Commercial Support

Recognizing Peripheral Artery Disease in the Primary Care Practice: Best Practice Recommendations for Patient Assessment, Cardiologist Referral and Long-term Management was supported by an educational grant from Abbott Vascular.

Course Accreditation

The Association of Black Cardiologists, Inc. is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Association of Black Cardiologists, Inc. designates this educational activity for a maximum of 1.0 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Faculty

Lee Kirksey, MD, MBA
Department of Vascular Surgery
The Heart and Vascular Institute
The Cleveland Clinic
Cleveland, OH
Cities and Dates

Emerging Challenges in Primary Care: Update 2015
Conference Schedule

May 30, 2015
Atlanta, GA

June 27, 2015
Troy, MI
Levels of Evaluation

Consistent with the policies of the ACCME, NACE evaluates the effectiveness of all CME activities using a systematic process based on Moore’s model. This outcome study reaches Level 5.

- Level 1: Participation
- Level 2: Satisfaction
- Level 3: Declarative and Procedural Knowledge
- Level 4: Competence
- Level 5: Performance “self-reported”
- Level 6: Patient Health
- Level 7: Community Health

Level 1: Participation

- 628 attendees in 2 cities
- 67% Physicians; 28% NPs or PAs; 4% RNs; 1% Other
- 54% in community-based practice
- 69% PCPs, 4% Cardiology; 1% Endocrinology; 26% Other or did not respond
- 91% provide direct patient care

Did we reach the right audience? Yes!
Level 2: Satisfaction

- 100% rated the activity as excellent
- 100% indicated the activity improved their knowledge
- 96% stated that they learned new and useful strategies for patient care
- 87% said they would implement new strategies that they learned in their practice
- 100% said the program was fair-balanced and unbiased

Were our learners satisfied? Yes!

Sample Size: N = approximately 628
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Patients seen each week in any clinical with Peripheral Arterial Disease:

- None: 5%
- 1-5: 50%
- 6-10: 17%
- 11-15: 16%
- 16-20: 6%
- 21-25: 3%
- > 25: 3%

Sample Size: N = approximately 628
Did Learners Say They Achieved Learning Objective?

Upon completion of this activity, I can Review the epidemiology of peripheral artery disease (PAD) including among African Americans; identify risk factors for PAD; describe components of patient assessment for PAD; discuss the evidence-based management of PAD.

Yes! 100% of learners believed they did.
Outcome Study Methodology

Goal
To determine the effect this CME activity had on learners with respect to competence to apply critical knowledge, confidence in treating patients with diseases or conditions discussed, and change in practice behavior.

Dependent Variables

1. **Level 3-5: Knowledge, Competence, and Performance**
   Case-based vignettes and pre- and post-test knowledge questions were asked with each session in the CME activity. Identical questions were also asked to a sample of attendees 4 weeks after the program to assess retention of knowledge. Responses can demonstrate learning and competence in applying critical knowledge. The use of case vignettes for this purpose has considerable predictive value. Vignettes, or written case simulations, have been widely used as indicators of actual practice behavior. ¹

2. **Practitioner Confidence**
   Confidence with the information relates directly to the likeliness of actively using knowledge. Practitioner confidence in his/her ability to diagnose and treat a disease or condition can affect practice behavior patterns.

3. **Level 5: Self-Reported Change in Practice Behavior**
   Four weeks after CME activity, practitioners are asked if they changed practice behavior.

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4. Readiness to Change Behavior (Prochaska and DeClemente Model)

CME activities can motivate providers to move through different stages of change which can ultimately lead them to take action and modify their practice behavior in accordance with the objectives of the education. Movement through these stages of change is an important dependent variable to consider in evaluating the impact of CME. Participants were asked to evaluate their stage of change with respect to specific topics being presented.

- **Pre-contemplation stage**: I do not manage (XXX illness), nor do I plan to this year.
- **Contemplation stage**: I did not manage (XXX illness) before this course, but as a result of attending this course I'm thinking of managing it now.
- **Pre-contemplation/confirmation stage**: I do manage patients with (XXX Illness) and this course confirmed that I do **not** need to change my treatment methods.
- **Preparation for action stage**: I do manage patients with (XXX illness) and this course helped me change my treatment methods.

