2024)

CLASS (STRENGTH) OF RECOMMENDATION

Class 1 (STRONG) — Benefit >>> Risk

Suggested phrases for writing recommendations:
- Is recommended
- Is indicated/useful/effective/beneficial
- Should be performed/administered/other
- Comparative-Effectiveness Phrases†:
  - Treatment/strategy A is recommended/indicated in preference to treatment B
  - Treatment A should be chosen over treatment B

Class 2a (MODERATE) — Benefit >> Risk

Suggested phrases for writing recommendations:
- Is reasonable
- Can be useful/effective/beneficial
- Comparative-Effectiveness Phrases†:
  - Treatment/strategy A is probably recommended/indicated in preference to treatment B
  - It is reasonable to choose treatment A over treatment B

Class 2b (WEAK) — Benefit ≥ Risk

Suggested phrases for writing recommendations:
- May/might be reasonable
- May/might be considered
- Usefulness/effectiveness is unknown/unclear/uncertain or not well-established

Class 3: No Benefit (MODERATE) — Benefit = Risk (Generally, LOE A or B use only)

Suggested phrases for writing recommendations:
- Is not recommended
- Is not indicated/useful/effective/beneficial
- Should not be performed/administered/other

Class 3: HARM (STRONG) — Risk > Benefit

Suggested phrases for writing recommendations:
- Potentially harmful
- Causes harm
- Associated with excess morbidity/mortality
- Should not be performed/administered/other

LEVEL (QUALITY) OF EVIDENCE‡

Level A
- High-quality evidence‡ from more than 1 RCT
- Meta-analyses of high-quality RCTs
- One or more RCTs corroborated by high-quality registry studies

Level B-R (Randomized)
- Moderate-quality evidence‡ from 1 or more RCTs
- Meta-analyses of moderate-quality RCTs

Level B-NR (Nonrandomized)
- Moderate-quality evidence‡ from 1 or more well-designed, well-executed nonrandomized studies, observational studies, or registry studies
- Meta-analyses of such studies

Level C-LD (Limited Data)
- Randomized or nonrandomized observational or registry studies with limitations of design or execution
- Meta-analyses of such studies
- Physiological or mechanistic studies in human subjects

Level C-EO (Expert Opinion)
- Consensus of expert opinion based on clinical experience

COR and LOE are determined independently (any COR may be paired with any LOE).

A recommendation with LOE C does not imply that the recommendation is weak. Many important clinical questions addressed in guidelines do not lend themselves to clinical trials. Although RCTs are unavailable, there may be a very clear clinical consenus that a particular test or therapy is useful or effective.

* The outcome or result of the intervention should be specified (an improved clinical outcome or increased diagnostic accuracy or incremental prognostic information).

† For comparative-effectiveness recommendations (COR 1 and 2a; LOE A and B only), studies that support the use of comparator verbs should involve direct comparisons of the treatments or strategies being evaluated.

‡ The method of assessing quality is evolving, including the application of standardized, widely-used, and preferably validated evidence grading tools; and for systematic reviews, the incorporation of an Evidence Review Committee.

COR indicates Class of Recommendation; EO, expert opinion; LD, limited data; LOE, Level of Evidence; NR, nonrandomized; R, randomized; and RCT, randomized controlled trial.

Table 2. ACC/AHA 2026 Peripheral Artery Disease Measures

Measure No.	Measure Title	Care Setting	Attribution	Measure Domain	COR/LOE
Performance Measures					
PM-1	Target BP for Patients With PAD	Outpatient	Individual practitioner, Facility	Treatment	COR: 1, LOE: A; COR: 1, LOE: B-R
PM-2	Use of ACE Inhibitors or ARB for Patients With PAD	Inpatient, Outpatient	Individual practitioner, Facility	Treatment	COR: 1, LOE: B-R
PM-3	Diabetes Management for PAD	Inpatient, Outpatient	Individual practitioner, Facility	Treatment	COR: 1, LOE: A; COR: 1, LOE: C-EO; COR: 2b, LOE: B-NR
PM-4	Antithrombotic Therapy for Symptomatic PAD	Inpatient, Outpatient	Individual practitioner, Facility	Treatment	COR: 1, LOE: A
PM-5	Lipid-Lowering Therapy for PAD (High-Intensity Statins)	Inpatient, Outpatient	Individual practitioner, Facility	Treatment	COR: 1, LOE: A
PM-6	Tobacco Use: Screening and Counseling	Inpatient, Outpatient	Individual practitioner, Facility	Patient education, Treatment, Self-management	COR: 1, LOE: A; COR: 1, LOE: B-NR
PM-7	SET or Structured Community-Based Exercise Therapy	Outpatient	Individual practitioner, Facility	Patient education, Treatment, Self-management, Monitoring	COR: 1, LOE: A; COR: 1, LOE: B-R; COR: 2a, LOE: A; COR: 2b, LOE: B-R
Quality Measures					
QM-1	Vascular Review of Systems for Lower Extremity PAD	Inpatient, Outpatient	Individual practitioner, Facility	Risk assessment, Diagnosis	COR: 1, LOE: B-NR
QM-2	PAD "At Risk" Pulse Examination	Outpatient	Individual practitioner	Risk assessment, Diagnosis	COR: 1, LOE: B-NR
QM-3	Preventive Foot Care for PAD	Outpatient	Individual practitioner	Patient education, Treatment, Self-management, Monitoring	COR: 1, LOE: C-LD; COR: 1, LOE: C-EO
QM-4	Lipid-Lowering Therapy for PAD (Novel Drugs)	Inpatient, Outpatient	Individual practitioner, Facility	Treatment	COR: 1, LOE: A; COR: 2a, LOE: B-R
QM-5	Identifying Health Disparities in PAD	Inpatient, Outpatient	Facility	Risk assessment, Diagnosis, Patient education, Treatment, Self-management, Monitoring	COR: 1, LOE: C-EO
QM-6	Saphenous Vein Assessment Before Leg Revascularization	Inpatient, Outpatient	Individual practitioner, Facility	Diagnosis	COR: 1, LOE: B-R
QM-7	Lower Extremity Surveillance After Revascularization	Outpatient	Individual practitioner	Diagnosis, Monitoring	COR: 1, LOE: C-EO; COR: 1, LOE: B-NR; COR: 1, LOE: C-LD; COR: 2a, LOE: B-R; COR: 2a, LOE: C-LD; COR: 2b, LOE: B-NR
QM-8	Multidisciplinary Team Evaluation for Patients With CLTI	Inpatient, Outpatient	Facility	Treatment	COR: 1, LOE: B-NR; COR: 1, LOE: C-EO

ACC indicates American College of Cardiology; ACE, angiotensin-converting enzyme; AHA, American Heart Association; ARB, angiotensin-receptor blocker; BP, blood pressure; CLTI, chronic limb-threatening ischemia; COR, Class of Recommendation; LOE, Level of Evidence; PAD, peripheral artery disease; PM, performance measure; QM, quality measure; and SET, supervised exercise therapy.

exclusions are considered absolute and are applied in circumstances where it would be inappropriate to include certain patients in a measure. Exclusions allow providers to exclude eligible patients from the denominator up front, without determining whether those patients meet the numerator. Denominator exceptions are intended to allow for provider discretion in weighing the benefits and risks of a treatment or procedure and to allow providers to meet a measure when they determine that a treatment is not warranted for a particular patient due to contraindications or other factors.[2] More information on how the measure specifications are formulated can be found in the Spertus 2005 and 2010 papers that serve as the methodology for the development of ACC/AHA performance measures documents.[2,3]

The value (benefit relative to cost) of a process of care was also considered. If high-quality, published cost-effectiveness studies indicated that a Class 1 guideline recommendation for a process of care was considered a poor value by ACC/AHA standards, then it was not included as a performance measure.[5] No Class 1 recommended processes of care were judged to be of poor value. All ACC/AHA clinical practice guideline recommendations (including a limited number of Class 2 recommendations) were considered as potential quality measures. Ultimately, measures were selected based on their importance for health, the strength of data supporting the recommendations, existing gaps in patient care, ease of implementation, and risk for unintended consequences. The writing committee believes that implementation of this measure set by clinicians and health care facilities will enhance safe, cost-effective, patient-centered, and culturally sensitive care for individual patients.

1.1. Scope of the Problem

According to the "2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease,"[1] more than 230 million individuals worldwide have PAD. The extent of PAD varies from asymptomatic atherosclerosis in the smallest arteries of the lower extremity to life- or limb-threatening manifestations of severe atherosclerosis in the aorta and major branches. There is also extensive variation in the treatment of PAD around the world, especially catheter-based treatments.[6] For example, there are regions where access to care is difficult, and amputation risk is excessive.[7] Conversely, there are also regions where procedure rates are high and often performed outside the scope of recommendations issued in the 2024 PAD guideline.[1,8]

Given these variations, there is a clear need for oversight and evaluation of the care provided to individuals with PAD. Ensuring that PAD treatments are provided with the highest quality requires measures that accurately evaluate PAD care as well as the environment in which care is delivered. These measures will help patients, clinicians, researchers, quality assurance personnel, payers, and regulatory agencies evaluate PAD care similarly and properly focus attention toward ensuring that high-quality, high-value care is delivered to all patients. These measures relate to all aspects of PAD care, from initial evaluation and testing, preventive medical therapy, and risk factor modification such as smoking cessation, to procedural aspects of care and population-specific goals, especially among patients at risk for health care disparities.

1.2. Disclosure of Relationships With Industry and Other Entities

The Joint Committee makes every effort to avoid actual, potential, or perceived conflicts of interest that could arise as a result of relationships with industry or other entities (RWI). Information about the ACC/AHA policy on RWI can be found online at https://www.acc.org/guidelines/about-guidelines-and-clinical-documents/relationships-with-industry-policy. All members of the writing committee, as well as those selected to serve as peer reviewers of this document, were required to disclose all current relationships and those existing within the 12 months before the initiation of this writing effort. The ACC/AHA policy also requires that the writing committee chair and at least 50% of the writing committee have no relevant RWI. Writing committee members are excluded from writing or voting on sections to which their specific RWI may apply.

Any writing committee member who develops new RWI during his or her tenure on the writing committee is required to notify staff in writing. These statements are reviewed periodically by the Joint Committee and by members of the writing committee. Author and peer reviewer RWI that are pertinent to the document are included in the appendixes: Appendix B for comprehensive writing committee RWI and Appendix C for comprehensive peer reviewer RWI.

The work of the writing committee was supported exclusively by the ACC and the AHA without commercial support. The American Association of Cardiovascular and Pulmonary Rehabilitation, American Podiatric Medical Association, Association of Black Cardiologists, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine, Society for Vascular Nursing, Society for Vascular Surgery, Society of Interventional Radiology, and the Vascular and Endovascular Surgery Society served as collaborators on this project. Members of the writing committee volunteered their time for this effort. Meetings of the writing committee were confidential and attended only by writing committee members and staff from the ACC and AHA.

2. METHODOLOGY

2.1. Literature Review

In developing the PAD measure set, the writing committee reviewed evidence-based guidelines and statements that would potentially impact the construct of the measures. The clinical practice guidelines and scientific statements that most directly contributed to the development of these measures are shown in Table 3.

2.2. Definition and Selection of Measures

The writing committee considered several additional factors that are listed in Table 4. The potential impact, appropriateness for public reporting and pay for performance, validity, reliability, and feasibility were considered.

Table 3. Associated ACC/AHA Clinical Practice Guidelines and Other Clinical Guidance Documents

2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1]
2019 AHA/ACC Clinical Performance and Quality Measures for Adults With High Blood Pressure[9]
2016 AHA/ACC Guideline on the Management of Patients With Lower Extremity Peripheral Artery Disease[10]
2010 ACCF/AHA/ACR/SCAI/SIR/SVM/SVN/SVS Performance Measures for Adults With Peripheral Artery Disease[4]

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; ACCF, American College of Cardiology Foundation; ACR, American College of Radiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Table 4. ACC/AHA Joint Committee on Performance Measures: Attributes for Performance Measures[11]

1. **Evidence Based**	
High-impact area that is useful in improving patient outcomes	(a) For structural measures, the structure should be closely linked to a meaningful process of care that in turn is linked to a meaningful patient outcome. (b) For process measures, the scientific basis for the measure should be well established, and the process should be closely linked to a meaningful patient outcome. (c) For outcome measures, the outcome should be clinically meaningful. If appropriate, performance measures based on outcomes should adjust for relevant clinical characteristics through the use of appropriate methodology and high-quality data sources.
2. **Measure Selection**	
Measure definition	(a) The patient group to whom the measure applies (denominator) and the patient group for whom conformance is achieved (numerator) are clearly defined and clinically meaningful.
Measure exceptions and exclusions	(b) Exceptions and exclusions are supported by evidence.
Reliability	(c) The measure is reproducible across organizations and delivery settings.
Face validity	(d) The measure appears to assess what it is intended to.
Content validity	(e) The measure captures most meaningful aspects of care.
Construct validity	(f) The measure correlates well with other measures of the same aspect of care.
3. **Measure Feasibility**	
Reasonable effort and cost	(a) The data required for the measure can be obtained with reasonable effort and cost.
Reasonable time period	(b) The data required for the measure can be obtained within the period allowed for data collection.
4. **Accountability**	
Actionable	(a) Those held accountable can affect the care process or outcome.
Unintended consequences avoided	(b) The likelihood of negative unintended consequences with the measure is low.

Reproduced with permission from Thomas et al.[12] Copyright © 2018, American Heart Association, Inc. and American College of Cardiology Foundation.
ACC indicates American College of Cardiology; and AHA, American Heart Association.

The writing committee examined available information on current gaps in care.

3. ACC/AHA PERIPHERAL ARTERY DISEASE MEASURE SET

3.1. Discussion of Peripheral Artery Disease Measure Set

After reviewing the existing guidelines, the writing committee discussed which measures required revision to reflect updated science related to PAD and identified which guideline recommendations could serve as the basis for new performance or quality measures. The writing committee also reviewed existing publicly available measure sets.

These subsections serve as a synopsis of the revisions that were made to previous measures and a description of why the new measures were created for both the inpatient and outpatient setting.

3.1.1. Retired Measures

There were no measures that were retired.

3.1.2. Revised Measures

The writing committee reviewed and made changes to 6 measures from the 2010 ACCF/AHA peripheral artery disease performance measures document,[4] as summarized in Table 5. Table 5 provides information on the updated measures, including the care setting, title, and a brief rationale for revisions made to the measures.

3.1.3. New Measures

The writing committee created a comprehensive list of measures addressing PAD. This set includes 15 measures: 7 performance measures and 8 quality measures. Four of the 7 performance measures and 5 of the 8 quality measures are new. Table 6 includes a list of the measures with information on the care setting and a brief rationale. Performance measures are typically those measures that target meaningful gaps in the quality of care and are based on Class 1 recommendations from clinical practice guidelines. Other measures that are important but are not based on Class 1 recommendations or are lacking in other important characteristics (eg, questions of feasibility, validity) are recommended as quality measures. If additional evidence supports the importance of the proposed quality measures, they may be changed to performance measures in the future. Performance and quality measures are designed to help clinicians reduce gaps in the quality of care that they provide to their patients.

The measures are structured in a typical format in which the goal is to seek a higher performance score, ideally nearing 100%.

For more detailed information on each measure's construct, refer to the specifications in Appendix A.

4. AREAS FOR FURTHER RESEARCH

The 7 performance measures and 8 quality measures described in this document provide a framework for the

Table 5. Revised Peripheral Artery Disease Measures

Measure No.*	Measure Title	Description of Revision	Rationale for Revision
2	Cholesterol-Lowering Medications (Statin)	Removed maximal dosing from the measure, simplified the measure specifications, and modified the measure to focus on high-intensity statin therapy with the goal of achieving a ≥50% reduction in LDL-C level.	The guideline recommendation for lipid-lowering therapy for patients with PAD has changed. Maximal dosing is no longer used, and high-intensity statin therapy is indicated for patients with PAD.
3	Smoking Cessation	Modified to include other forms of tobacco.	The 2024 PAD guideline[1] includes Class 1 (LOE: A) recommendations for quitting smoking and other forms of tobacco to reduce the risk of developing PAD, the progression of established PAD, and the risk of limb-related events and death.
5	Supervised Exercise	Modified to include community-based exercise therapy.	The 2024 PAD guideline[1] includes structured community-based exercise as a Class 1 (LOE: A) recommendation due to increased evidence of the efficacy of this type of exercise intervention for patients with PAD.
6	Lower Extremity Vein Bypass Graft Surveillance	Modified to further define the population based on the 2024 PAD guideline recommendation.[1]	The measure was revised to be based on the most current recommendation.
T-1	Vascular Review of Systems for Lower Extremity PAD†	Modified to replace the definition of risk in the denominator with the PAD-related risk amplifiers from the 2024 PAD guideline.[1]	The 2024 PAD guideline[1] calls for special considerations in the evaluation and care of patients with PAD, including those with specified PAD-related risk amplifiers.
T-2	PAD "At Risk" Population Pulse Examination†	Modified to replace the definition of risk in the denominator with the PAD-related risk amplifiers from the 2024 PAD guideline.[1]	Age and geriatric syndromes alone are independent risks, whereas other factors should be considered "at risk" regardless of age.

