Vascular Disease Screening Now and the Future

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CVS: Preventing Harm
Global

• 17.9 million deaths worldwide CVD

• 31% of all deaths
Cardiovascular disease (CVD) is the leading cause of death worldwide.

In England, CVD causes 1 in 4 deaths, which equates to 1 death every 4 minutes.
6.8 million people with CVD

Estimated £15.8 billion per year Non-healthcare costs

Healthcare costs alone in England stand at an estimated £7.4 billion per year
10 year cardiovascular disease ambitions for England

Atrial fibrillation (AF)

85% of the expected number of people with AF are detected by 2029
90% of patients with AF who are already known to be at high risk of a stroke to be adequately anticoagulated by 2029

High blood pressure

80% of the expected number of people with high blood pressure are diagnosed by 2029

High cholesterol

75% of people aged 40 to 74 have received a formal validated CVD risk assessment and cholesterol reading recorded on a primary care data system in the last five years by 2029
45% of people aged 40 to 74 identified as having a 20% or greater 10-year risk of developing CVD in primary care are treated with statins by 2029
25% of people with Familial Hypercholesterolaemia (FH) are diagnosed and treated optimally according to the NICE FH Guideline by 2024
NHS Long Term Plan

49k Strokes

31k MIs

10 year cardiovascular disease ambitions for England

Atrial fibrillation (AF)

- 85% of the expected number of people with AF are detected by 2029
- 90% of patients with AF who are already known to be at high risk of a stroke to be adequately anticoagulated by 2029

High blood pressure

- 80% of the expected number of people with high blood pressure are diagnosed by 2029
- 80% of the total number of people already diagnosed with high blood pressure are treated to target as per NICE guidelines by 2029

High cholesterol

- 75% of people aged 40 to 74 have received a formal validated CVD risk assessment and cholesterol reading recorded on a primary care data system in the last five years by 2029
- 45% of people aged 40 to 74 identified as having a 20% or greater 10-year risk of developing CVD in primary care are treated with statins by 2029
- 25% of people with Familial Hypercholesterolaemia (FH) are diagnosed and treated optimally according to the NICE FH Guideline by 2024
Vascular Disease

Peripheral Arterial Disease

Aortic Aneurysms
Risk factors for PAD

- Male gender (c.f. female)
- Hyperhomocysteinaemia
- Race (Asian/hispanic/black vs. white)
- Age (per 10 years)
- Diabetes
- Smoking
- Hypertension
- Dyslipidaemia
- Hyperhomocysteinaemia
- C-reactive protein (CRP)
- Renal insufficiency

Odds ratio

CAPRIE/AGATHA: overlap between CAD, CVD and PAD

CAD = coronary artery disease
CVD = cerebrovascular disease
PAD = peripheral artery disease

Coccheri S. Eur Heart J 1998;19(Suppl): 227
## Prevalence of polyvascular disease in registries

<table>
<thead>
<tr>
<th>Study</th>
<th>Patients (n)</th>
<th>Stroke</th>
<th>Stroke and PAD</th>
<th>Stroke and CHD</th>
<th>Stroke PAD CHD</th>
<th>Polyvascular</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACH¹</td>
<td>67,888</td>
<td>18,843 (16.6%)</td>
<td>815 (2.8%)</td>
<td>5703 (10%)</td>
<td>1086 (1.6%)</td>
<td>15.9%</td>
</tr>
<tr>
<td>CAPRIE²³</td>
<td>19,000</td>
<td>7391 (39.2%)</td>
<td>722 (7.1%)</td>
<td>1387 (10.7%)</td>
<td>627 (3.3%)</td>
<td>26.3%</td>
</tr>
<tr>
<td>DETECT⁴</td>
<td>753</td>
<td>753 (12.5%)</td>
<td>94 (12.5%)</td>
<td>119 (15.8%)</td>
<td>45 (6.0%)</td>
<td>34.3%</td>
</tr>
<tr>
<td>SCALA⁵</td>
<td>852 (acute)</td>
<td>852 (50.8%)</td>
<td>433 (41%)</td>
<td>349 (41%)</td>
<td>?</td>
<td>&gt;50%</td>
</tr>
<tr>
<td>GetABI⁶</td>
<td>6880</td>
<td>1218 (17.7%)</td>
<td>165 (13.5%)</td>
<td>468 (38.4%)</td>
<td>186 (15.3)</td>
<td>67.2%</td>
</tr>
</tbody>
</table>