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Learning Objectives:

1. Review the epidemiology of peripheral artery disease (PAD) including among African Americans.

2. Identify risk factors for PAD.

3. Describe components of patient assessment for PAD.

4. Discuss the evidence-based management of PAD.
## Key Findings

**Recognizing Peripheral Artery Disease in the Primary Care Practice:**
**Best Practice Recommendations for Patient Assessment, Cardiologist Referral and Longterm Management**

<table>
<thead>
<tr>
<th>Knowledge/Competence</th>
<th>Learners demonstrated significant improvement from pre to post-testing in their answers to <em>three</em> out of <em>four</em> of the case-based questions regarding treating Peripheral Arterial Disease.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>Whereas the majority of learners rated themselves as having very low confidence in their understanding of treating Peripheral Arterial Disease in patients before the education most of the learners showed very high gains in confidence after the program.</td>
</tr>
<tr>
<td>Intent to Perform</td>
<td>As a result of this program, 18% of learners who did not treat Peripheral Arterial Disease before are considering doing so, while 57% indicated that they will change their treatment methods.</td>
</tr>
<tr>
<td>Change of Practice Behavior</td>
<td>95% of learners who responded to our four week survey indicated that they had changed their practice behavior to implement the learning objectives of this program within four weeks after they attended the activity.</td>
</tr>
</tbody>
</table>

*N= 66*
PAD affects one in twenty Americans over the age of 50. Which of the following is true about PAD? (Learning Objectives 1, 2)

- African Americans have the same risk of developing PAD as whites
- A smoker is twice as likely to develop PAD as a non-smoker
- One in ten Americans over the age of 50 with diabetes will develop PAD
- One in three patients with vascular claudication will have coronary atherosclerosis at cardiac catheterization

Green highlight indicates significant difference between pre and post testing.
The most appropriate initial evaluation of the patient suspected of suffering from PAD with claudication is: (Learning Objective 3)

- Ankle brachial index (ABI) or Pulse Volume Recordings (PVR)

Green highlight indicates significant difference between pre and post testing.

Pre N = 307  Post N = 368
A patient is found to have PAD with mild claudication. Appropriate initial management includes:

(Learning Objective 2,4)

P Value: 0.541 – Not Significant

Red highlight indicates no significant difference between pre and post testing.

Pre N = 324  Post N = 372
A 45 year old known diabetic presents to your office with erythema, fever and a small superficial RT. plantar ulcer. He has palpable pulses and ABI=1.0. What is his WIFI score? (Learning Objective 3)

P Value: <0.001 – Significant

Green highlight indicates significant difference between pre and post testing.
Which of the statements below describes your approach to treating a patient with Peripheral Arterial Disease?

- Pre-Contemplation Stage
- Contemplation Stage
- Preparation for Action Stage
- Pre-Contemplation/Confirmation Stage

<table>
<thead>
<tr>
<th>Pre-Contemplation Stage</th>
<th>Contemplation Stage</th>
<th>Preparation for Action Stage</th>
<th>Pre-Contemplation/Confirmation Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not treat Peripheral Arterial Disease, nor do I plan to this year.</td>
<td>I did not treat Peripheral Arterial Disease, but as a result of attending this course I'm thinking of doing this now.</td>
<td>I do treat Peripheral Arterial Disease and this course helped me change my methods.</td>
<td>I do treat Peripheral Arterial Disease and this course confirmed that I don't need to change my methods</td>
</tr>
</tbody>
</table>

N=148
PAD affects one in twenty Americans over the age of 50. Which of the following is true about PAD? (Learning Objectives 1, 2)

- African Americans have the same risk of developing PAD as whites
- A smoker is twice as likely to develop PAD as a non-smoker
- One in ten Americans over the age of 50 with diabetes will develop PAD
- One in three patients with vascular claudication will have coronary atherosclerosis at cardiac catheterization

Green highlight indicates significant difference between pre and post testing.
The most appropriate initial evaluation of the patient suspected of suffering from PAD with claudication is: (Learning Objective 3)

Four Week Case Study Questions
(boxed answer is correct)

The most appropriate initial evaluation of the patient suspected of suffering from PAD with claudication is:

- Catheter based angiography
- CT angiography
- Ankle brachial index (ABI) or Pulse Volume Recordings (PVR)
- Magnetic Resonance Angiography (MRA)

Green highlight indicates significant difference between pre and post testing.
A patient is found to have PAD with mild claudication. Appropriate initial management includes:

(Learning Objective 4)
A 45 year old known diabetic presents to your office with erythema, fever and a small superficial RT. plantar ulcer. He has palpable pulses and ABI=1.0. What is his WIFI score? (Learning Objective 3)
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On a scale of 1 to 5, please rate how confident you would be in the evaluation and management of a patient with Peripheral Arterial Disease?

<table>
<thead>
<tr>
<th>Rating</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all confident</td>
<td>16%</td>
<td>3%</td>
</tr>
<tr>
<td>Slightly confident</td>
<td>36%</td>
<td>21%</td>
</tr>
<tr>
<td>Moderately confident</td>
<td>34%</td>
<td>42%</td>
</tr>
<tr>
<td>Pretty much confident</td>
<td>10%</td>
<td>24%</td>
</tr>
<tr>
<td>Very confident</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Pre N= 286  Post N= 325
Describe/list any other educational activities that you attended in the last month concerning the treatment of peripheral arterial disease (PAD)?