LDL-C indicates low-density lipoprotein cholesterol; LOE, Level of Evidence; and PAD, peripheral artery disease.

*The measure numbers in the first column of the table correspond with the measures from the 2010 ACCF/AHA peripheral artery disease performance measures document.[4]

†Test measure (T-1 and T-2): This measure has been designated for use in internal quality improvement programs only. It is not appropriate for any other use (eg, pay-for-performance, physician ranking, or public reporting programs).

assessment of the care provided to individuals with PAD. These measures are an important aspect of evaluating variations in care and encouraging patients, providers, health systems, and payers to use the most effective, cost-effective, and patient-centered treatments for PAD in every patient.

The newly developed measures focus on evidence-based medical management strategies such as blood pressure medications, diabetes care, and antithrombotic therapies. New trials and evidence demonstrate the important long-term effects of these medical therapies, and as such, our quality measures purposefully focus on delivery of these therapeutic strategies. While these management strategies have clearly demonstrated value, there are several questions regarding the role of medical therapies for patients with PAD, especially related to the duration and need for combination therapies around the time of procedures. Moreover, the role of other novel agents for diabetes, obesity, and recalcitrant hyperlipidemia remains a topic of current trials. Completing these studies and establishing high-quality evidence to guide the future integration of multiple medical therapies will undoubtedly be a subject of future quality measures.

The impact of health and social disparities on the care of individuals with PAD will also continue to influence future guidelines and measures. Assessing the comprehensive effect of these disparities on treatments and interventions is much more complex than follow-up visits after a clinical trial. Understanding the impact of therapies will require the use of health services research and the implementation of scientific methodologies to understand the intersection between therapies and social determinants of health. For instance, for many patients who undergo amputation, the challenges at hand are not an absence of known evidence-based care recommendations but rather challenges in health care access and treatment adherence prior to amputation. Implementation science is a rapidly evolving field that emphasizes a better understanding of the design and execution of population-based interventions, which may help improve the effectiveness of care delivery. In future studies, designing and testing health interventions in diverse communities, specifically those in underserved areas who have historically not been included in prior PAD trials, will provide better evidence for how to close health care quality and outcome gaps. These can be as simple as wound care and vascular testing interventions delivered in patients' own environments and delivered in culturally sensitive ways. Smartphone-based tools leveraging artificial intelligence may further enhance accessibility by enabling noninvasive monitoring outside clinical settings. For example, integrating artificial intelligence–powered imaging analysis for early PAD detection[13] and the use of wearable sensors to identify key PAD-related physiologic changes[14] can provide continuous, real-time insights into disease progression, allowing for earlier intervention, better management,[15] and overall improved patient outcomes. These efforts may prove to deliver the best evidence for future quality measures, especially related to patients and populations with

Table 6. New Measures

Measure No.	Care Setting	Measure Title	Rationale for Creating New Measure	Rationale for Designating as a Quality Measure vs a Performance Measure
PM-1	Outpatient	Target BP for Patients With PAD	BP control has excellent supporting evidence showing improved outcomes in patients with PAD. BP targets received a Class 1 recommendation in the 2024 PAD guideline.[1]	N/A
PM-2	Inpatient, Outpatient	Use of ACE Inhibitors or ARB for Patients With PAD	Use of ACE inhibitors or ARB in management of BP in patients with PAD has been shown to significantly improve outcomes and received a Class 1 recommendation in the 2024 PAD guideline.[1]	N/A
PM-3	Inpatient, Outpatient	Diabetes Management for PAD	Diabetes management with GLP-1 agonists or SGLT-2 inhibitors in patients with type 2 diabetes and PAD decreased MACE. Diabetes management received a Class 1 recommendation in the 2024 PAD guideline.[1]	N/A
PM-4	Inpatient, Outpatient	Antithrombotic Therapy for Symptomatic PAD	Studies evaluating the use of antithrombotic therapy have demonstrated an important outcome benefit for the prevention of MACE and MALE in patients with symptomatic PAD. Antithrombotic therapy received a Class 1 recommendation in the 2024 PAD guideline.[1]	N/A
Measure No.	**Care Setting**	**Measure Title**	**Rationale for Creating New Measure**	**Rationale for Designating as a Quality Measure vs a Performance Measure**
QM-3	Outpatient	Preventive Foot Care for PAD	PAD is a risk factor for foot complications.	Components reflect generally accepted recommendations but do not have enough supporting evidence.
QM-4	Inpatient, Outpatient	Lipid-Lowering Therapy for PAD (Novel Drugs)	This measure is meant to complement PM-5: Lipid-Lowering Therapy for PAD (High-Intensity Statins). QM-4 incorporates novel lipid-lowering agents to achieve target LDL-C <70 mg/dL for patients with PAD.	The recommendations addressing the use of PCSK9 inhibitors and ezetimibe are Class 2 recommendations with lower-quality evidence. Therefore, it would not be appropriate for the measure to be tied to performance.
QM-5	Inpatient, Outpatient	Identifying Health Disparities in PAD	The prevalence of PAD in the United States varies across demographic groups, and evidence suggests that the most impacted groups are less likely to receive evidence-based care. QM-5 aims to ensure that disparities are identified and addressed at the point of care delivery to improve patient outcomes.	No definitive consensus on how disparities should be evaluated.
QM-6	Inpatient, Outpatient	Saphenous Vein Assessment Before Leg Revascularization	A recent randomized trial showed good outcomes when a high-quality saphenous vein is used as a bypass conduit. The measure is based on a Class 1 recommendation from the 2024 PAD guideline.[1]	Saphenous vein quality has not always been assessed in prior studies.
QM-8	Inpatient, Outpatient	Multidisciplinary Team Evaluation for Patients With CLTI	The complexity of CLTI and the need for coordinated, patient-focused, and multispecialty management is well accepted in related literature and by expert clinicians and received a Class 1 recommendation in the 2024 PAD guideline.[1]	The complexity and number of potential specialties to treat CLTI make it difficult to track, and EHR systems record this differently.

ACE indicates angiotensin-converting enzyme; ARB, angiotensin-receptor blocker; BP, blood pressure; CLTI, chronic limb-threatening ischemia; EHR, electronic health record; GLP-1, glucagon-like peptide-1; LDL-C, low-density lipoprotein cholesterol; MACE, major adverse cardiovascular events; MALE, major adverse limb events; N/A, not applicable; PAD, peripheral artery disease; PCSK9, proprotein convertase subtilisin/kexin type 9; PM, performance measure; QM, quality measure; and SGLT-2, sodium-glucose cotransporter-2.

some of the challenges we describe in this document. Our national organizations, especially the ACC, AHA, and other patient-facing sources of education and advocacy, will be key supporters and partners in these efforts.

ACC/AHA JOINT COMMITTEE ON PERFORMANCE MEASURES

Boback Ziaeian, MD, PhD, FACC, FAHA, Chair; Sandeep Das, MD, MPH, MBA, FACC, FAHA, Chair-Elect; Biykem Bozkurt, MD, PhD, FACC, FAHA, Immediate Past Chair*; H. Vernon ("Skip") Anderson, MD, FACC, FSCAI*; Ingabire Grace Balinda, MD, MS; Jeffrey T. Bruckel, MD, MPH, FACC, FSCAI; Leslie Cho, MD, FACC, FSCAI; Janice Y. Chyou, MD, FACC, FAHA; Adam D. DeVore, MD, MHS, FACC; Michael P. Dorsch, PharmD, MS, FACC, FAHA; Daniel Duprez, MD, PhD, FACC, FAHA; Stacy Garcia, RT(R), RN, BSN, MBA-HCM*; Jadry A. Gruen, MD, MSHP, FACC; Paul L. Hess, MD, MHS, FACC; Sabeeda Kadavath, MD, FACC*; Dinesh Kalra, MD, FACC, FAHA; Mohammad Shahzeb Khan, MD, MSc, FACC;

Michelle Maya Kittleson, MD, PhD, FACC, FAHA; Puja B. Parikh, MD, MPH, FACC, FSCAI*; Nosheen Reza, MD, FACC; Jennifer T. Thibodeau, MD, MSCS, FACC, FAHA; Marlene S. Williams, MD, FACC; Isis Zambrana, RN, BSN, MBA, CPHQ

PRESIDENTS AND STAFF

American College of Cardiology

Christopher M. Kramer, MD, FACC, President
Cathleen C. Gates, Chief Executive Officer
Richard J. Kovacs, MD, MACC, Chief Medical Officer
Justine Varieur Turco, Divisional Vice President, Scientific Publications & Guidelines
Mindy J. Saraco, MHA, Director, Clinical Policy and Guidelines
Grace D. Ronan, Senior Production and Operations Manager, Clinical Policy Publications
Leah Patterson, Project Manager, Clinical Content Development

American Heart Association/American College of Cardiology

Abdul R. Abdullah, MD, Director, Guideline Science and Methodology
Shae Martinez, MLS, Reference Consultant, Medical Librarian

American Heart Association

Keith Churchwell, MD, FAHA, President
Nancy Brown, Chief Executive Officer
Mariell Jessup, MD, FAHA, Chief Science and Medical Officer
Nicole Aiello Sapio, EdD, Executive Vice President, Office of Science Strategies and Operations
Radhika Rajgopal Singh, PhD, Senior Vice President, Office of Science and Medicine
Prashant Nedungadi, BPharm, PhD, Vice President, Science and Medicine, Clinical Guidelines
Barbara Entl, MD, Science and Medicine Advisor, Office of Science, Medicine and Health
Courtney Goodwin, MPH, Program Manager Guidelines, Office of Science, Medicine and Health
Kathie Thomas, DHA, MPH, Senior Director, Program Development, Health Science, Research & Analytics, Quality & Health IT
Amy Bennett, JD, Senior Program Development Manager, Data Solutions, Performance Measures, Quality & Health IT
Sana Gokak, MPH, Program Manager, Healthcare Quality Measures, Quality & Health IT
Joseph W. Loftin, III, National Director, Statements and Guidelines, Scientific Publishing

ARTICLE INFORMATION

This article has been copublished in the *Journal of the American College of Cardiology*.

This document underwent a 14-day peer review between April 29, 2025, and May 13, 2025, and a 30-day public comment period between May 1, 2025, and June 2, 2025.

This document was approved by the American College of Cardiology Clinical Policy Approval Committee and the American Heart Association Science Advisory and Coordinating Committee in September 2025; and by the American College of Cardiology Science and Quality Committee, American Heart Association Executive Committee, American Association of Cardiovascular and Pulmonary Rehabilitation, American Podiatric Medical Association, Association of Black Cardiologists, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine, Society for Vascular Nursing, Society for Vascular Surgery, Society of Interventional Radiology, and the Vascular and Endovascular Surgery Society in October 2025.

Copies: This document is available on the websites of the American Heart Association (professional.heart.org) and the American College of Cardiology (www.acc.org). A copy of the document is also available at https://professional.heart.org/statements by selecting the "Guidelines & Statements" button. To purchase additional reprints, call 215-356-2721 or email Meredith.Edelman@wolterskluwer.com.

The expert peer review of AHA-commissioned documents (eg, scientific statements, clinical practice guidelines, systematic reviews) is conducted by the AHA Office of Science Operations. For more on AHA statements and guidelines development, visit https://professional.heart.org/statements. Select the "Guidelines & Statements" drop-down menu near the top of the webpage, then click "Publication Development."

*Former Joint Committee on Performance Measures member; current member during initiation of the writing effort.

REFERENCES

1. Gornik HL, Aronow HD, Goodney PP, et al. 2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS guideline for the management of lower extremity peripheral artery disease: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2024:149;e1313–e1410.
2. Spertus JA, Bonow RO, Chan P, et al. ACCF/AHA new insights into the methodology of performance measurement: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Performance Measures. *Circulation*. 2010;122:2091–2106.
3. Spertus JA, Eagle KA, Krumholz HM, et al. American College of Cardiology and American Heart Association methodology for the selection and creation of performance measures for quantifying the quality of cardiovascular care. *Circulation*. 2005;111:1703–1712.
4. Olin JW, Allie DE, Belkin M, et al. ACCF/AHA/ACR/SCAI/SIR/SVM/SVN/SVS 2010 performance measures for adults with peripheral artery disease: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Performance Measures. *Circulation*. 2010;122:2583–2618.
5. Anderson JL, Heidenreich PA, Barnett PG, et al. ACC/AHA statement on cost/value methodology in clinical practice guidelines and performance measures: a report of the American College of Cardiology/American Heart Association Task Force on Performance Measures and Task Force on Practice Guidelines. *Circulation*. 2014;129:2329–2345.
6. Goodney PP, Travis LL, Nallamothu BK, et al. Variation in the use of lower extremity vascular procedures for critical limb ischemia. *Circ Cardiovasc Qual Outcomes*. 2012;5:94–102.
7. Goodney PP, Holman K, Henke PK, et al. Regional intensity of vascular care and lower extremity amputation rates. *J Vasc Surg*. 2013;57:1471–1480.
8. Sorber R, Dun C, Kawaji Q, et al. Early peripheral vascular interventions for claudication are associated with higher rates of late interventions and progression to chronic limb threatening ischemia. *J Vasc Surg*. 2023;77:836–847.e833.
9. Casey DE, Thomas RJ, Bhalla V, et al. 2019 AHA/ACC clinical performance and quality measures for adults with high blood pressure: a report of the American College of Cardiology/American Heart Association Task Force on Performance Measures. *Circ Cardiovasc Qual Outcomes*. 2019;12:e000057.
10. Gerhard-Herman MD, Gornik HL, Barrett C, et al. 2016 AHA/ACC guideline on the management of patients with lower extremity peripheral artery disease: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*. 2017;135:e726–e779.
11. Normand SL, McNeil BJ, Peterson LE, et al. Eliciting expert opinion using the Delphi technique: identifying performance indicators for cardiovascular disease. *Int J Qual Health Care*. 1998;10:247–260.
12. Thomas RJ, Balady G, Banka G, et al. 2018 ACC/AHA clinical performance and quality measures for cardiac rehabilitation: a report of the American College of Cardiology/American Heart Association Task Force on Performance Measures. *Circ Cardiovasc Qual Outcomes*. 2018;11:e000037.
13. Song JH, Tomihama RT, Roh D, et al. Leveraging artificial intelligence to optimize the care of peripheral artery disease patients. *Ann Vasc Surg*. 2024;107:48–54.
14. Souza J, Escadas S, Baxevani I, et al. Smart wearable systems for the remote monitoring of selected vascular disorders of the lower extremity: a systematic review. *Int J Environ Res Public Health*. 2022;19:15231.
15. Kim M, Kim Y, Choi M. Mobile health platform based on user-centered design to promote exercise for patients with peripheral artery disease. *BMC Med Inform Decis Mak*. 2022;22:206.
16. Whelton PK, Carey RM, Aronow WS, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Hypertension*. 2018;71:e13–e115.
17. Centers for Medicare and Medicaid Services (CMS). HTN-2 (NQF 0018): controlling high blood pressure. Accessed August 1, 2025. https://qpp.cms.gov/docs/QPP_quality_measure_specifications/Web-Interface-Measures/2019_Measure_HTN2_CMSWebInterface.pdf.
18. Diehm C, Pittrow D, Lawall H. Effect of nebivolol vs. hydrochlorothiazide on the walking capacity in hypertensive patients with intermittent claudication. *J Hypertens*. 2011;29:1448–1456.
19. Espinola-Klein C, Weisser G, Jagodzinski A, et al. β-blockers in patients with intermittent claudication and arterial hypertension: results from the nebivolol or metoprolol in arterial occlusive disease trial. *Hypertension*. 2011;58:148–154.
20. Paravastu SC, Mendonca DA, Da Silva A. Beta blockers for peripheral arterial disease. *Cochrane Database Syst Rev*. 2013;2013:CD005508.
21. Piller LB, Simpson LM, Baraniuk S, et al. Characteristics and long-term follow-up of participants with peripheral arterial disease during ALLHAT. *J Gen Intern Med*. 2014;29:1475–1483.
22. Wright JT Jr, Williamson JD, Whelton PK, et al. Sprint Research Group. A randomized trial of intensive versus standard blood-pressure control. *N Engl J Med*. 2015;373:2103–2116.
23. Bavry AA, Anderson RD, Gong Y, et al. Outcomes among hypertensive patients with concomitant peripheral and coronary artery disease: findings from the INternational VErapamil-SR/Trandolapril STudy. *Hypertension*. 2010;55:48–53.
24. Itoga NK, Tawfik DS, Lee CK, et al. Association of blood pressure measurements with peripheral artery disease events. *Circulation*. 2018;138:1805–1814.
25. Mehler PS, Coll JR, Estacio R, et al. Intensive blood pressure control reduces the risk of cardiovascular events in patients with peripheral arterial disease and type 2 diabetes. *Circulation*. 2003;107:753–756.
26. Sleight P. The HOPE Study (Heart Outcomes Prevention Evaluation). *J Renin Angiotensin Aldosterone Syst*. 2000;1:18–20.
27. Yusuf S, Teo KK, Pogue J, et al, ONTARGET Investigators. Telmisartan, ramipril, or both in patients at high risk for vascular events. *N Engl J Med*. 2008;358:1547–1559.
28. Armstrong EJ, Chen DC, Singh GD, et al. Angiotensin-converting enzyme inhibitor or angiotensin receptor blocker use is associated with reduced major adverse cardiovascular events among patients with critical limb ischemia. *Vasc Med*. 2015;20:237–244.
29. Cannon CP, Pratley R, Dagogo-Jack S, et al. Cardiovascular outcomes with ertugliflozin in type 2 diabetes. *N Engl J Med*. 2020;383:1425–1435.
30. Cosmi F, Laini R, Nicolucci A. Semaglutide and cardiovascular outcomes in patients with type 2 diabetes. *N Engl J Med*. 2017;376:890.
31. Gerstein HC, Colhoun HM, Dagenais GR, et al. Dulaglutide and cardiovascular outcomes in type 2 diabetes (REWIND): a double-blind, randomised placebo-controlled trial. *Lancet*. 2019;394:121–130.
32. Holman RR, Bethel MA, Mentz RJ, et al. Effects of once-weekly exenatide on cardiovascular outcomes in type 2 diabetes. *N Engl J Med*. 2017;377:1228–1239.
33. Marso SP, Daniels GH, Brown-Frandsen K, et al. Liraglutide and cardiovascular outcomes in type 2 diabetes. *N Engl J Med*. 2016;375:311–322.
34. Neal B, Perkovic V, Mahaffey KW, et al. Canagliflozin and cardiovascular and renal events in type 2 diabetes. *N Engl J Med*. 2017;377:644–657.
35. Perkovic V, Jardine MJ, Neal B, et al. Canagliflozin and renal outcomes in type 2 diabetes and nephropathy. *N Engl J Med*. 2019;380:2295–2306.
36. Pfeffer MA, Claggett B, Diaz R, et al. Lixisenatide in patients with type 2 diabetes and acute coronary syndrome. *N Engl J Med*. 2015;373:2247–2257.
37. Verma S, Al-Omran M, Leiter LA, et al. Cardiovascular efficacy of liraglutide and semaglutide in individuals with diabetes and peripheral artery disease. *Diabetes Obes Metab*. 2022;24:1288–1299.
38. Wiviott SD, Raz I, Bonaca MP, et al. Dapagliflozin and cardiovascular outcomes in type 2 diabetes. *N Engl J Med*. 2019;380:347–357.
39. Zinman B, Wanner C, Lachin JM, et al. Empagliflozin, cardiovascular outcomes, and mortality in type 2 diabetes. *N Engl J Med*. 2015;373:2117–2128.
40. Heidenreich PA, Bozkurt B, Aguilar D, et al. 2022 AHA/ACC/HFSA guideline for the management of heart failure: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2022;145:e895–e1032.
41. Heyward J, Mansour O, Olson L, et al. Association between sodium-glucose cotransporter 2 (SGLT2) inhibitors and lower extremity amputation: a systematic review and meta-analysis. *PLoS One*. 2020;15:e0234065.
42. US Food and Drug Administration. FDA removes boxed warning about risk of leg and foot amputations for the diabetes medicine canagliflozin (Invokana, Invokamet, Invokamet XR). Accessed August 1, 2025. https://www.fda.gov/drugs/drug-safety-and-availability/fda-removes-boxed-warning-about-risk-leg-and-foot-amputations-diabetes-medicine-canagliflozin.
43. Arya S, Binney ZO, Khakharia A, et al. High hemoglobin A(1c) associated with increased adverse limb events in peripheral arterial disease patients undergoing revascularization. *J Vasc Surg*. 2018;67:217–228.e211.
44. Lane KL, Abusamaan MS, Voss BF, et al. Glycemic control and diabetic foot ulcer outcomes: a systematic review and meta-analysis of observational studies. *J Diabetes Complications*. 2020;34:107638.

