Preventing Unnecessary Amputations: Peripheral Artery Disease and Congressional Responses
Panelists

Dr. Bryan Fisher – Moderator; Congressional Black Caucus 40 Under 40
Dr. Foluso Fakorede – Association of Black Cardiologists
Dr. Osama Ibrahim – North Memorial Health, Minneapolis, MN
Dr. Ehrin Armstrong – Society for Cardiovascular Angiography and Interventions
Dr. Lola Coke – Preventive Cardiovascular Nurses Association
Paulsen-Payne Initiative
Reducing Amputations in Patients with PAD

• This past February, Reps. Paulsen, Payne and 30 other members of the Congressional Black Caucus sent letters to HHS and the VA

• Letters highlighted significant racial disparities in amputations
  • African-American patients with diabetes have amputation risks 4X higher
  • Native-Americans in the west more than twice as likely to be amputated
  • Hispanics up to 75% more likely to be amputated

• Letters showed need for comprehensive approach to amputation prevention

• Letters have led to discussion with HHS over the possibility of an intragovernmental workgroup on amputation reduction with CMS, VA, and the Indian Health Service
Peripheral artery disease or PAD commonly refers to the presence of a stenosis or occlusion in the aorta or arteries of the limbs.

Prognosis is correlated with the severity of PAD as measured by the ankle brachial index (ABI).

General practitioners (e.g., PCP, Podiatrists, etc) must be engaged in the diagnosis and management of PAD—it can be life saving.

Early referral to a vascular specialist can facilitate optimal risk factor modification and management—this saves lives and reduces unnecessary amputation(s).
Economic Burden/Challenge

Annual 2015 expenditure $215-380 Billion
75% of that “tab” picked up Medicare
More cost than CAD and DM
More prevalent than CAD and AFIB (2 major cardiac conditions)
More prevalent than all cancers combined
Only 12.5% of projected patient population identified and treated accordingly
150-180,000 amputations occur annually in the US where majority of these amputations may be avoided
Prevalence of PAD

- NHANES\(^1\) Age ≥70: 14.5%
- NHANES\(^1\) Age >40: 4.3%
- San Diego\(^2\) Mean Age=66: 11.7%
- Rotterdam\(^3\) Age >55: 19.1%
- Diehm\(^4\) Age ≥65: 19.8%
- PARTNERS\(^5\) Age >70 or 50–69 with Diabetes or Smoking: 29%

When common risk factors were included, the prevalence of PAD was approximately one-third of patients.
10-Year Survival Rates for Patients with PAD

![Graph showing survival rates over time for different categories of PAD and normal subjects.](image-url)
Why fear PAD?

Similar characteristics of any **CANCER**
- Progressive
- Asymptomatic
- When identified – usually too late
- Significant morbidity/mortality
- Extremely prevalent and numbers are only on the rise:
  - Aging population
  - Increasing diabetic population ( > 30-50% of population by 2050)

**CANCER PATIENTS ARE AT-RISK AND NEED TO BE SCREENED**

– *Pap smear, CXR, and mammography*
Why fear PAD?

We know PAD patients exist – ALL the prevalence data supports such a claim. PAD is our new number one cardiovascular challenge SO why are we behind?

“THE PATIENT NEEDS TO BE EXTRAPOLATED – THIS CAN BE ACHIEVED BY PATIENT SPECIFIC POULATION SCREENING AND PROMOTING AWARENESS TO PHYSICIANS, HEALTHCARE ADMINISTRATORS, AND COMMUNITY”
The Patient Experience
Amputation Lottery: It’s not a game

- Probability of major amputation depends on:
  - Who you are and where you live
  - Race/Ethnicity

- Hospital-related costs account for the majority of total costs

- Majority undergoing amputations are Medicaid/Medicare recipients

- Economic burden of PAD / CLI exceeds diabetes and all cancers
Revascularization Rates Low in Certain Regions
How Can Mississippi Amputee Afford $200,000 / Year?