![Bar chart showing the percentage of respondents in each category.]

- None: 74%
- Live Conferences: 15%
- Enduring webcasts or monographs: 3%
- Journal activities: 8%

4 Weeks Post  N= 66
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What specific skills or practice behaviors have you implemented for patients with peripheral arterial disease (PAD) since this CME activity?
(Comments received from attendees at 4 week follow up)

- Encourage staff to consistently measure ABIs
- Smoking cessation discussion
- Increased suspicion of PAD in high risk groups
- More patient education
- Risk identification
- Screening more often for PAD
- Recommending exercise
- Continued focus on the primary exam, eliminating exacerbating factors
- Early identification and referral to vascular when identified
- Early introduction of insulin in the treatment of poorly or difficult to control type II diabetics
- More confident on how to evaluate/asses for PAD
- Feel I have improved my diagnostic skills
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What specific barriers have you encountered that may have prevented you from successfully implementing strategies for patients with peripheral arterial disease (PAD) since this CME activity?
(Comments received from attendees at 4 week follow up)

- Insurance coverage for tests and procedures
- Lack of time
- Patients compliance
- We don't do ABI's in our office due to the cost, time and staff education. We refer out for these
- Getting referrals for patients with no insurance
- Financial issues - paying copay for tests, office visits, transportation
- Patients have hard time with smoking cessation and controlling DM
- Lack of equipment to perform ABI
Discussion and Implication
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The need for continued education in the area of Peripheral Arterial Disease was demonstrated based on literature reviews and surveys completed prior to the conference series. Attendee knowledge was assessed at 3 points for this program: prior to the lecture, immediately following the lecture, and again at 4 weeks after the conference using the case vignettes listed above. The results indicated improvement in knowledge in all 4 of the areas tested, three of which achieved statistical significance. Specifically, as a result of this lecture, participants: recognize that one in three patients with claudication will have coronary calcification at cardiac catheterization, that smokers have 4 times the risk of PAD as non-smokers (not 2 times the risk) and that 1 in 3 Americans over the age of 50 with Diabetes will develop PAD (not 1 in 10); understand that obtaining an Ankle Brachial Index or Pulse Volume Recording is the most appropriate initial evaluation of a patient suspected of having PAD with claudication; and are more aware of the WIFI grading system for stratification of a wound and recognition of the risk of limb ischemia. The majority of learners at the start of the program were aware that appropriate initial management of a patient with claudication includes smoking cessation; a supervised exercise program; and initiation of statin therapy. Nearly all were aware that catheter based angiography is not utilized initially.

Data obtained from participants 4 weeks after the program demonstrated relatively stable changes in knowledge from the post test scores with the exception of recognition of the epidemiology of PAD. Many respondents incorrectly believe that smokers are twice as likely to develop PAD as non-smokers, when it is actually 4 times greater risk. They are also still unclear on the strong relationship between coronary atherosclerosis and PAD. Persistent gaps in knowledge are clear in that 32% of participants still do not know how to utilize the WIFI grading system.
Discussion and Implication
Recognizing Peripheral Artery Disease in the Primary Care Practice:
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Cardiologist Referral and Longterm Management

After the conference, 99% of participants indicated that they were somewhat or very likely to utilize strategies learned from this program in their practice. 95% of participants reported managing at least 1 patient with peripheral arterial disease weekly while 45% see more than 5 PAD patients weekly indicating that a significant number of patients will be impacted by this program. Moderate to very confident levels rose from 47% to 76% by the end of the program. In addition, 18% of learners who did not manage peripheral arterial disease before the program are considering doing so, while 57% who do manage peripheral arterial disease, indicated that they will change their treatment methods as a result of this program. 95% of respondents indicated that they had changed their practice behavior 4 weeks after attending this program.

Attendees indicated multiple new, specific, practice behaviors they implemented as a result of this program that included more patient education, greater risk factor identification, more ankle-brachial index monitoring, more confident exam skills and earlier referral to vascular specialists when PAD is discovered. 74% of respondents indicated that they had not participated in any other educational activities suggesting that their behavior changes were most likely a result of this program.

Barriers to care include patient compliance, lack of equipment to measure ABI’s, time constraints, and insurance coverage.

The notable changes in post test scores signify a clear gap in knowledge and an unmet need among primary care clinicians. Persistent gaps in knowledge exist in recognizing patients at risk for PAD, wound assessment and severity determination using the MIFI score, and management strategies. It continues to be an important area for future educational programs.