45. Singh S, Armstrong EJ, Sherif W, et al. Association of elevated fasting glucose with lower patency and increased major adverse limb events among patients with diabetes undergoing infrapopliteal balloon angioplasty. *Vasc Med*. 2014;19:307–314.
46. Takahara M, Kaneto H, Iida O, et al. The influence of glycemic control on the prognosis of Japanese patients undergoing percutaneous transluminal angioplasty for critical limb ischemia. *Diabetes Care*. 2010;33:2538–2542.
47. Eikelboom JW, Connolly SJ, Bosch J, et al. Rivaroxaban with or without aspirin in stable cardiovascular disease. *N Engl J Med*. 2017;377:1319–1330.
48. Bonaca MP, Bauersachs RM, Anand SS, et al. Rivaroxaban in peripheral artery disease after revascularization. *N Engl J Med*. 2020;382:1994–2004.
49. Anand SS, Caron F, Eikelboom JW, et al. Major adverse limb events and mortality in patients with peripheral artery disease: the COMPASS trial. *J Am Coll Cardiol*. 2018;71:2306–2315.
50. Anand SS, Bosch J, Eikelboom JW, et al. Rivaroxaban with or without aspirin in patients with stable peripheral or carotid artery disease: an international, randomised, double-blind, placebo-controlled trial. *Lancet*. 2018;391:219–229.
51. Anand S, Yusuf S, Xie C, et al, Warfarin Antiplatelet Vascular Evaluation Trial Investigators. Oral anticoagulant and antiplatelet therapy and peripheral arterial disease. *N Engl J Med*. 2007;357:217–227.
52. Johnson WC, Williford WO. Benefits, morbidity, and mortality associated with long-term administration of oral anticoagulant therapy to patients with peripheral arterial bypass procedures: a prospective randomized study. *J Vasc Surg*. 2002;35:413–421.
53. Heart Protection Study Collaborative Group. Randomized trial of the effects of cholesterol-lowering with simvastatin on peripheral vascular and other major vascular outcomes in 20 536 people with peripheral arterial disease and other high-risk conditions. *J Vasc Surg*. 2007;45:645–654; discussion 653–644.
54. Grundy SM, Stone NJ, Bailey AL, et al. 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA guideline on the management of blood cholesterol: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*. 2019;139:e1082–e1143.
55. Pastori D, Farcomeni A, Milanese A, et al. Statins and major adverse limb events in patients with peripheral artery disease: a systematic review and meta-analysis. *Thromb Haemost*. 2020;120:866–875.
56. Arya S, Khakharia A, Binney ZO, et al. Association of statin dose with amputation and survival in patients with peripheral artery disease. *Circulation*. 2018;137:1435–1446.
57. Colantonio LD, Hubbard D, Monda KL, et al. Atherosclerotic risk and statin use among patients with peripheral artery disease. *J Am Coll Cardiol*. 2020;76:251–264.
58. Bonaca MP, Nault P, Giugliano RP, et al. Low-density lipoprotein cholesterol lowering with evolocumab and outcomes in patients with peripheral artery disease: insights from the FOURIER trial (Further Cardiovascular Outcomes Research With PCSK9 Inhibition in Subjects With Elevated Risk). *Circulation*. 2018;137:338–350.
59. Jukema JW, Szarek M, Zijlstra LE, et al. Alirocumab in patients with polyvascular disease and recent acute coronary syndrome: ODYSSEY OUTCOMES trial. *J Am Coll Cardiol*. 2019;74:1167–1176.
60. Schwartz GG, Steg PG, Szarek M, et al. Peripheral artery disease and venous thromboembolic events after acute coronary syndrome: role of lipoprotein(a) and modification by alirocumab: prespecified analysis of the ODYSSEY OUTCOMES randomized clinical trial. *Circulation*. 2020;141:1608–1617.
61. Fowkes FG, Rudan D, Rudan I, et al. Comparison of global estimates of prevalence and risk factors for peripheral artery disease in 2000 and 2010: a systematic review and analysis. *Lancet*. 2013;382:1329–1340.
62. United States Public Health Service Office of the Surgeon General, National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. *Smoking Cessation: A Report of the Surgeon General*. Washington (DC): US Department of Health and Human Services; 2020.
63. Barua RS, Rigotti NA, Benowitz NL, et al. 2018 ACC expert consensus decision pathway on tobacco cessation treatment: a report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents. *J Am Coll Cardiol*. 2018;72:3332–3365.
64. US Preventive Services Task Force. Interventions for tobacco smoking cessation in adults, including pregnant persons: US Preventive Services Task Force recommendation statement. *JAMA*. 2021;325:265–279.
65. Rose JJ, Krishnan-Sarin S, Exil VJ, et al. Cardiopulmonary impact of electronic cigarettes and vaping products: a scientific statement from the American Heart Association. *Circulation*. 2023;148:703–728.
66. Eckel RH, Jakicic JM, Ard JD, et al. 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2014;129(suppl 2):S76–S99.
67. Patnode CD, Henderson JT, Thompson JH, et al. Behavioral counseling and pharmacotherapy interventions for tobacco cessation in adults, including pregnant women: a review of reviews for the US Preventive Services Task Force. *Ann Intern Med*. 2015;163:608–621.
68. Stead LF, Buitrago D, Preciado N, et al. Physician advice for smoking cessation. *Cochrane Database Syst Rev*. 2013;2013:CD000165.
69. Hennrikus D, Joseph AM, Lando HA, et al. Effectiveness of a smoking cessation program for peripheral artery disease patients: a randomized controlled trial. *J Am Coll Cardiol*. 2010;56:2105–2112.
70. Mills EJ, Thorlund K, Eapen S, et al. Cardiovascular events associated with smoking cessation pharmacotherapies: a network meta-analysis. *Circulation*. 2014;129:28–41.
71. Prochaska JJ, Hilton JF. Risk of cardiovascular serious adverse events associated with varenicline use for tobacco cessation: systematic review and meta-analysis. *BMJ*. 2012;344:e2856.
72. Rigotti NA, Pipe AL, Benowitz NL, et al. Efficacy and safety of varenicline for smoking cessation in patients with cardiovascular disease: a randomized trial. *Circulation*. 2010;121:221–229.
73. Rigotti NA, Regan S, Levy DE, et al. Sustained care intervention and postdischarge smoking cessation among hospitalized adults: a randomized clinical trial. *JAMA*. 2014;312:719–728.
74. Tonstad S, Farsang C, Klaene G, et al. Bupropion SR for smoking cessation in smokers with cardiovascular disease: a multicentre, randomised study. *Eur Heart J*. 2003;24:946–955.
75. Lu L, Mackay DF, Pell JP. Secondhand smoke exposure and risk of incident peripheral arterial disease and mortality: a Scotland-wide retrospective cohort study of 4045 non-smokers with cotinine measurement. *BMC Public Health*. 2018;18:348.
76. Lv X, Sun J, Bi Y, et al. Risk of all-cause mortality and cardiovascular disease associated with secondhand smoke exposure: a systematic review and meta-analysis. *Int J Cardiol*. 2015;199:106–115.
77. Mons U, Muezzinler A, Gellert C, et al. Impact of smoking and smoking cessation on cardiovascular events and mortality among older adults: meta-analysis of individual participant data from prospective cohort studies of the CHANCES consortium. *BMJ*. 2015;350:h1551.
78. Ngu NL, McEvoy M. Environmental tobacco smoke and peripheral arterial disease: a review. *Atherosclerosis*. 2017;266:113–120.
79. Fakhry F, Fokkenrood HJ, Spronk S, et al. Endovascular revascularisation versus conservative management for intermittent claudication. *Cochrane Database Syst Rev*. 2018;3:CD010512.
80. Murphy TP, Cutlip DE, Regensteiner JG, et al. Supervised exercise versus primary stenting for claudication resulting from aortoiliac peripheral artery disease: six-month outcomes from the claudication: exercise versus endoluminal revascularization (CLEVER) study. *Circulation*. 2012;125:130–139.
81. Murphy TP, Cutlip DE, Regensteiner JG, et al. Supervised exercise, stent revascularization, or medical therapy for claudication due to aortoiliac peripheral artery disease: the CLEVER study. *J Am Coll Cardiol*. 2015;65:999–1009.
82. Mazari FA, Gulati S, Rahman MN, et al. Early outcomes from a randomized, controlled trial of supervised exercise, angioplasty, and combined therapy in intermittent claudication. *Ann Vasc Surg*. 2010;24:69–79.
83. Golledge J, Singh TP, Alahakoon C, et al. Meta-analysis of clinical trials examining the benefit of structured home exercise in patients with peripheral artery disease. *Br J Surg*. 2019;106:319–331.
84. McDermott MM, Spring B, Tian L, et al. Effect of low-intensity vs high-intensity home-based walking exercise on walk distance in patients with peripheral artery disease: the LITE randomized clinical trial. *JAMA*. 2021;325:1266–1276.

85. Bearne LM, Volkmer B, Peacock J, et al. Effect of a home-based, walking exercise behavior change intervention vs usual care on walking in adults with peripheral artery disease: the MOSAIC randomized clinical trial. *JAMA*. 2022;327:1344–1355.
86. Parmenter BJ, Dieberg G, Phipps G, et al. Exercise training for health-related quality of life in peripheral artery disease: a systematic review and meta-analysis. *Vasc Med*. 2015;20:30–40.
87. Parmenter BJ, Dieberg G, Smart NA. Exercise training for management of peripheral arterial disease: a systematic review and meta-analysis. *Sports Med*. 2015;45:231–244.
88. Fakhry F, Rouwet EV, den Hoed PT, et al. Long-term clinical effectiveness of supervised exercise therapy versus endovascular revascularization for intermittent claudication from a randomized clinical trial. *Br J Surg*. 2013;100:1164–1171.
89. Hageman D, Fokkenrood HJ, Gommans LN, et al. Supervised exercise therapy versus home-based exercise therapy versus walking advice for intermittent claudication. *Cochrane Database Syst Rev*. 2018;4:CD005263.
90. Hiatt WR, Regensteiner JG, Hargarten ME, et al. Benefit of exercise conditioning for patients with peripheral arterial disease. *Circulation*. 1990;81:602–609.
91. Lane R, Harwood A, Watson L, et al. Exercise for intermittent claudication. *Cochrane Database Syst Rev*. 2017;12:CD000990.
92. McDermott MM, Ferrucci L, Tian L, et al. Effect of granulocyte-macrophage colony-stimulating factor with or without supervised exercise on walking performance in patients with peripheral artery disease: the PROPEL randomized clinical trial. *JAMA*. 2017;318:2089–2098.
93. Pilz M, Kandioler-Honetz E, Wenkstetten-Holub A, et al. Evaluation of 6- and 12-month supervised exercise training on strength and endurance parameters in patients with peripheral arterial disease. *Wien Klin Wochenschr*. 2014;126:383–389.
94. Regensteiner JG. Exercise in the treatment of claudication: assessment and treatment of functional impairment. *Vasc Med*. 1997;2:238–242.
95. Regensteiner JG, Steiner JF, Hiatt WR. Exercise training improves functional status in patients with peripheral arterial disease. *J Vasc Surg*. 1996;23:104–115.
96. Stewart KJ, Hiatt WR, Regensteiner JG, et al. Exercise training for claudication. *N Engl J Med*. 2002;347:1941–1951.
97. Treat-Jacobson D, McDermott MM, Bronas UG, et al. Optimal exercise programs for patients with peripheral artery disease: a scientific statement from the American Heart Association. *Circulation*. 2019;139:e700–e710.
98. Duscha BD, Piner LW, Patel MP, et al. Effects of a 12-week mHealth program on functional capacity and physical activity in patients with peripheral artery disease. *Am J Cardiol*. 2018;122:879–884.
99. Gardner AW, Parker DE, Montgomery PS, et al. Step-monitored home exercise improves ambulation, vascular function, and inflammation in symptomatic patients with peripheral artery disease: a randomized controlled trial. *J Am Heart Assoc*. 2014;3:e001107.
100. Gardner AW, Parker DE, Montgomery PS, et al. Efficacy of quantified home-based exercise and supervised exercise in patients with intermittent claudication: a randomized controlled trial. *Circulation*. 2011;123:491–498.
101. Manfredini R, Lamberti N, Manfredini F, et al. Gender differences in outcomes following a pain-free, home-based exercise program for claudication. *J Womens Health (Larchmt)*. 2019;28:1313–1321.
102. Mays RJ, Hiatt WR, Casserly IP, et al. Community-based walking exercise for peripheral artery disease: an exploratory pilot study. *Vasc Med*. 2015;20:339–347.
103. McDermott MM, Guralnik JM, Criqui MH, et al. Home-based walking exercise in peripheral artery disease: 12-month follow-up of the GOALS randomized trial. *J Am Heart Assoc*. 2014;3:e000711.
104. McDermott MM, Liu K, Guralnik JM, et al. Home-based walking exercise intervention in peripheral artery disease: a randomized clinical trial. *JAMA*. 2013;310:57–65.
105. Biswas MP, Capell WH, McDermott MM, et al. Exercise training and revascularization in the management of symptomatic peripheral artery disease. *JACC Basic Transl Sci*. 2021;6:174–188.
106. Bo E, Bergland A, Stranden E, et al. Effects of 12 weeks of supervised exercise after endovascular treatment: a randomized clinical trial. *Physiother Res Int*. 2015;20:147–157.
107. Doshi R, Shah P, Majmundar M, et al. Comparison of supervised exercise therapy with or without revascularization for the management of intermittent claudication: SET in PAD. *Eur J Intern Med*. 2021;92:131–133.
108. Fakhry F, Spronk S, van der Laan L, et al. Endovascular revascularization and supervised exercise for peripheral artery disease and intermittent claudication: a randomized clinical trial. *JAMA*. 2015;314:1936–1944.
109. Klaphake S, Buettner S, Ultee KH, et al. Combination of endovascular revascularization and supervised exercise therapy for intermittent claudication: a systematic review and meta-analysis. *J Cardiovasc Surg (Torino)*. 2018;59:150–157.
110. Kruidenier LM, Nicolai SP, Rouwet EV, et al. Additional supervised exercise therapy after a percutaneous vascular intervention for peripheral arterial disease: a randomized clinical trial. *J Vasc Interv Radiol*. 2011;22:961–968.
111. Mazari FA, Khan JA, Samuel N, et al. Long-term outcomes of a randomized clinical trial of supervised exercise, percutaneous transluminal angioplasty or combined treatment for patients with intermittent claudication due to femoropopliteal disease. *Br J Surg*. 2017;104:76–83.
112. Meneses AL, Ritti-Dias RM, Parmenter B, et al. Combined lower limb revascularisation and supervised exercise training for patients with peripheral arterial disease: a systematic review of randomised controlled trials. *Sports Med*. 2017;47:987–1002.
113. Pandey A, Banerjee S, Ngo C, et al. Comparative efficacy of endovascular revascularization versus supervised exercise training in patients with intermittent claudication: meta-analysis of randomized controlled trials. *JACC Cardiovasc Interv*. 2017;10:712–724.
114. Saratzis A, Paraskevopoulos I, Patel S, et al. Supervised exercise therapy and revascularization for intermittent claudication: network meta-analysis of randomized controlled trials. *JACC Cardiovasc Interv*. 2019;12:1125–1136.
115. Bulinska K, Kropielnicka K, Jasinski T, et al. Nordic pole walking improves walking capacity in patients with intermittent claudication: a randomized controlled trial. *Disabil Rehabil*. 2016;38:1318–1324.
116. Dipnarine K, Barak S, Martinez CA, et al. Pain-free treadmill exercise for patients with intermittent claudication: are there gender differences? *Vascular*. 2016;24:304–314.
117. Mika P, Konik A, Januszek R, et al. Comparison of two treadmill training programs on walking ability and endothelial function in intermittent claudication. *Int J Cardiol*. 2013;168:838–842.
118. Parmenter BJ, Mavros Y, Ritti Dias R, et al. Resistance training as a treatment for older persons with peripheral artery disease: a systematic review and meta-analysis. *Br J Sports Med*. 2020;54:452–461.
119. Saxton JM, Zwierska I, Blagojevic M, et al. Upper- versus lower-limb aerobic exercise training on health-related quality of life in patients with symptomatic peripheral arterial disease. *J Vasc Surg*. 2011;53:1265–1273.
120. Treat-Jacobson D, Bronas UG, Leon AS. Efficacy of arm-ergometry versus treadmill exercise training to improve walking distance in patients with claudication. *Vasc Med*. 2009;14:203–213.
121. Zwierska I, Walker R, Choksy S, et al. Upper- vs lower-limb aerobic exercise rehabilitation in patients with symptomatic peripheral arterial disease: a randomized controlled trial. *J Vasc Surg*. 2005;42:1122–1130.
122. O'Hare AM, Glidden DV, Fox CS, et al. High prevalence of peripheral arterial disease in persons with renal insufficiency: results from the National Health and Nutrition Examination Survey 1999–2000. *Circulation*. 2004;109:320–323.
123. Criqui MH, Matsushita K, Aboyans V, et al. Lower extremity peripheral artery disease: contemporary epidemiology, management gaps, and future directions: a scientific statement from the American Heart Association. *Circulation*. 2021;144:e171–e191.
124. Miikkola M, Lantta T, Suhonen R, et al. Challenges of foot self-care in older people: a qualitative focus-group study. *J Foot Ankle Res*. 2019;12:5.
125. Hirsch AT, Criqui MH, Treat-Jacobson D, et al. Peripheral arterial disease detection, awareness, and treatment in primary care. *JAMA*. 2001;286:1317–1324.
126. McDermott MM. Lower extremity manifestations of peripheral artery disease: the pathophysiologic and functional implications of leg ischemia. *Circ Res*. 2015;116:1540–1550.
127. McDermott MM, Greenland P, Liu K, et al. Leg symptoms in peripheral arterial disease: associated clinical characteristics and functional impairment. *JAMA*. 2001;286:1599–1606.
128. McDermott MM, Mehta S, Greenland P. Exertional leg symptoms other than intermittent claudication are common in peripheral arterial disease. *Arch Intern Med*. 1999;159:387–392.