PAD Register

• Symptomatic (>60. only 20%)
• Asymptomatic

Reduced ankle brachial pressure index is an independent predictor of cardiac and cerebrovascular morbidity and mortality and may help to identify patients who would benefit from secondary prevention.
Long-term survival in patients with PAD

565 patients >66 years old
5-year mortality rate in PAD compared with other conditions

Graph adapted from Crippi MH. Vasc Med. 2001;6(3 Suppl):3-7.

1 American Cancer Society. Cancer facts and figures 1997.
Aneurysmal Disease
Aneurysm screening in the UK – a 4 nations approach

An abdominal aortic aneurysm (AAA) is a dangerous swelling of the aorta, the largest blood vessel in the body. England, Wales, Scotland and Northern Ireland all have similar screening programmes that prevent hundreds of premature deaths in older men.

Together, the 4 nations each year invite about 400,000 men aged 65 for screening, sharing learning and best practice to improve health outcomes.

Latest UK-wide annual AAA screening data

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>Scotland</th>
<th>Northern Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men screened</td>
<td>233,426</td>
<td>15,800</td>
<td>61,942</td>
<td>7,601</td>
</tr>
<tr>
<td>Uptake</td>
<td>79.5%</td>
<td>80.1%</td>
<td>85.8%</td>
<td>83.0%</td>
</tr>
<tr>
<td>AAAs detected</td>
<td>2,773</td>
<td>208</td>
<td>936</td>
<td>111</td>
</tr>
<tr>
<td>Prevalence</td>
<td>1.2%</td>
<td>1.3%</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

#Screeningisyourchoice  www.gov.uk/phe/screening @PHE_Screening
Who should be screened?

• **men aged 65 or over** – AAAs are up to 6 times more common in men than women, and the risk of getting one goes up as you get older

• **people who smoke** – if you smoke or used to smoke, you're up to 15 times more likely to get an AAA

• **people with high blood pressure** – high blood pressure can double your risk of getting an AAA

• **people with a parent, sibling or child with an AAA** – you're about 4 times more likely to get an AAA if a close relative has had one
Foot Screening in Patients with Diabetes
Who is at Risk?

- Neuropathic prevalence 58%\(^1\) (85%)\(^2\)
- Ischaemic 4 X non diabetic
- Neuroischaemic
- Structural abnormality


Diabetic Foot Complications

- Deformity
- Corn and callous
- Ulceration
- Gangrene
- Osteomyelitis
- Amputation (15 - 46%)

Ischaemia
Integrated Care Pathways

Competent Screening
Risk stratification
QOF

Primary care
Annual review

Past or present ulceration

‘High Risk’

‘Low Risk’

Diabetic Foot Protection Team

Multidisciplinary Diabetic Foot Team

National Diabetes Foot Ulcer Audit
NICE Guidance

• Any inpatient with diabetes should have a diabetic foot check
• Patients with diabetic foot disease should be referred to a Multidisciplinary Foot Team

• Waterlow scores, Pressure reporting.....Stop the red .......

• Nationally failing abysmally!
• Pictures of catastrophes
Mr/Mrs X

Blood Tests
Blood Pressure Measurement
ECG
ECHO
ABPI
USS Aorta
Foot Check
Neuropathy assessment
Networked Care: Every Opportunity Counts
Changing Roles

• Extending Roles
• Increased Training
• Consider Skill Mix and Ambitions
• Opportunities for Local Investment
• Manchester Model for PAD Pods
• St Thomas’ Haematology/Primary Care AF
• Foot HCA Champions at St Heliers
• Dialysis Foot Checks
• Community Checks with Open Access
• Increased use of Pharmacist Screeners/Advice
• Chair side Atrial Fibrillation testing in Pod clinics
Networked Care: Every Opportunity Counts