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>Poverty Rate (by Household Income)</th>
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</thead>
<tbody>
<tr>
<td>48</td>
<td>Alabama</td>
<td>19.2%</td>
</tr>
<tr>
<td>49</td>
<td>Louisiana</td>
<td>19.9%</td>
</tr>
<tr>
<td>50</td>
<td>New Mexico</td>
<td>20.6%</td>
</tr>
<tr>
<td>51</td>
<td>Mississippi</td>
<td>21.9%</td>
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MY SHE-RO

- Ms. Gertrude Campbell
- Lives in Greenville, MS
- Rep B. Thompson district
- First African-American female hired at Greenville post office
- First African-American postmaster in Starkville, MS
- Favorite hobbies are dancing and cooking
- Retired after loss of left leg at age 72
- Unfortunately, I met Gertrude for the first time in March of 2018; she presented at a late stage and limbs were not salvageable
MARCH – INITIAL VISIT

TWO WEEKS LATER
My She-Ro’s Best Friend, Gwendolyn

- Ms. Gwendolyn Hughes
- Diagnosed with diabetes and stroke, but wheelchair bound due to undiagnosed PAD.
- Screened by me in August 2017 (despite USPSTF saying not to screen at-risk patients)
- I successfully revascularized her - she walked and danced into my office 2 weeks later.
- Same disease but different outcomes due to lack of standardized, comprehensive amputation prevention policies
Case 2
52 yo with diabetic and smoker presented to ER with stage 4 Rutherford class claudication.

BEFORE

AFTER
My She-Ro’s Best Friend, Gwendolyn
CVSCM Bolivar Medical Center Procedures

- Peripheral Angiograms
- Major Amputations
Department of Veterans Affairs: Preventing Amputations in Veterans Everywhere (PAVE)
Principles of VA’s PAVE Program
Principles of VA’s PAVE Program

Preventing Amputation in Veterans Everywhere

Established in 1993 by Public Law 102-405

Broad parameters of VA’s PAVE program align with Paulsen-Payne letter as three main principles:

1. Screening of At-Risk Patients
2. Assessment and Stratification of At-Risk Patients
3. Multidisciplinary Limb Salvage Team
Screening of At-Risk Patients

• Identify those patients most likely at risk
• At-risk patients include
  • Patients with peripheral artery disease
  • Patients with diabetes
  • Patients with end stage renal disease
  • Patients with any cause sensory neuropathy
Risk Assessment and Referral Algorithm

Risk assessment in primary care:
- Inspect for foot deformities
- Palpate pulses
- Monofilament testing

Use of risk assessment tool (Foot Risk Score) to set a risk score
- FRS 0 – Diabetes with no other problems
- FRS 1 – Diabetes and minor deformity
- FRS 2 – Diabetes with diminished circulation (but not diagnosed PAD) and/or sensory neuropathy with or without deformity
- FRS 3 – Diabetes with diagnosed PAD, with or without sensory neuropathy and any patient who has end stage renal disease, diagnosed PAD, Charcot foot, past history of gangrene, foot ulceration or amputation.

Because risk assessment is not a full examination, any patient with a FRS of 2 or 3 requires an examination by a foot care specialist to determine accurate FRS which includes Doppler exam for “diminished pulses” and a NIVT if warranted.
50% of Patients Are Medium or High Risk

Outcomes Risk Levels

- Normal Risk
- Low Risk
- Moderate Risk
- High Risk
Multidisciplinary Limb Salvage Team

• Once risk assessment is established a referral algorithm is activated for proper referral for acute issues

• Referral algorithm includes a PAVE Team, an interdisciplinary group of clinicians and healthcare specialists utilizing preventive and rehabilitative resources.

• Interventions include revascularization, wound care, limb salvage surgery, etc.
Results from VA’s PAVE Program
Who Gets Treated in the VA PAVE Program?

- 1.6 million patients in the VA PAVE program
- Average age 69 years
- 568,000 with a known history of peripheral artery disease
- 94,000 with non-healing ulcers
- 57,000 with gangrene
Reduced Major Amputations
Reduced Rates of Above-Knee Amputations
Intragovernmental Workgroup on Amputation Reduction
Intragovernmental Workgroup on Amputation Reduction

• Congress should direct Administration to convene intragovernmental workgroup to develop standardized model for amputation reduction
  • **Screening for At-Risk Patients**
    • HHS should work w/USPSTF to develop screening protocol for at-risk patients
  • **Multidisciplinary care**
    • Interprofessional Internet Consultation Codes in 2019 Physician Fee Schedule could encourage multi-disciplinary teams to provide vascular evaluations to provide risk assessments and referral recommendations
  • **No amputation without vascular evaluation**
    • Provider documentation of vascular evaluation in prior 12 months in cases of non-traumatic, non-emergent amputations
    • Non-payment of amputation without arterial testing