129. Armstrong DW, Tobin C, Matangi MF. The accuracy of the physical examination for the detection of lower extremity peripheral arterial disease. *Can J Cardiol*. 2010;26:e346–e350.
130. Cournot M, Boccalon H, Cambou JP, et al. Accuracy of the screening physical examination to identify subclinical atherosclerosis and peripheral arterial disease in asymptomatic subjects. *J Vasc Surg*. 2007;46:1215–1221.
131. Criqui MH, Denenberg JO, Bird CE, et al. The correlation between symptoms and non-invasive test results in patients referred for peripheral arterial disease testing. *Vasc Med*. 1996;1:65–71.
132. Khan NA, Rahim SA, Anand SS, et al. Does the clinical examination predict lower extremity peripheral arterial disease? *JAMA*. 2006;295:536–546.
133. Londero LS, Lindholt JS, Thomsen MD, et al. Pulse palpation is an effective method for population-based screening to exclude peripheral arterial disease. *J Vasc Surg*. 2016;63:1305–1310.
134. Armstrong DG, Boulton AJM, Bus SA. Diabetic foot ulcers and their recurrence. *N Engl J Med*. 2017;376:2367–2375.
135. Jupiter DC, Thorud JC, Buckley CJ, et al. The impact of foot ulceration and amputation on mortality in diabetic patients: I-from ulceration to death, a systematic review. *Int Wound J*. 2016;13:892–903.
136. Nguyen TPL, Edwards H, Do TND, et al. Effectiveness of a theory-based foot care education program (3STEPFUN) in improving foot self-care behaviours and foot risk factors for ulceration in people with type 2 diabetes. *Diabetes Res Clin Pract*. 2019;152:29–38.
137. Hingorani A, LaMuraglia GM, Henke P, et al. The management of diabetic foot: a clinical practice guideline by the Society for Vascular Surgery in collaboration with the American Podiatric Medical Association and the Society for Vascular Medicine. *J Vasc Surg*. 2016;63(Suppl 2):3S–21S.
138. Botros M, Kuhnke J, Embil JM, et al. Best practice recommendations for the prevention and management of diabetic foot ulcers. *Foundations of Best Practice for Skin and Wound Management*. Wound Care Canada; 2017:1–68.
139. Chen H, Cai C, Xie J. The effect of an intensive patients' education program on anxiety, depression and patient global assessment in diabetic foot ulcer patients with Wagner grade 1/2: a randomized, controlled study. *Medicine (Baltimore)*. 2020;99:e18480.
140. Hoogeveen RC, Dorresteijn JA, Kriegsman DM, et al. Complex interventions for preventing diabetic foot ulceration. *Cochrane Database Syst Rev*. 2015;2015:CD007610.
141. Polikandrioti M, Vasilopoulos G, Koutelekos I, et al. Quality of life in diabetic foot ulcer: associated factors and the impact of anxiety/depression and adherence to self-care. *Int J Low Extrem Wounds*. 2020;19:165–179.
142. Siersma V, Koster-Rasmussen R, Bruun C, et al. Visual impairment and mortality in patients with type 2 diabetes. *BMJ Open Diabetes Res Care*. 2019;7:e000638.
143. Bus SA. Innovations in plantar pressure and foot temperature measurements in diabetes. *Diabetes Metab Res Rev*. 2016;32(Suppl 1):221–226.
144. Bonaca MP, Gutierrez JA, Cannon C, et al. Polyvascular disease, type 2 diabetes, and long-term vascular risk: a secondary analysis of the IMPROVE-IT trial. *Lancet Diabetes Endocrinol*. 2018;6:934–943.
145. Matsushita K, Sang Y, Ning H, et al. Lifetime risk of lower-extremity peripheral artery disease defined by ankle-brachial index in the United States. *J Am Heart Assoc*. 2019;8:e012177.
146. Durazzo TS, Frencher S, Gusberg R. Influence of race on the management of lower extremity ischemia: revascularization vs amputation. *JAMA Surg*. 2013;148:617–623.
147. Mustapha JA, Fisher BT Sr, Rizzo JA, et al. Explaining racial disparities in amputation rates for the treatment of peripheral artery disease (PAD) using decomposition methods. *J Racial Ethn Health Disparities*. 2017;4:784–795.
148. Holman KH, Henke PK, Dimick JB, et al. Racial disparities in the use of revascularization before leg amputation in Medicare patients. *J Vasc Surg*. 2011;54:420–426.e1.
149. Meadows TA, Bhatt DL, Hirsch AT, et al. Ethnic differences in the prevalence and treatment of cardiovascular risk factors in US outpatients with peripheral arterial disease: insights from the reduction of atherothrombosis for continued health (REACH) registry. *Am Heart J*. 2009;158:1038–1045.
150. Morrissey NJ, Giacovelli J, Egorova N, et al. Disparities in the treatment and outcomes of vascular disease in Hispanic patients. *J Vasc Surg*. 2007;46:971–978.
151. Haine A, Kavanagh S, Berger JS, et al. Sex-specific risks of major cardiovascular and limb events in patients with symptomatic peripheral artery disease. *J Am Coll Cardiol*. 2020;75:608–617.
152. Lo RC, Bensley RP, Dahlberg SE, et al. Presentation, treatment, and outcome differences between men and women undergoing revascularization or amputation for lower extremity peripheral arterial disease. *J Vasc Surg*. 2014;59:409–418.e403.
153. Demsas F, Joiner MM, Telma K, et al. Disparities in peripheral artery disease care: a review and call for action. *Semin Vasc Surg*. 2022;35:141–154.
154. Hurst JE, Tehan PE, Hussey K, et al. Association of peripheral artery disease and chronic limb-threatening ischemia with socioeconomic deprivation in people with diabetes: a population data-linkage and geospatial analysis. *Vasc Med*. 2021;26:147–154.
155. Harris JK, Beatty K, Leider JP, et al. The double disparity facing rural local health departments. *Annu Rev Public Health*. 2016;37:167–184.
156. Minc SD, Goodney PP, Misra R, et al. The effect of rurality on the risk of primary amputation is amplified by race. *J Vasc Surg*. 2020;72:1011–1017.
157. Alabi O, Beriwal S, Gallini JW, et al. Association of health care utilization and access to care with vascular assessment before major lower extremity amputation among US veterans. *JAMA Surg*. 2023;158:e230479.
158. Farber A, Menard MT, Conte MS, et al. Surgery or endovascular therapy for chronic limb-threatening ischemia. *N Engl J Med*. 2022;387:2305–2316.
159. Bradbury AW, Moakes CA, Popplewell M, et al. A vein bypass first versus a best endovascular treatment first revascularisation strategy for patients with chronic limb threatening ischaemia who required an infra-popliteal, with or without an additional more proximal infra-inguinal revascularisation procedure to restore limb perfusion (BASIL-2): an open-label, randomised, multicentre, phase 3 trial. *Lancet*. 2023;401:1798–1809.
160. Conte MS, Mann MJ, Simosa HF, et al. Genetic interventions for vein bypass graft disease: a review. *J Vasc Surg*. 2002;36:1040–1052.
161. Conte MS, Bandyk DF, Clowes AW, et al. Results of PREVENT III: a multicenter, randomized trial of edifoligide for the prevention of vein graft failure in lower extremity bypass surgery. *J Vasc Surg*. 2006;43:742–751; discussion 751.
162. Schanzer A, Hevelone N, Owens CD, et al. Technical factors affecting autogenous vein graft failure: observations from a large multicenter trial. *J Vasc Surg*. 2007;46:1180–1190; discussion 1190.
163. Hammad TA, Smolderen KG, Spertus JA, et al. Associations of exercise ankle-brachial index, pain-free walking distance and maximum walking distance with the Peripheral Artery Questionnaire: finding from the PORTRAIT PAD Registry. *Vasc Med*. 2019;24:32–40.
164. Kim BH, Cho KI, Spertus J, et al. Peripheral artery questionnaire improves ankle brachial index screening in symptomatic patients with peripheral artery disease. *Int J Clin Pract*. 2014;68:1488–1495.
165. McDermott MM, Guralnik JM, Criqui MH, et al. Six-minute walk is a better outcome measure than treadmill walking tests in therapeutic trials of patients with peripheral artery disease. *Circulation*. 2014;130:61–68.
166. Nordanstig J, Wann-Hansson C, Karlsson J, et al. Vascular Quality of Life Questionnaire-6 facilitates health-related quality of life assessment in peripheral arterial disease. *J Vasc Surg*. 2014;59:700–707.
167. Noyes AM, Abbott JD, Gosch K, et al. Association between health status and sociodemographic, clinical and treatment disparities in the Patient-centered Outcomes Related to TReatment Practices in Peripheral Arterial Disease: Investigating Trajectories (PORTRAIT) registry. *Vasc Med*. 2018;23:32–38.
168. Treat-Jacobson D, Lindquist RA, Witt DR, et al. The PADQOL: development and validation of a PAD-specific quality of life questionnaire. *Vasc Med*. 2012;17:405–415.
169. Kruger D. Neo-intimal hyperplasia, diabetes and endovascular injury. *Cardiovasc J Afr*. 2012;23:507–511.
170. Owens CD, Gasper WJ, Rahman AS, et al. Vein graft failure. *J Vasc Surg*. 2015;61:203–216.
171. Venermo M, Sprynger M, Desormais I, et al. Editor's choice - follow-up of patients after revascularisation for peripheral arterial diseases: a consensus document from the European Society of Cardiology Working Group on Aorta and Peripheral Vascular Diseases and the European Society for Vascular Surgery. *Eur J Vasc Endovasc Surg*. 2019;58:641–653.
172. Zierler RE, Jordan WD, Lal BK, et al. The Society for Vascular Surgery practice guidelines on follow-up after vascular surgery arterial procedures. *J Vasc Surg*. 2018;68:256–284.

173. Mohler ER 3rd, Gornik HL, Gerhard-Herman M, et al. ACCF/ACR/AIUM/ASE/ASN/ICAVL/SCAI/SCCT/SIR/SVM/SVS/SVU 2012 appropriate use criteria for peripheral vascular ultrasound and physiological testing part I: arterial ultrasound and physiological testing: a report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force, American College of Radiology, American Institute of Ultrasound in Medicine, American Society of Echocardiography, American Society of Nephrology, Intersocietal Commission for the Accreditation of Vascular Laboratories, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, Society for Interventional Radiology, Society for Vascular Medicine, Society for Vascular Surgery, and Society for Vascular Ultrasound. *J Am Coll Cardiol*. 2012;60:242–276.
174. Barleben A, Bandyk DF. Surveillance and follow-up after revascularization for critical limb ischemia. *Semin Vasc Surg*. 2014;27:75–81.
175. Expert Panel on Vascular Imaging, Cooper K, Majdalany BS, et al. ACR appropriateness criteria®: lower extremity arterial revascularization-post-therapy imaging. *J Am Coll Radiol*. 2018;15:S104–S115.
176. Martinez-Rico C, Marti-Mestre X, Jimenez-Guiu X, et al. Ultrasound surveillance in endovascular revascularization of lower limbs. *Ann Vasc Surg*. 2019;56:274–279.
177. Abu Dabrh AM, Mohammed K, Farah W, et al. Systematic review and meta-analysis of duplex ultrasound surveillance for infrainguinal vein bypass grafts. *J Vasc Surg*. 2017;66:1885–1891.e8.
178. Davies AH, Hawdon AJ, Sydes MR, et al. Is duplex surveillance of value after leg vein bypass grafting? Principal results of the Vein Graft Surveillance Randomised Trial (VGST). *Circulation*. 2005;112:1985–1991.
179. Brumberg RS, Back MR, Armstrong PA, et al. The relative importance of graft surveillance and warfarin therapy in infrainguinal prosthetic bypass failure. *J Vasc Surg*. 2007;46:1160–1166.
180. Lalak NJ, Hanel KC, Hunt J, et al. Duplex scan surveillance of infrainguinal prosthetic bypass grafts. *J Vasc Surg*. 1994;20:637–641.
181. Conte MS, Bradbury AW, Kolh P, et al. Global vascular guidelines on the management of chronic limb-threatening ischemia. *Eur J Vasc Endovasc Surg*. 2019;58(Suppl 1):S1–S109.e33.
182. Chung J, Modrall JG, Ahn C, et al. Multidisciplinary care improves amputation-free survival in patients with chronic critical limb ischemia. *J Vasc Surg*. 2015;61:162–169.
183. Mii S, Tanaka K, Kyuragi R, et al. Aggressive wound care by a multidisciplinary team improves wound healing after infrainguinal bypass in patients with critical limb ischemia. *Ann Vasc Surg*. 2017;41:196–204.
184. Armstrong DG, Bharara M, White M, et al. The impact and outcomes of establishing an integrated interdisciplinary surgical team to care for the diabetic foot. *Diabetes Metab Res Rev*. 2012;28:514–518.
185. Armstrong EJ, Alam S, Henao S, et al. Multidisciplinary care for critical limb ischemia: current gaps and opportunities for improvement. *J Endovasc Ther*. 2019;26:199–212.
186. Conte MS, Bradbury AW, Kolh P, et al. Global vascular guidelines on the management of chronic limb-threatening ischemia. *Eur J Vasc Endovasc Surg*. 2019;58:S1–S109.e133.
187. Flores AM, Mell MW, Dalman RL, et al. Benefit of multidisciplinary wound care center on the volume and outcomes of a vascular surgery practice. *J Vasc Surg*. 2019;70:1612–1619.
188. Vartanian SM, Robinson KD, Ofili K, et al. Outcomes of neuroischemic wounds treated by a multidisciplinary amputation prevention service. *Ann Vasc Surg*. 2015;29:534–542.

Appendix A. Peripheral Artery Disease Measure Set

Performance Measures for Peripheral Artery Disease

Short Title: PM-1: Target BP for Patients With PAD

PM-1: BP Goals (<130/<80 mm Hg) in Patients With PAD

Measure Description: Percentage of patients aged 18-85 y with PAD who have adequately controlled BP	
Numerator	Patients with adequately controlled BP (<130/<80 mm Hg) on the most recent measurement* or home BP measurement submitted electronically or telephonically
Denominator	Patients aged 18-85 y with hypertension with at least 1 outpatient encounter with a diagnosis of PAD during the first 6 mo of the measurement year or any time before the measurement period
Denominator Exclusions	ESKD, kidney transplantation, pregnancy, autonomic dysfunction, white coat hypertension
Denominator Exceptions	Documentation of medical reason(s) for not adequately controlling BP (eg, prior treatment intolerance or significant risk for treatment intolerance [intolerance could include hypotension, hyperkalemia, acute renal insufficiency, allergy, angioedema, or other medical reasons at the discretion of the treatment team], BP readings taken during a hospital stay, BP readings taken on the same day as a diagnostic or invasive procedure where changes in diet and medication administration are required, nondigital BP recordings) Documentation of patient reason(s) for not adequately controlling BP (eg, unable to afford medications, limited access to care, patient refusal or noncompliance)
Measurement Period	12 mo
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record or data collection flow sheet Electronically or telephonically transmitted BP readings
Attribution	Individual practitioner Facility
Care Setting	Outpatient
Rationale	
HBP is the most prevalent risk factor for PAD, found in 35% to 55% of patients at the time of PAD diagnosis.[1] HBP is strongly associated with risk of MACE, CKD, and polyvascular disease.[1] HBP has been associated with declines in ABI over time in patients with PAD.[1] Control of HBP has been shown to reduce the risk of MACE in patients with PAD through the improvement of symptoms of claudication and functional status.[1] More than half of patients in the United States have poorly controlled BP. This measure has been designed to be congruent with existing hypertension guidelines[16] and to mirror similar performance measures used in the ACC/AHA performance measures for adults with HBP document,[9] as well as other measures defined by NCQA HEDIS, NQF, NCQA, and CMS, and other measures that are used in payment programs, public reporting, quality improvement, and regulatory/accreditation programs.[1,9,16,17]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with PAD and hypertension, antihypertensive therapy should be administered to reduce the risk of MACE.[16,18–21] (Class 1, Level of Evidence: A) 2. In patients with PAD and hypertension, a systolic blood pressure (SBP) goal of <130 mm Hg and a diastolic blood pressure target of <80 mm Hg is recommended.[16,22–25] (Class 1, Level of Evidence: B-R)	

*If there is no BP documented or if the measurement is incomplete (missing either SBP or DBP) during the measurement year, the patient will fail the measure and not be included in the numerator. If there are multiple BP readings on the same date of service, the lowest systolic and diastolic measurements are representative of the BP.

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ABI, ankle-brachial index; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; BP, blood pressure; CKD, chronic kidney disease; CMS, Centers for Medicare & Medicaid Services; DBP, diastolic blood pressure; EHR, electronic health record; ESKD, end-stage kidney disease; HBP, high blood pressure; HEDIS, Healthcare Effectiveness Data and Information Set; MACE, major adverse cardiovascular events; NCQA, National Committee for Quality Assurance; NQF, National Quality Forum; PAD, peripheral artery disease; PM, performance measure; SBP, systolic blood pressure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Appendix A. Continued

Short Title: PM-2: Use of ACE Inhibitors or ARB for Patients With PAD

PM-2: Use of ACE Inhibitors or ARB as First-Line Antihypertensive Therapy for Patients With PAD

Measure Description: Percentage of patients aged 18-85 y with PAD who have hypertension (SBP ≥130 or DBP ≥80 mm Hg) and who are treated with ACE inhibitors or ARB as antihypertensive therapy	
Numerator	Patients who were prescribed either an ACE inhibitor or ARB*
Denominator	Patients aged 18-85 y with hypertension who had at least 1 outpatient encounter with a diagnosis of PAD during the first 6 mo of the measurement year or any time before the measurement period
Denominator Exclusions	ESKD, kidney transplantation, pregnancy, patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	Documentation of medical reason(s) for not prescribing an ACE inhibitor or ARB (eg, prior treatment intolerance or significant risk for treatment intolerance [intolerance could include hypotension, hyperkalemia, acute renal insufficiency, allergy, angioedema, or other medical reasons at the discretion of the treatment team]) Documentation of patient reason(s) for not prescribing an ACE inhibitor or ARB (eg, unable to afford medications, limited access to care, patient refusal or noncompliance) Note: The reasons for not prescribing an ACE inhibitor or ARB do not need to be documented at every visit but must be documented clearly in the EHR to qualify.
Measurement Period	Antihypertensive therapy initiated within a 12-mo period of outpatient evaluation for PAD
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record or data collection flow sheet Electronically or telephonically transmitted BP readings
Attribution	Individual practitioner Facility
Care Setting	Inpatient Outpatient
Rationale	
The HOPE trial enrolled patients with high cardiovascular risk to determine the role of ramipril in the reduction of cardiovascular events.[26] In a subgroup analysis of patients with PAD (defined as ABI <0.9), ramipril showed a significant reduction in risk of MI, stroke, or vascular death by 25%.[26] The ONTARGET investigators showed similar benefits of MACE with telmisartan.[27] In an observational study of patients with CLTI by Armstrong et al,[28] use of ACE inhibitors or an ARB in observational data has been associated with a 25% lower rate of MACE and all-cause mortality.	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with PAD and hypertension, the selective use of angiotensin-converting enzyme (ACE) inhibitors or angiotensin-receptor blockers is recommended to reduce the risk of MACE.[26–28] (Class 1, Level of Evidence: B-R)	

*Use of an ARN inhibitor in the setting of concomitant cardiomyopathy fulfills the requirement for inclusion in the numerator.

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ABI, ankle-brachial index; ACC, American College of Cardiology; ACE, angiotensin-converting enzyme; AHA, American Heart Association; APMA, American Podiatric Medical Association; ARB, angiotensin-receptor blocker; ARN, angiotensin receptor–neprilysin; BP, blood pressure; CLTI, chronic limb-threatening ischemia; DBP, diastolic blood pressure; EHR, electronic health record; ESKD, end-stage kidney disease; HOPE, Heart Outcomes Prevention trial; MACE, major adverse cardiovascular events; MI, myocardial infarction; ONTARGET, Ongoing Telmisartan Alone and in Combination with Ramipril Global Endpoint Trial; PAD, peripheral artery disease; PM, performance measure; SBP, systolic blood pressure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Appendix A. Continued

Short Title: PM-3: Diabetes Management for PAD

PM-3: Diabetes Management for PAD

Measure Description: Percentage of patients age ≥18 y with PAD and a diagnosis of type 2 diabetes who were prescribed GLP-1 agonists or SGLT-2 inhibitors	
Numerator	Patients who were prescribed GLP-1 agonists or SGLT-2 inhibitors
Denominator	Patients age ≥18 y with PAD and a diagnosis of type 2 diabetes
Denominator Exclusions	Patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	Documentation of medical reason(s) for not prescribing GLP-1 agonists or SGLT-2 inhibitors (eg, allergy or adverse drug reaction to GLP-1 agonists or SGLT-2 inhibitors) Documentation of patient reason(s) for not prescribing GLP-1 agonists or SGLT-2 inhibitors (eg, unable to afford medications, limited access to care, patient refusal or noncompliance)
Measurement Period	12 mo
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Individual practitioner Facility
Care Setting	Inpatient Outpatient
Rationale	
The GLP-1 agonists and SGLT-2 inhibitors reduce MACE in randomized trials of individuals with type 2 diabetes and PAD.[29–39] Clinical practice guidelines and randomized controlled trial data support the use of SGLT-2 inhibitors to prevent MACE in patients with PAD who have heart failure.[40] Limb survival improved in the patients with PAD enrolled in the empagliflozin cardiovascular outcome event trial in type 2 diabetes.[41] The finding of an increased amputation rate in patients with PAD and diabetes who were treated with canagliflozin has never been reproduced.[42]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with PAD and type 2 diabetes, use of glucagon-like peptide-1 agonists (liraglutide and semaglutide) and sodium-glucose cotransporter-2 (SGLT-2) inhibitors (canagliflozin, dapagliflozin, and empagliflozin) are effective to reduce the risk of MACE.[29–39,41] (Class 1, Level of Evidence: A) 2. In patients with PAD, management of diabetes should be coordinated among members of the health care team. (Class 1, Level of Evidence: C-EO) 3. In patients with PAD and diabetes, glycemic control may be beneficial to improve limb outcomes.[43–46] (Class 2b, Level of Evidence: B-NR)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; EHR, electronic health record; GLP-1, glucagon-like peptide-1; MACE, major adverse cardiovascular events; PAD, peripheral artery disease; PM, performance measure; SCAI, Society for Cardiovascular Angiography and Interventions; SGLT-2, sodium-glucose cotransporter 2; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Appendix A. Continued

Short Title: PM-4: Antithrombotic Therapy for Symptomatic PAD

PM-4: Use of Low-Dose Antithrombotic Therapy in Combination With Low-Dose Aspirin for Symptomatic PAD

Measure Description: Percentage of patients age ≥18 y with a diagnosis of symptomatic PAD who are prescribed low-dose antithrombotic therapy (rivaroxaban 2.5 mg twice daily) in combination with low-dose aspirin to reduce the risk of MI, stroke, cardiovascular death, or MALE (severe limb ischemia leading to an intervention or major vascular amputation)	
Numerator	Patients who were prescribed rivaroxaban 2.5 mg twice daily in combination with low-dose aspirin once daily
Denominator	Patients age ≥18 y with a history of symptomatic PAD History of symptomatic PAD is defined as the presence of the following: 1. Functional impairment or claudication OR 2. CLTI (eg, ischemic rest pain, nonhealing ischemic ulcers, gangrene) OR 3. History of vascular reconstruction or revascularization including bypass surgery or percutaneous intervention to the extremities OR 4. Amputation for CLTI
Denominator Exclusions	Patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	Documentation of medical reason(s) for not prescribing antithrombotic therapy (eg, allergy or intolerance to aspirin or rivaroxaban, adverse drug reaction, patients with contraindications to anticoagulation, patients with contraindications to DOAC therapy, other medical indication for dual antiplatelet therapy, other medical indication for full-intensity anticoagulation with a VKA or DOAC, recent lower extremity revascularization [<10 d], acute limb ischemia [<2 wks], or ACS [<30 d]) Documentation of patient reason(s) for not prescribing antithrombotic therapy (eg, unable to afford medications, limited access to care, patient refusal or noncompliance) Documentation of system reason(s) for not prescribing antithrombotic therapy (eg, lack of insurance coverage for rivaroxaban)
Measurement Period	Every patient encounter or every health care visit over a 12-mo period
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Individual practitioner Facility
Care Setting	Inpatient Outpatient
Rationale	
Recent trials, including the COMPASS[47] and VOYAGER[48] trials, have demonstrated that the use of low-dose rivaroxaban (2.5 mg twice daily) in combination with once daily low-dose aspirin therapy in patients with symptomatic PAD, including following endovascular or surgical revascularization, led to a significantly reduced risk of both MACE and MALE despite an association with increased risk of bleeding.[49] A reduction in MACE and MALE was also found in patients with carotid disease or patients with CAD and an abnormal ABI in the absence of symptoms.[50] These reductions were seen when compared with aspirin alone. There is generally no role for full-intensity anticoagulation for the prevention of MACE and MALE in patients with PAD given excess bleeding risk.[51,52]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with symptomatic PAD, low-dose rivaroxaban (2.5 mg twice daily) combined with low-dose aspirin is effective to reduce the risk of MACE and MALE.[47,49] (Class 1, Level of Evidence: A) 2. After endovascular or surgical revascularization for PAD, low-dose rivaroxaban (2.5 mg twice daily) combined with low-dose aspirin is recommended to reduce the risk of MACE and MALE.[48] (Class 1, Level of Evidence: A)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ABI, ankle-brachial index; ACC, American College of Cardiology; ACS, acute coronary syndrome; AHA, American Heart Association; APMA, American Podiatric Medical Association; CAD, coronary artery disease; CLTI, chronic limb-threatening ischemia; COMPASS, Cardiovascular Outcomes for People Using Anticoagulation Strategies trial; DOAC, direct oral anticoagulant; EHR, electronic health record; MACE, major adverse cardiovascular events; MALE, major adverse limb events; MI, myocardial infarction; PAD, peripheral artery disease; PM, performance measure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; VESS, Vascular and Endovascular Surgery Society; VKA, vitamin K antagonists; and VOYAGER, Vascular Outcomes Study of ASA (acetylsalicylic acid) Along with Rivaroxaban in Endovascular or Surgical Limb Revascularization trial.

Appendix A. Continued

Short Title: PM-5: Lipid-Lowering Therapy for PAD (High-Intensity Statins)

PM-5: Lipid-Lowering Therapy for Secondary Prevention of MACE and MALE for Patients With PAD (High-Intensity Statins)

Measure Description: Percentage of patients age ≥18 y with PAD who are prescribed a high-intensity statin* to achieve a ≥50% reduction in LDL-C level	
Numerator	Patients who are prescribed a high-intensity statin*
Denominator	Patients age ≥18 y with PAD
Denominator Exclusions	Patients without documented atherosclerosis or plaque who undergo vascular reconstruction for traumatic injury only, patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	Documentation of medical reason(s) for not prescribing lipid-lowering therapy (eg, allergy or intolerance to listed medications) Documentation of patient reason(s) for not prescribing lipid-lowering therapy (eg, unable to afford medications, limited access to care, patient refusal or noncompliance)
Measurement Period	12 mo
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Individual practitioner Facility
Care Setting	Inpatient Outpatient
Rationale	
Treatment of dyslipidemia reduces the risk of adverse cardiovascular events in patients with atherosclerosis and reduces MALE in patients with symptomatic PAD. Cholesterol-lowering therapy with an hydroxymethylglutaryl-coenzyme A reductase inhibitor (statin) reduces the risk of MI, stroke, and cardiovascular death in patients with coronary artery disease.[53–55] In the Heart Protection Study, statins reduced the risk of MI, stroke, or cardiovascular death by 24% in patients with PAD.[53] Despite the proven efficacy of effective lipid-lowering therapy in patients with PAD, these patients are undertreated when compared with patients with coronary artery disease.[56,57] Indirect yet supporting evidence from PAD subgroup analyses of large RCTs of other lipid-lowering agents has shown that treatment strategies to lower LDL-C values <70 mg/dL are associated with improved rates of MACE and MALE.[58–60]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with PAD, treatment with high-intensity statin therapy is indicated, with an aim of achieving a ≥50% reduction in low-density lipoprotein cholesterol (LDL-C) level.[53–55] (Class 1, Level of Evidence: A)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; EHR, electronic health record; LDL-C, low-density lipoprotein cholesterol; MACE, major adverse cardiac events; MALE, major adverse limb events; MI, myocardial infarction; PAD, peripheral artery disease; PM, performance measure; RCT, randomized controlled trial; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

*High-intensity statin therapy is defined as either atorvastatin ≥40 mg, or rosuvastatin ≥20 mg.

Appendix A. Continued

Short Title: PM-6: Tobacco Use: Screening and Counseling

PM-6: Tobacco Use Screening With Cessation Counseling, Behavioral, or Pharmacologic Interventions Provided

Measure Description: Percentage of patients age ≥18 y with a diagnosis of PAD who were seen within a 12-mo period and screened for any kind of tobacco use, including electronic nicotine delivery systems, smokeless tobacco, or other products,* and if identified as tobacco users, received tobacco cessation counseling and were offered behavioral or pharmacologic interventions.† Smoking cessation interventions for patients with PAD who actively use any form of tobacco involves counseling to quit at every visit and encouragement to maintain cessation. Patients with PAD should be advised to avoid secondhand tobacco exposure.	
Numerator	Patients who were screened for tobacco use* and who received behavioral or pharmacological tobacco cessation counseling intervention† if identified as a tobacco user
Denominator	Patients age ≥18 y with a diagnosis of PAD seen within a 12-mo period
Denominator Exclusions	Patients who are in hospice care for any part of the measurement period, patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	Documentation of patient reason(s) for not screening for tobacco use, or ordering tobacco cessation counseling or cessation interventions (eg, unable to afford counseling or cessation interventions, patient refusal or noncompliance, other patient reasons)
Measurement Period	Every patient encounter or every health care visit over a 12-mo period
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Individual practitioner Facility
Care Setting	Inpatient Outpatient
Rationale	
Tobacco use is a major modifiable risk factor for PAD, significantly contributing to increased morbidity and mortality.[61] Smoking cessation is associated with lower rates of MALE, including bypass graft failure and amputation, as well as reduced mortality in patients with PAD. The risk of developing PAD remains high among former smokers. Secondhand smoke is also linked to an increased risk of all-cause death, stroke, cardiovascular disease, and may contribute to PAD progression. Despite the availability of multiple evidence-based tools and strategies, smoking cessation support remains underutilized in PAD care. Health care provider counseling plays a crucial role in increasing cessation rates. Integrating provider-based measures into smoking cessation programs ensures a systematic approach to helping patients quit, as well as continued abstinence from tobacco use for those who have successfully quit. Evidence-based strategies combining behavioral counseling and pharmacotherapy, such as varenicline, bupropion, and NRT, have been shown to increase cessation rates compared with self-directed quit attempts.[62,63] For patients who are active tobacco users of any kind, the long-term health effects of using electronic cigarettes in place of NRT to facilitate cigarette smoking cessation are not well established,[64,65] and their long-term effects on health outcomes, including MALE and MACE, remain unexplored. Clinicians should incorporate smoking cessation as a cornerstone of PAD management, adhering to established guidelines, including the 2018 ACC expert consensus decision pathway, while further research on electronic nicotine delivery systems is warranted.[63] Expanding the use of these strategies and exploring innovative approaches, such as digital health solutions and group therapy models, may improve outcomes in this high-risk population.	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. Patients with PAD who smoke cigarettes or use any other forms of tobacco should be advised at every visit to quit or encouraged to maintain cessation.[66–68] (Class 1, Level of Evidence: A) 2. Patients with PAD who smoke cigarettes or use any other forms of tobacco should be assisted in developing a plan for quitting that includes pharmacotherapy (ie, varenicline, bupropion, and/or nicotine replacement therapies) combined with counseling, and/or referral to a smoking cessation program.[69–74] (Class 1, Level of Evidence: A) 3. Patients with PAD should be advised to avoid exposure to secondhand tobacco smoke in all indoor or enclosed spaces, including work, home, transportation vehicles, and public places.[62,75–78] (Class 1, Level of Evidence: B-NR)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; EHR, electronic health record; MACE, major adverse cardiovascular events; MALE, major adverse limb events; NRT, nicotine replacement therapy; PAD, peripheral artery disease; PM, performance measure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

*Includes any type of tobacco (eg, cigarettes, cigars, smokeless tobacco products, vapes, electronic cigarettes, nicotine gels, hookah tobacco, hookah pens, pipe tobacco, nicotine pouches, etc).

†Cessation counseling intervention includes brief counseling (≤3 min) or pharmacotherapy (including but not limited to varenicline, bupropion, NRT, or referral to smoking cessation programs).

Appendix A. Continued

Short Title: PM-7: SET or Structured Community-Based Exercise Therapy

PM-7: SET or Structured Community-Based Exercise Therapy

Measure Description: Percentage of patients age ≥18 y with chronic symptomatic PAD (including claudication) who were offered SET or structured community-based exercise therapy within 12 mo of diagnosis	
Numerator	Patients who were offered: 1. A SET or training program (PAD rehabilitation) as an option (preferred) OR 2. A structured community-based exercise therapy program prescribed and guided by a qualified health professional, which includes behavior change techniques delivered through in-person or virtual health coaching and activity tracking (acceptable alternative if no supervised program is accessible*) AND documented medical, patient, or system reason, documented by a physician, advanced practice nurse, or physician assistant, stating that they could not be offered a supervised program Note: Exercise training should be offered within 12 mo of diagnosis, and it should be performed for a minimum of 30 to 45 min within each 60-min session for up to 36 sessions within a 12-wk timeframe.
Denominator	Patients age ≥18 y with chronic symptomatic PAD (including claudication)
Denominator Exclusions	Patients in hospice care or skilled nursing facility, or patients who participated in an exercise program
Denominator Exceptions	Documentation of medical reason(s) for not offering a supervised or structured exercise training program (eg, CLTI [eg, ischemic rest pain, nonhealing ischemic ulcers, gangrene], unstable angina or recent MI, decompensated heart failure, uncontrolled cardiac arrhythmias, severe or symptomatic valvular disease, other conditions that could be aggravated by exercise [eg, severe joint disease, uncontrolled diabetes, uncontrolled hypertension, severe pulmonary disease, or limb or tissue loss], unstable walking outdoors or unsupervised) Documentation of patient reason(s) for not offering a supervised or structured exercise training program (eg, unable to afford exercise therapy, limited access to care, patient refusal or noncompliance) Documentation of system reason(s) for not offering a supervised or structured exercise training program (eg, lack of insurance coverage, structured community-based exercise program is inaccessible, coaching and activity tracking platforms are commonly unavailable or inaccessible to patients or not available for practitioners to prescribe)
Measurement Period	12 mo
Sources of Data	EHR data Administrative data/claims (outpatient claims) Administrative data/claims expanded (multiple sources, SET PAD program) Paper medical record
Attribution	Individual practitioner Facility
Care Setting	Outpatient
Rationale	
There are strong, high-quality, and consistent data supporting the use of SET to improve functional status, walking performance, and QOL in patients with stable symptomatic PAD. This includes those who are being considered for revascularization because exercise improvements are at least as effective as revascularization.[79–81] Medicare and most commercial insurance companies now cover SET for patients with claudication (PAD rehabilitation), which is most commonly available in cardiac rehabilitation programs, either in a clinic office space or hospital setting. Some third-party payers may require that SET is performed in a hospital outpatient setting. When revascularization is performed, if the patient remains symptomatic, referral to SET can result in optimization of benefits.[82] Although most RCTs have compared SET to control or usual care conditions, the evidence supporting structured community-based exercise (including home-based programs) continues to grow. A 2019 meta-analysis including 11 trials and 807 patients showed that, overall, these programs improve walking performance and physical activity compared with usual care.[83] Two additional recent RCTs support the efficacy of structured community-based exercise programs to improve functional status among patients with stable symptomatic PAD.[84,85] Similarly, there is increasing evidence that alternative forms of exercise that do not involve treadmill walking for moderate to severe claudication, such as arm cranking or stationary cycling, also improve walking performance and QOL, similar to improvements seem with traditional treadmill walking programs.[86,87] Unstructured exercise programs, such as advice from the vascular specialist for patients with stable symptomatic PAD to "go out and walk," have not been shown to be effective and only have a limited role in care when structured exercise programs are not available.	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with chronic symptomatic PAD, SET is recommended to improve walking performance, functional status, and QOL.[80,81,86–97] (Class 1, Level of Evidence: A) 2. In patients with chronic symptomatic PAD, a structured community-based exercise program with behavioral change techniques is effective to improve walking performance, functional status, and QOL.[83–85,97–104] (Class 1, Level of Evidence: A) 3. In patients who have undergone revascularization for chronic symptomatic PAD, SET after revascularization is effective to improve walking performance, functional status, and QOL.[82,105–114] (Class 1, Level of Evidence: A) 4. In patients with functionally limiting claudication, SET or a structured community-based exercise program should be offered as an initial treatment option.[79–81,88] (Class 1, Level of Evidence: B-R) 5. In patients with chronic symptomatic PAD, alternative programs of nonwalking structured exercise therapy (eg, arm ergometry, recumbent stepping) can be beneficial to improve walking performance, functional status, and QOL.[86,87,115–121] (Class 2a, Level of Evidence: A) 6. In patients with chronic symptomatic PAD, the usefulness of structured walking exercise therapy that avoids moderate to severe ischemic symptoms is uncertain.[84,116,117] (Class 2b, Level of Evidence: B-R) 7. In patients with chronic symptomatic PAD, the usefulness of unstructured exercise to improve walking performance, functional status, and QOL is uncertain.[89,100,102] (Class 2b, Level of Evidence: B-R)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; CLTI, chronic limb-threatening ischemia; EHR, electronic health record; MI, myocardial infarction; PAD, peripheral artery disease; PM, performance measure; QOL, quality of life; RCT, randomized controlled trial; SCAI, Society for Cardiovascular Angiography and Interventions; SET, supervised exercise therapy; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

*Inaccessible means that no program is available in the patient's area, is affordable within the patient's economic means, or will accommodate the patient's work hours or other fixed schedule barriers. A structured, community-based exercise program is prescribed and guided by a qualified health professional and includes behavior change techniques delivered through in-person or virtual health coaching and activity tracking.

Appendix A. Continued

Quality Measures for Peripheral Artery Disease

Short Title: QM-1: Vascular Review of Systems for Lower Extremity PAD

QM-1: Vascular Review of Systems for Lower Extremity PAD

Measure Description: Percentage of patients age ≥18 y with increased risk for PAD who received a vascular review of systems for lower extremity PAD at least once in the last 24 mo	
Numerator	Patients who received a vascular review of systems in the last 24 mo including an assessment of ALL of the following: 1. Walking impairment or claudication 2. Ischemic rest pain 3. Lower extremity nonhealing wounds
Denominator	Patients age ≥18 y with increased risk for PAD based on the presence of ≥1 of the following risk amplifiers*: 1. Older age (ie, ≥75 y) and geriatric syndromes (eg, frailty, mobility impairment) 2. Diabetes 3. Ongoing smoking and use of other forms of tobacco 4. CKD[122]: eGFR <60 mL/min/1.73 m^2 5. ESKD: (ie, dialysis dependence) most advanced stage of CKD (stage 5) 6. Polyvascular disease: atherosclerosis within ≥2 arterial beds (coronary, peripheral artery, or cerebrovascular) 7. Microvascular disease: abnormalities of the microvasculature, often leading to retinopathy, neuropathy, and nephropathy 8. Depression
Denominator Exclusions	Patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	None
Measurement Period	24 mo
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Individual practitioner Facility
Care Setting	Inpatient Outpatient
Rationale	
Clinical assessment is a central component of evaluation for PAD. Recognition of patterns (clinical subsets) of clinical presentation of PAD will direct clinical evaluation, diagnostic testing, and treatment, as well as determine the urgency of care. The clinical assessment for PAD includes medical history, physical examination, and consideration of differential diagnoses, and is performed before diagnostic testing for PAD. Multiple clinical subsets of PAD exist, including asymptomatic patients. Therefore, history taking and a targeted vascular review of systems for at-risk patients is necessary.[1,123,124]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients at increased risk of PAD, a comprehensive medical history and review of symptoms to assess for exertional leg symptoms, lower extremity rest pain, and lower extremity wounds or other ischemic skin changes should be performed.[125–128] (Class 1, Level of Evidence: B-NR) 2. In patients at increased risk of PAD, a comprehensive vascular examination and inspection of the legs and feet should be performed regularly.[125,129–132] (Class 1, Level of Evidence: B-NR)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; EHR, electronic health record; ESKD, end-stage kidney disease; PAD, peripheral artery disease; QM, quality measure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

*The PAD-related risk amplifiers are discussed in more detail in the 2024 PAD guideline, Section 4: Special Considerations in PAD: Risk Amplifiers, Health Disparities, and PAD in Older Patients.

Appendix A. Continued

Short Title: QM-2: PAD "At Risk" Pulse Examination

QM-2: PAD "At Risk" Population Pulse Examination

Measure Description: Percentage of patients age ≥18 y with increased risk for PAD who received a lower extremity pulse examination within the last 12 mo	
Numerator	Patients in whom a lower extremity pulse examination was documented at least once in the last 12 mo (the pulse examination should include the femoral, popliteal, dorsalis pedis, and posterior tibial pulses)
Denominator	Patients age ≥18 y with increased risk for PAD based on the presence of ≥1 of the following risk amplifiers*: 1. Older age (ie, ≥75 y) and geriatric syndromes (eg, frailty, mobility impairment) 2. Diabetes 3. Ongoing smoking and use of other forms of tobacco 4. CKD[122]: eGFR <60 mL/min/1.73 m^2 5. ESKD: (ie, dialysis dependence), most advanced stage of CKD (stage 5) 6. Polyvascular disease: atherosclerosis within ≥2 arterial beds (coronary, peripheral artery, or cerebrovascular) 7. Microvascular disease: abnormalities of the microvasculature, often leading to retinopathy, neuropathy, and nephropathy 8. Depression
Denominator Exclusions	Patients with diagnosed PAD
Denominator Exceptions	Documentation of medical reason(s) for not performing pulse examination (eg, amputation) Documentation of patient reason(s) for not performing pulse examination (eg, patient refusal)
Measurement Period	12 mo
Sources of Data	EHR data Paper medical record
Attribution	Individual practitioner
Care Setting	Outpatient
Rationale	
Clinical assessment is a central component of evaluation for PAD. Clinical assessment begins with recognition of risk factors for PAD. Risk factors for atherosclerosis and the presence of atherosclerotic disease in other vascular areas are important risk features.[1] Patients at risk for PAD are identified based on demographic features, cardiovascular risk factors, or the presence of atherosclerotic vascular disease in other vascular beds.[1] Patients at increased risk of PAD require a thorough vascular examination with a focus on the lower extremities. To appropriately accomplish this, all lower extremity garments, including shoes and socks, should be removed. Lower extremity pulses (femoral, popliteal, dorsalis pedis, and posterior tibial arteries) are evaluated with palpation and rated as follows: 0, absent; 1, diminished; 2, normal; or 3, bounding. Presence of all 4 (right and left) posterior tibial and dorsalis pedis pulses on palpation is associated with low likelihood of PAD.[133]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients at increased risk of PAD, a comprehensive medical history and review of symptoms to assess for exertional leg symptoms, lower extremity rest pain, and lower extremity wounds or other ischemic skin changes should be performed.[125–128] (Class 1, Level of Evidence: B-NR) 2. In patients at increased risk of PAD, a comprehensive vascular examination and inspection of the legs and feet should be performed regularly.[125,129–132] (Class 1, Level of Evidence: B-NR)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; EHR, electronic health record; ESKD, end-stage kidney disease; PAD, peripheral artery disease; QM, quality measure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

*The PAD-related risk amplifiers are discussed in more detail in the 2024 PAD guideline, section 4: Special Considerations in PAD: Risk Amplifiers, Health Disparities, and PAD in Older Patients.

Appendix A. Continued

Short Title: QM-3: Preventive Foot Care for PAD

QM-3: Preventive Foot Care for Patients Diagnosed With PAD

Measure Description: Percentage of patients age ≥18 y with PAD who received comprehensive preventive foot care	
Numerator	Patients who received all the following services related to preventive foot care: 1. Detailed vascular-related medical history (eg, previous foot ulcer[s] or CLTI, amputation, Charcot deformity, calluses; current symptoms of PAD or CLTI: claudication or other leg fatigue with walking, rest pain, foot ulcers; lower extremity revascularization [endovascular or surgical procedures]; cigarette or other tobacco use [current, past]; diabetes; retinopathy or visual impairment; CKD; symptoms of neuropathy [eg, pain, burning, numbness in feet]; history of other CVD [eg, CAD, heart failure, cerebrovascular disease]) 2. Physical examination: a. Evaluate skin integrity, including presence of any ulcers, calluses, or corns (eg, visual inspection includes the whole foot and in between all toes) b. Examine for foot deformity (eg, bunion, hammertoe or claw toe, abnormal foot arch, Charcot deformity) c. Perform neurological assessment: 10-g monofilament testing with at least 1 other measurement: pinprick, temperature, or vibration d. Evaluate (palpate) pulses in the legs and feet 3. Education regarding general preventive foot self-care (eg, nail and skin care, washing and drying the feet daily [especially between the toes], doing foot exercises [eg, heel lifts while standing, ankle pumps, and rolling the bottom of the foot on a tennis ball], protecting feet from heat and cold, avoiding walking barefoot, and wearing socks and appropriately fitting shoes) 4. Evaluation of footwear (eg, ill-fitting, inadequate, lack of footwear) 5. Referral to footcare specialist or wound care, as appropriate or needed
Denominator	Patients age ≥18 y with PAD
Denominator Exclusions	Bilateral amputee or condition that does not allow patient to accurately respond to a neurological examination (eg, dementia, Alzheimer's, etc)
Denominator Exceptions	Documentation of patient reason(s) for not providing preventive foot care (eg, unable to afford preventive foot care, limited access to care, patient refusal or noncompliance)
Measurement Period	12 mo
Sources of Data	EHR data Administrative data/claims (outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Individual practitioner
Care Setting	Outpatient
Rationale	
PAD increases the risk of foot ulcers, infection, and amputation, and carries a 40% rate of death at 5 y after a foot ulcer has developed.[134,135] Foot ulcers and amputation caused by PAD or diabetic neuropathy are major causes of death and disability in patients with these conditions. Education on foot self-care for patients with PAD and for their family members and other support persons is important. Dry, cracked skin and corn or callus formation are precursors of foot ulcers, and patient education regarding foot care has been shown to reduce the occurrence of these lesions.[136] For preventive foot care in particular, the patient and their family or caregivers are essential members of this care team. The presence of foot deformities is a risk factor for the development of foot ulcers among patients with PAD. These deformities, which include bunions (hallux valgus), hammertoe, claw toe, flatfoot (pes planus), severe high-arch foot (pes cavus), Charcot foot, or the arthritic foot, can lead to foot ulcers caused by joint immobility, friction, or pressure. Patients with these types of foot deformities should be referred to a podiatrist for further evaluation and care.[137] Wearing therapeutic footwear can reduce the risk of foot ulcers in patients with PAD and severe neuropathy, foot deformities, ulcer or Charcot history, callus formation, or history of amputation. Engagement of foot care specialists (eg, podiatrists) for longitudinal follow-up is recommended by the International Working Group on the Diabetic Foot guidelines for patients at moderate or high risk of foot ulcers and, when available, is reasonable for all patients with PAD.[138]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with PAD, providing general preventive foot self-care education to patients and their family members and support persons is recommended.[124,135,136,139–142] (Class 1, Level of Evidence: C-LD) 2. In patients with PAD, foot inspection by a clinician at every visit is recommended. (Class 1, Level of Evidence: C-EO) 3. In patients with PAD at high risk for ulcers and amputation, therapeutic footwear is recommended.[137,143] (Class 1, Level of Evidence: C-LD) 4. In patients with PAD, a comprehensive foot evaluation should be performed at least annually to identify risk factors for ulcers and amputation. (Class 1, Level of Evidence: C-EO)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; CAD, coronary artery disease; CKD, chronic kidney disease; CLTI, chronic limb-threatening ischemia; CVD, cardiovascular disease; EHR, electronic health record; PAD, peripheral artery disease; QM, quality measure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Appendix A. Continued

Short Title: QM-4: Lipid-Lowering Therapy for PAD (Novel Drugs)

QM-4: Lipid-Lowering Therapy for Secondary Prevention of MACE and MALE for Patients With PAD (Novel Drugs)

Measure Description: Percentage of patients age ≥18 y with PAD who receive maximally tolerated statin therapy* with the adjunctive use of PCSK9 inhibitors or ezetimibe when statin therapy alone does not achieve a target LDL-C ≤70 mg/dL	
Numerator	Patients with LDL-C ≥70 mg/dL who are on a maximally tolerated statin* AND 1. Who are also prescribed ezetimibe OR 2. Who are also prescribed a PCSK9 inhibitor
Denominator	Patients age ≥18 y with PAD who have LDL-C ≥70 mg/dL despite receiving maximally tolerated statin therapy*
Denominator Exclusions	Patients without documented atherosclerosis or plaque who undergo vascular reconstruction for traumatic injury only, patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	Documentation of medical reason(s) for not prescribing lipid-lowering therapy (eg, allergy or intolerance to listed medications) Documentation of patient reason(s) for not prescribing lipid-lowering therapy (eg, unable to afford medications, limited access to care, patient refusal or noncompliance)
Measurement Period	12 mo
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Individual practitioner Facility
Care Setting	Inpatient Outpatient
Rationale	
Treatment of dyslipidemia reduces the risk of adverse cardiovascular events in patients with atherosclerosis and reduces MALE in patients with symptomatic PAD. Cholesterol-lowering therapy with an hydroxymethylglutaryl-coenzyme A reductase inhibitor (statin) reduces the risk of MI, stroke, and cardiovascular death in patients with coronary artery disease.[53–55] In the Heart Protection Study, statins reduced the risk of MI, stroke, or cardiovascular death by 24% in patients with PAD.[53] Despite the proven efficacy of effective lipid-lowering therapy in patients with PAD, these patients are undertreated when compared with patients with coronary artery disease.[56,57] Indirect yet supporting evidence from PAD subgroup analyses of large RCTs of other lipid-lowering agents have shown that treatment strategies to lower LDL-C values <70 mg/dL are associated with improved rates of MACE and MALE.[58–60] In a subgroup analysis of IMPROVE-IT involving 1005 patients with extracoronary atherosclerotic arterial disease, including PAD, there was a lower rate of MACE (45.2% vs 49.5%), favoring ezetimibe for the primary composite endpoint of cardiovascular death, major coronary event, or ischemic stroke at 7 y.[144] No data support the use of ezetimibe to prevent MALE in patients with PAD. In 2 subgroup analyses of studies evaluating PCSK9 inhibitors, use of alirocumab and evolocumab in patients with PAD was associated with lower rates of MACE and MALE compared with placebo.[58,59] The findings from the PAD subanalysis of the FOURIER study showed that evolocumab was associated with a lower occurrence of MACE (HR: 0.79 [95% CI: 0.66-0.94]; *P*=0.0098) and MALE (HR: 0.63 [95% CI: 0.39-1.03]; *P*=0.063) compared with placebo.[58] In the ODYSSEY OUTCOMES trial, alirocumab was associated with significantly lower rates of MALE, including progression to CLTI, revascularization, or unplanned amputation (HR: 0.59 [95% CI: 0.40-0.86]) in patients with previously diagnosed PAD.[59,60]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with PAD, treatment with high-intensity statin therapy is indicated, with an aim of achieving a ≥50% reduction in low-density lipoprotein cholesterol (LDL-C) level.[53–55] (Class 1, Level of Evidence: A) 2. In patients with PAD who are on maximally tolerated statin therapy and have an LDL-C level of ≥70 mg/dL, it is reasonable to add ezetimibe therapy.[54,144] (Class 2a, Level of Evidence: B-R) 3. In patients with PAD who are on maximally tolerated statin therapy and have an LDL-C level of ≥70 mg/dL, it is reasonable to add PCSK9 inhibitor therapy.[54,58–60] (Class 2a, Level of Evidence: B-R)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; CLTI, chronic limb-threatening ischemia; EHR, electronic health record; FOURIER, Further Cardiovascular Outcomes Research with PCSK9 Inhibition in Subjects with Elevated Risk study; HR, hazard ratio; IMPROVE-IT, Improved Reduction of Outcomes: Vytorin Efficacy International Trial; LDL-C, low-density lipoprotein cholesterol; MACE, major adverse cardiac events; MALE, major adverse limb events; MI, myocardial infarction; ODYSSEY OUTCOMES, Evaluation of Cardiovascular Outcomes After an Acute Coronary Syndrome During Treatment With Alirocumab trial; PAD, peripheral artery disease; PCSK9, proprotein convertase subtilisin/kexin type 9; QM, quality measure; RCT, randomized controlled trial; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

*High-intensity statin therapy is defined as either atorvastatin ≥40 mg or rosuvastatin ≥20 mg.

Appendix A. Continued

Short Title: QM-5: Identifying Health Disparities in PAD

QM-5: Identifying Health Disparities in PAD Performance or Quality Measure Attainment

Measure Description: Percentage of patients age ≥18 y with PAD who meet specified quality and performance measures, stratified by key demographic and social determinant of health categories **Note:** Evaluating the proportion of patients achieving quality and performance measures stratified by predefined status can help identify if any group is receiving significantly reduced quality of PAD care.	
Numerator	Among the denominator population, the proportion of patients who meet each specified performance or quality measure, stratified separately by: 1. Race (self-identified) 2. Ethnicity (self-identified) 3. Sex assigned at birth 4. Gender identity and preference 5. One or more social determinants of health (as documented), including but not limited to: • Insurance status • Income level • Educational status • Housing status • Food insecurity • Transportation access • Rurality or geographic remoteness
Denominator	Patients age ≥18 y with PAD eligible for each performance and quality measure
Denominator Exclusions	Measure-specific exclusions
Denominator Exceptions	Measure-specific exceptions
Measurement Period	Measure dependent
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Facility
Care Setting	Inpatient Outpatient
Rationale	
Research consistently demonstrates significant disparities in PAD prevalence, management, and outcomes among racial and ethnic minorities, women, and individuals affected by adverse social determinants of health. Black patients, for example, have a higher prevalence of PAD and are disproportionately affected by complications such as lower extremity amputation compared with their White counterparts.[123,145] Racial disparities even persist after adjusting for comorbid conditions like diabetes mellitus and hypertension.[146,147] Furthermore, Black and Hispanic patients with PAD are less likely to receive evidence-based therapies, such as statins and antiplatelet agents, and are less likely to undergo revascularization procedures, compared with White patients.[148–150] Sex-specific differences in PAD outcomes also underscore the need for targeted quality measures. Women with PAD are often diagnosed later in the disease course and despite comparable PAD severity. Women are less likely than men to receive diagnostic testing and interventions, leading to increased morbidity and mortality.[151,152] Social determinants, including income, education, housing stability, and geographic proximity to health care facilities, significantly influence PAD outcomes. Patients with lower socioeconomic status often face barriers to accessing timely care, resulting in worse disease progression and higher rates of complications, including amputations.[153,154] Geographical disparities further compound these inequities, as rural and underserved areas often lack specialized vascular care.[7,155–157] It is also important to note that patients with overlapping characteristics associated with social or structural disadvantages (eg, rural Black patients) may face greater health disparities due to the combined effects of multiple risk factors. This concept, known as intersectionality, is increasingly being explored in research related to health outcomes and can be considered when evaluating performance and quality measures related to PAD care delivery. This quality measure aims to assist health systems in identifying potential disparities by performing systematic analyses of PAD performance and quality measure achievements stratified by race, ethnicity, sex, gender identity, and social determinants of health. By identifying and understanding disparities, health care systems can implement targeted interventions to improve equitable care delivery. Strategies may include increasing access to evidence-based therapies, enhancing education for underserved populations, optimizing screening and referral processes for at-risk groups, and developing more health services that can be delivered virtually or closer to home. Although all data may not be readily available, consideration should be given to identifying and/or enhancing capabilities for collecting and aggregating key demographic and social determinant of health measures.	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. Clinicians and health care systems should actively pursue evidence of health disparities in diagnosis, treatment, and outcomes for patients with PAD and use efforts to limit the impact of these disparities on clinical outcomes. (Class 1, Level of Evidence: C-EO)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; EHR, electronic health record; PAD, peripheral artery disease; QM, quality measure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Appendix A. Continued

Short Title: QM-6: Saphenous Vein Assessment Before Leg Revascularization

QM-6: Assessing the Quality of the Great Saphenous Vein Before Leg Revascularization

Measure Description: Percentage of patients age ≥18 y with CLTI who are candidates for surgical bypass and endovascular revascularization and who undergo ultrasound mapping of the great saphenous vein before open or endovascular revascularization	
Numerator	Patients who undergo ultrasound mapping of the great saphenous vein before lower extremity revascularization
Denominator	Patients age ≥18 y with CLTI who undergo lower extremity revascularization
Denominator Exclusions	Patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	Documentation of medical reason(s) for not performing saphenous vein mapping before revascularization (eg, patient presentation with acute limb ischemia requiring urgent revascularization, inability to perform adequate imaging study due to body habitus) Documentation of patient reason(s) for not performing saphenous vein mapping before revascularization (eg, unable to afford medications, limited access to care, patient refusal or noncompliance) Documentation of system reason(s) for not performing saphenous vein mapping before revascularization (eg, unavailability of ultrasound testing facilities in the facility providing revascularization)
Measurement Period	Mapping within 12 mo prior to revascularization
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record Imaging laboratory records
Attribution	Individual practitioner Facility (health care setting providing revascularization, including hospital or outpatient-based angiography laboratory)
Care Setting	Inpatient Outpatient
Rationale	
In the BEST-CLI trial, the presence or absence of a great saphenous vein of 3-mm diameter was the criterion used to determine adequacy of this conduit for surgical bypass.[158] This trial provided Level 1 evidence that patients with CLTI with a high-quality saphenous vein have improved revascularization outcomes when compared with endovascular therapy, especially for patients with femoropopliteal segment disease.	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with CLTI who are candidates for surgical bypass and endovascular revascularization, ultrasound mapping of the great saphenous vein is recommended.[158,159] (Class 1, Level of Evidence: B-R)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; BEST-CLI, Best Endovascular versus Best Surgical Therapy in Patients with CLI trial; CLTI, chronic limb-threatening ischemia; EHR, electronic health record; PAD, peripheral artery disease; QM, quality measure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Appendix A. Continued

Short Title: QM-7: Lower Extremity Surveillance After Revascularization

QM-7: Lower Extremity Autogenous Vein Bypass Surveillance After Revascularization

Measure Description: Percentage of patients age ≥18 y with PAD who have undergone lower extremity AVBG surgery and have surveillance after index surgery with ABI and arterial DUS for new lower extremity signs or symptoms at least once during the 12-mo measurement period	
Numerator	Patients who have lower extremity surveillance with ABI and arterial DUS for new lower extremity signs or symptoms at least once during the 12-mo measurement period
Denominator	Patients age ≥18 y with PAD who have undergone lower extremity AVBG surgery
Denominator Exclusions	None
Denominator Exceptions	Documentation of medical reason(s) for not performing lower extremity surveillance (eg, patient has undergone prosthetic bypass graft surgery, patient has undergone major lower limb amputation remote from their revascularization procedure, patient has undergone non-PAD AVBG due to a trauma, occluded bypass graft) Documentation of patient reason(s) for not performing lower extremity surveillance (eg, unable to afford surveillance, limited access to care, patient refusal or noncompliance) Documentation of system reason(s) for not performing lower extremity surveillance (eg, lack of insurance coverage)
Measurement Period	12 mo
Sources of Data	EHR data Administrative data/claims (inpatient or outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record Imaging laboratory records
Attribution	Individual practitioner
Care Setting	Outpatient
Rationale	
Autogenous vein is the preferred conduit for open surgical reconstructions in the lower extremity that require bypass grafts.[160] However, vein grafts can develop stenotic lesions that lead to graft failure and recurrent symptoms of lower extremity ischemia.[161,162] Such lesions have been observed in 30% to 50% of vein grafts observed for up to 5 y.[161] Serial follow-up or surveillance of infrainguinal vein bypass grafts by some combination of clinical assessment, measurement of ABI, and DUS scanning has been recommended to identify lesions that threaten graft patency and to facilitate selective repeated interventions to maintain graft function. Surveillance protocols have resulted in primary, assisted primary, and secondary patency rates of 61%, 77%, and 80%, respectively, at 1 y.[161]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with PAD, with or without revascularization, longitudinal follow-up with routine clinical evaluation, including assessment of limb symptoms and functional status, lower extremity pulse and foot assessment, and progress of risk factor management, is recommended. (Class 1, Level of Evidence: C-EO) 2. In patients with PAD, coordination of care among clinicians to improve the management of PAD and comorbid conditions and to optimize patient outcomes is recommended. (Class 1, Level of Evidence: C-EO) 3. In patients with PAD, with or without revascularization, periodic assessment of functional status as well as overall health-related QOL as a component of longitudinal follow-up is recommended.[163–168] (Class 1, Level of Evidence: B-NR) 4. In patients with PAD who have undergone lower extremity revascularization (ie, surgical and/or endovascular), longitudinal follow-up that includes periodic clinical evaluation of lower extremity symptoms and pulse and foot assessment is recommended.[169–172] (Class 1, Level of Evidence: C-LD) 5. In patients with PAD who have undergone lower extremity revascularization (ie, surgical, endovascular, or both) with new lower extremity signs or symptoms, ABI and arterial duplex ultrasound is recommended.[172–176] (Class 1, Level of Evidence: C-LD) 6. In patients with PAD who have undergone infrainguinal, autogenous vein bypass graft(s) without new lower extremity signs or symptoms, it is reasonable to perform ABI and arterial duplex ultrasound surveillance within the first 1 to 3 months postprocedure, then repeat at 6 and 12 months, and then annually.[171–173,177,178] (Class 2a, Level of Evidence: B-R) 7. In patients with PAD who have undergone endovascular procedures without new lower extremity signs or symptoms, it is reasonable to perform ABI and arterial duplex ultrasound surveillance within the first 1 to 3 months postprocedure, then repeat at 6 and 12 months, and then annually.[173,175,176] (Class 2a, Level of Evidence: C-LD) 8. In patients with PAD who have undergone infrainguinal, prosthetic bypass graft(s) without new lower extremity signs or symptoms, the effectiveness of ABI and arterial duplex ultrasound surveillance is uncertain.[172,173,179,180] (Class 2b, Level of Evidence: B-NR)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ABI, ankle-brachial index; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association, AVBG, autogenous vein bypass graft; DUS, duplex ultrasound surveillance; EHR, electronic health record; PAD, peripheral artery disease; QM, quality measure; QOL, quality of life; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Appendix A. Continued

Short Title: QM-8: Multidisciplinary Team Evaluation for Patients With CLTI

QM-8: Multidisciplinary Team Evaluation for Patients With CLTI

Measure Description: Percentage of patients ≥18 y with CLTI-related wounds who undergo multidisciplinary evaluation to address wound care, offloading, infection management, revascularization, or palliation	
Numerator	Patients who have a multidisciplinary approach, including at least 2 specialists to address infection, topical management or wound care, offloading, revascularization, and palliation where needed Note: As stated in the 2024 PAD guideline, a multispecialty care team is defined as a team of professionals representing different specialties and disciplines to assist in the evaluation and management of the patient with PAD. For the care of patients who also have CLTI, the team should include individuals who are skilled in endovascular revascularization, surgical revascularization, wound-healing therapies and foot surgery, and medical evaluation and care.
Denominator	Patients age ≥18 y with CLTI-related wounds
Denominator Exclusions	Patients in hospice care, patients who leave during hospitalization against medical advice, patients who die during hospitalization
Denominator Exceptions	Documentation of patient reason(s) for not providing a multidisciplinary team evaluation (eg, patient refusal, religious beliefs limiting care modalities, socioeconomic factors [eg, transportation, prescription benefits, finances], occupational requirements [eg, need for specialized shoe wear at work, inability to modify prolonged standing or walking at work, work hours disallow treatment]) Documentation of system reason(s) for not providing a multidisciplinary team evaluation (eg, lack of accessible services or specialists, lack of well-qualified support teams, lack of insurance coverage)
Measurement Period	12 mo
Sources of Data	EHR data Administrative data/claims (inpatient/outpatient claims) Administrative data/claims expanded (multiple sources) Paper medical record
Attribution	Facility
Care Setting	Inpatient Outpatient
Rationale	
In the management of CLTI, there are disciplines that are essential and disciplines that are beneficial. The primary goal in tissue preservation and limb salvage in CLTI is revascularization, except in the setting of a nonviable limb.[1,181] To optimize functionality, quality of life, wound healing, infection risk reduction, and pain management, team-based, multispecialty care is recommended for patients with CLTI and CLTI-related wounds. The provision of multidisciplinary modalities in a coordinated manner leads to patient-centered teams achieving complete wound healing and limb salvage. Many complex factors affect the structure and function of such teams, with the accessibility of needed specialists and support teams being paramount. In addition to vascular surgery, infectious diseases, orthopedics or podiatry, or plastic surgery, rehabilitation, diabetes management, orthotics, and prosthetics should be considered.[1,181] Care coordination is important, with the establishment of structured and systematic communication techniques, such as case conferences or morbidity and mortality discussions, being ideal. In the absence of life-threatening sepsis, evaluation by a multidisciplinary care team should occur, and tactics of shared decision-making should be utilized, with a goal to evaluate all revascularization and therapeutic options for limb preservation and functional optimization. When this is not possible, palliative management of the limb, including continued wound care, pain control, or amputation, should be considered within the context of the multidisciplinary team.[1,181]	
Clinical Recommendation(s)	
2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease[1] 1. In patients with CLTI, a multispecialty care team should evaluate and provide comprehensive care with goals of complete wound healing, minimizing tissue loss, and preservation of ambulatory status.[182,183] (Class 1, Level of Evidence: B-NR) 2. In patients with CLTI, an evaluation for revascularization options by a multispecialty care team is recommended before amputation (Table 15, PAD Guideline). (Class 1, Level of Evidence: C-EO) 3. In patients with CLTI who require amputation, evaluation should be performed by a multispecialty care team (Table 15, PAD Guideline) to assess for the most distal level of amputation that facilitates healing and provides maximal functional ability.[182,184–188] (Class 1, Level of Evidence: B-NR)	

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; CLTI, chronic limb-threatening ischemia; EHR, electronic health record; PAD, peripheral artery disease; QM, quality measure; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; and VESS, Vascular and Endovascular Surgery Society.

Appendix B. Author Relationships With Industry and Other Entities–2026 ACC/AHA Clinical Performance and Quality Measures for Patients With Peripheral Artery Disease

Committee Member	Employment	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Personal Research	Institutional, Organizational, or Other Financial Benefit	Expert Witness
Philip P. Goodney, Chair and AHA/ACC PAD Guideline Liaison	Dartmouth-Hitchcock Medical Center–Section Chief, Vascular Surgery; Geisel School of Medicine, Dartmouth–Associate Professor of The Dartmouth Institute and Associate Professor of Surgery	None	None	None	Not relevant: • FDA • VA Office of Research and Development	None	None
Elsie G. Ross, Vice Chair	UC San Diego Health–Vascular Surgeon, Associate Professor of Surgery, and Medical Director of Surgical Informatics	Not relevant: • Cook Medical* • Egg Medical Relevant: • Novartis*	None	None	Not relevant: • Doris Duke Charitable Foundation* • Martha Proctor Mack Foundation* • NIH* • SUSF*	None	None
Jeffrey T. Bruckel, JCPM Liaison	University of Rochester Medical Center–Assistant Professor and Interventional Cardiologist	Not relevant: • Asahi Intecc USA	None	None	None	Not relevant: • Inari Medical* • Medtronic	None
Olamide Alabi	Emory University–Associate Professor of Surgery; US Department of Veterans Affairs–Staff Physician, Assistant Section Chief	Not relevant: • Abbott† • Humacyte	None	None	None	Not relevant: • Doris Duke Charitable Foundation* • National Board of Medical Examiners • VA Office of Research and Development*	None
S. Elissa Altin, SCAI Representative	Yale School of Medicine–Associate Professor of Medicine (Cardiovascular Medicine)	None	None	None	Not relevant: • Reflow Medical (DSMB)	Not relevant: • Boston Scientific*	None
Karen Bauer, SVN Representative	UToledo Health–Director of Wound Services and Program Director of UTMC Wound and HBO Center	Not relevant: • Smith & Nephew, Inc • Urgo Medical North America, LLC	None	None	None	Not relevant: • KCI USA, Inc • Smith & Nephew, Inc	None
Rebecca L. Diekemper‡	AHA/ACC–Science and Health Advisor, Performance Measures	None	None	None	None	Not relevant: • AHA/ACC salaried employee	None
Marie D. Gerhard-Herman	Harvard Medical School–Associate Professor of Medicine; Brigham and Women's Hospital–Staff Physician	None	None	None	Not relevant: • NIH • Progeria Research Foundation	None	None
Lily E. Johnston, SVS Representative	Nexus HealthSpan–Associate Medical Director; Vascular Health Institute–Vascular Surgeon; Scripps Clinic Medical Group–Vascular Surgeon	None	None	None	None	Not relevant: • SVS†	Not relevant: • Plaintiff, bypass surgery for intraoperative popliteal artery injury, 2023* • Defendant, vascular consultation for lower extremity wounds, 2024

(*Continued*)

Appendix B. Continued

Committee Member	Employment	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Personal Research	Institutional, Organizational, or Other Financial Benefit	Expert Witness
Victoria T. Martin, ABC Representative	Ascension Saint Thomas Heart West–Interventional Cardiologist	None	None	None	None	Not relevant: • Medtronic* • Terumo Relevant: • Chiesi USA	None
Amanda M. Morrison	Vanderbilt University Medical Center, Department of Medicine–Clinical Fellow, Division of Cardiovascular Medicine	None	None	None	None	None	None
Parag J. Patel, SIR Representative	Medical College of Wisconsin–Professor	Not relevant: • Cook Medical • Medtronic Vascular*	None	None	Not relevant: • Penumbra*	Not relevant: • Bard Peripheral Vascular/BD (PI) • Boston Scientific (CEC)* • Inari Medical • SIR† • WL Gore & Associates (PI)	None
Paula Rodriguez-Miguelez	Virginia Commonwealth University–Associate Professor, Department of Kinesiology and Health Sciences	None	None	None	None	None	None
Jennifer A. Rymer	Duke University School of Medicine–John Bush Simpson Assistant Professor of Medicine; Duke University Medical Center–Interventional Cardiologist	None	None	None	Not relevant: • AHA* • NIH* Relevant: • Abiomed* • Chiesi USA* • Idorsia*	None	None
Kerry J. Stewart, AACVPR Representative	Johns Hopkins School of Medicine–Professor of Medicine	None	None	None	Not relevant: • NIH*	None	None
Dyane E. Tower, APMA Representative	American Podiatric Medical Association–Vice President, Clinical Affairs and Medical Director	None	None	Not relevant: • TNacity Blue Ocean*	None	Not relevant: • *Journal of the American Podiatric Medical Association* (Executive Editor)	None
Diane J. Treat-Jacobson, SVM Representative	University of Minnesota School of Nursing–Professor, Associate Dean and Cora Meidl Siehl Chair in Nursing Research for Improved Care	None	None	None	Not relevant: • NHLBI* • NIA*	None	None
Gabriela Velazquez, VESS Representative	Wake Forest University School of Medicine–Associate Professor of Surgery and Director of the Vascular Surgery Fellowship Program	None	None	None	Not relevant: • NHLBI • NIH • SVS Foundation • Vascular Cures Foundation	None	None

(*Continued*)

Appendix B. Continued

Committee Member	Employment	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Personal Research	Institutional, Organizational, or Other Financial Benefit	Expert Witness
Jose Wiley	Tulane University School of Medicine–Sidney W. and Marilyn S. Lassen Chair of Cardiovascular Medicine; Professor of Medicine & Adjunct Professor of Radiology; Chief, Section of Cardiology, John W. Deming Department of Medicine; Chair, LCMC Cardiovascular Service Line	None	None	None	None	None	None

This table represents all relationships of committee members with industry and other entities that were reported by authors, including those not deemed to be relevant to this document, at the time this document was under development. The table does not necessarily reflect relationships with industry at the time of publication. A person is deemed to have a significant interest in a business if the interest represents ownership of ≥5% of the voting stock or share of the business entity, or ownership of ≥$5 000 of the fair market value of the business entity; or if funds received by the person from the business entity exceed 5% of the person's gross income for the previous year. Relationships that exist with no financial benefit are also included for the purpose of transparency. Relationships in this table are modest unless otherwise noted. Please refer to https://www.acc.org/guidelines/about-guidelines-and-clinical-documents/relationships-with-industry-policy for definitions of disclosure categories or additional information about the ACC/AHA Disclosure Policy for Writing Committees.

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; AHA, American Heart Association; APMA, American Podiatric Medical Association; BD, Becton, Dickinson and Company; CEC, clinical endpoint committee; DSMB, data and safety monitoring board; FDA, US Food and Drug Administration; HBO, hyperbaric oxygen; JCPM, Joint Committee on Performance Measures; KCI, Kinetic Concepts Incorporated; NHLBI, National Heart, Lung, and Blood Institute; NIA, National Institute on Aging; NIH, National Institutes of Health; PAD, peripheral artery disease; PI, principal investigator; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SUSF, Society of University Surgeons Foundation; SVM, Society For Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; U, University; UC, University of California; UT, University of Toledo; UTMC University of Toledo Medical Center; VA, Veterans Affairs; and VESS, Vascular and Endovascular Surgery Society.

*Significant relationship.

†No financial benefit.

‡Rebecca Diekemper is an AHA/ACC joint staff member and acts as the Science and Health Advisor for the "2026 ACC/AHA Clinical Performance and Quality Measures for Patients With Peripheral Artery Disease." No relevant relationships to report. Nonvoting author on measures and not included/counted in the relationships with industry and other entities balance for this committee.

Appendix C. Reviewer Relationships With Industry and Other Entities–2026 ACC/AHA Clinical Performance and Quality Measures for Patients With Peripheral Artery Disease

Reviewer	Representation	Employment	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Personal Research	Institutional, Organizational, or Other Financial Benefit	Expert Witness
Subhash Banerjee	SCAI Official Reviewer	Baylor Scott & White–Paul J. Thomas Endowed Chair in Cardiology and Chief of Cardiovascular Research and Innovation; Dallas VA Medical Center–Physician	• AngioSafe* • Kaneka Pharma America LLC	None	• Cardiovascular Innovations Foundation	None	• Elsevier • GE Healthcare* • Novartis*	None
Jocelyn Beach	AHA Official Reviewer	Dartmouth-Hitchcock Medical Center–Vascular Surgeon	None	None	None	None	• Inari Medical† • Pfizer*	None
G. Jay Bishop	SVM Official Reviewer	Cleveland Clinic–Associate Section Head Vascular Medicine	None	None	None	None	None	None
Leo Daab	SVS Official Reviewer	Oregon Health & Science University–Vascular Surgeon	None	None	None	None	None	None
Laura Drudi	ACC/AHA Official Reviewer	Centre Hospitalier de l'Université de Montréal (CHUM)–Assistant Professor of Surgery	None	None	None	None	None	None
Daniel Duprez	ACC/AHA JCPM Lead Reviewer	University of Minnesota School of Public Health–Donald and Patricia Garofalo Chair in Preventive Cardiology, Professor of Medicine/Cardiology, Professor, Division of Epidemiology and Community Health, Director, Lipid Clinic, Director, Center for Rasmussen Cardiovascular Disease Prevention; MHealth Fairview–Cardiologist, Cardiovascular	None	None	None	None	• Amgen* • Arrowhead Pharmaceuticals* • NHLBI* • Novartis*	None
Jonathan Ehrman	AACVPR Official Reviewer	Henry Ford Health–Clinical Exercise Physiologist; Program Director, Preventive Cardiology/Cardiac Rehabilitation	None	None	None	None	None	None
Caroline Fife	APMA Official Reviewer	Intellicure–Chief Medical Officer	None	None	None	None	• US Wound Registry†	None
Nkechinyere Ijioma	ACC/AHA Official Reviewer	The Ohio State University Wexner Medical Center–Physician, Assistant Professor	None	None	None	None	• Mayo Clinic†	None
Eugen Ivan	ACC Official Reviewer	Comanche County Memorial Hospital–Cardiologist	None	None	None	None	None	None
Lee Kirksey	ABC Official Reviewer	Cleveland Clinic–Vice Chairman of Vascular Surgery	• WL Gore & Associates†	None	None	None	• Cook Medical†	None
Spas Kotev	ACC Official Reviewer	University of Iowa–Assistant-Professor in Cardiology	None	None	None	None	None	None

(*Continued*)

Appendix B. Continued

Reviewer	Representation	Employment	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Personal Research	Institutional, Organizational, or Other Financial Benefit	Expert Witness
Kumar Madassery	SIR Official Reviewer	Rush University Medical Center–Associate Professor	• Abbott Vascular* • Asahi Intecc USA* • Cook Group • Penumbra* • Philips* • ShockWave Medical*	None	None	None	None	None
Mary McDermott	ACC/AHA Content Reviewer	Northwestern Medicine–Physician; Northwestern University–Professor of Medicine	• Eli Lilly	None	• Vanguard Health Care ETF • Vanguard Health Care ETF (Dependent Child)	None	• ACI Medical† • *JAMA** • *Journal of Internal Medicine* • Mars† • National Institute on Aging* • NHLBI* • UCSF Foundation • University of New South Wales*	None
Carlos Mena-Hurtado	AHA Official Reviewer	Yale School of Medicine–Professor of Medicine and Cardiology and Co-Director, Vascular Medicine Outcomes Program (VAMOS); Yale New Haven Health–Interventional Cardiology, Director of Vascular Medicine, Heart and Vascular Center; Queen Mary University of London–Honorary Clinical Reader in the William Harvey Research Institute	• Terumo*	None	None	None	• Abbott Vascular* • Phillips* • Shockwave Medical*	None
Vijay Nambi	ACC/AHA Content Reviewer	Baylor College of Medicine–Professor of Medicine; US Department of Veterans Affairs–Cardiologist	None	None	• Abbott Laboratories • Insera Therapeutics	None	• Abbott Laboratories* • ACCF • AHA† • ASPC† • Ionis Pharmaceuticals† • NLA • Novartis†	None
Stephanie Shanklin	SVN Official Reviewer	OSF HealthCare–RN Data Abstractor, Quality and Safety	None	• SVN	None	None	None	None
Antwana Wright	VESS Official Reviewer	Medical University South Carolina–Vascular Surgeon	None	None	None	None	None	None

This table represents the relationships of reviewers with industry and other entities that were disclosed at the time of peer review. The table does not necessarily reflect relationships with industry at the time of publication. A person is deemed to have a significant interest in a business if the interest represents ownership of ≥5% of the voting stock or share of the business entity, or ownership of ≥$5 000 of the fair market value of the business entity; or if funds received by the person from the business entity exceed 5% of the person's gross income for the previous year. A relationship is considered to be modest if it is less than significant under the preceding definition. Relationships that exist with no financial benefit are also included for the purpose of transparency. Relationships in this table are modest unless otherwise noted.

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ABC, Association of Black Cardiologists; ACC, American College of Cardiology; ACCF, American College of Cardiology Foundation; AHA, American Heart Association; APMA, American Podiatric Medical Association; ASPC, American Society of Preventive Cardiology; CHUM, Centre Hospitalier de l'Université de Montréal; ETF, exchange-traded fund; GE, General Electric; *JAMA*, *Journal of the American Medical Association*; JCPM, Joint Committee on Performance Measures; NHLBI, National Heart, Lung, and Blood Institute; NLA, National Lipid Association; OSF, Order of St. Francis; RN, registered nurse; SCAI, Society for Cardiovascular Angiography and Interventions; SIR, Society of Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; SVS, Society for Vascular Surgery; UCSF, University of California San Francisco; VA, Veterans Affairs; VAMOS, Vascular Medicine Outcomes; and VESS, Vascular and Endovascular Surgery Society.

*Significant (>$5 000) relationship.

†No financial relationship.