Opportunities to enhance FH detection via the NHS Health Check programme

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Section 5.2

‘Individuals whose cholesterol level >7.5mmols and have a family history of premature CHD should be referred for consideration of FH and for cascade testing of family members if a FH diagnosis is confirmed’.
Cardiovascular Disease Prevention: Risk Detection and Management in Primary Care

**The Interventions**

<table>
<thead>
<tr>
<th>Cross Cutting</th>
<th>High BP detection and treatment</th>
<th>AF detection &amp; anticoagulation</th>
<th>Detection, CVD risk assessment, treatment</th>
<th>Type 2 Diabetes preventive intervention</th>
<th>Diabetes detection and treatment</th>
<th>CKD detection and management</th>
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<tbody>
<tr>
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**The Opportunities**

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<th>The Evidence</th>
<th>The Risk Condition</th>
<th>The Outcomes</th>
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<td>BP lowering prevents strokes and heart attacks</td>
<td>Blood Pressure</td>
<td>50% of all strokes &amp; heart attacks, plus CKD &amp; dementia</td>
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<td>Anticoagulation prevents 2/3 of strokes in AF</td>
<td>Atrial Fibrillation</td>
<td>5-fold increase in strokes, often of greater severity</td>
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<td>Behaviour change and statins reduce lifetime risk of CVD</td>
<td>High CVD risk &amp; Familial H/cholesterol</td>
<td>Marked increase in premature death and disability from CVD</td>
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<td>Intensive behaviour change (eg NHS DPP) reduces T2DM risk 30-60%</td>
<td>Non Diabetic Hyperglycaemia ('pre-diabetes')</td>
<td>Marked increase in Type 2 DM and CVD at an earlier age</td>
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<td>Control of BP, HbA1c and lipids improves CVD outcomes</td>
<td>Type 1 and 2 Diabetes</td>
<td>Marked increase in heart attack, stroke, kidney, eye, nerve damage</td>
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<td>Control of BP, CVD risk and proteinuria improves outcomes</td>
<td>Chronic Kidney Disease</td>
<td>Increase in CVD, acute kidney injury &amp; renal replacement</td>
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**Detection and 2°/3° Prevention**

- Blood Pressure
- Atrial Fibrillation
- High CVD risk & Familial H/cholesterol
- Non Diabetic Hyperglycaemia ('pre-diabetes')
- Type 1 and 2 Diabetes
- Chronic Kidney Disease

- 50% of all strokes & heart attacks, plus CKD & dementia
- 5-fold increase in strokes, often of greater severity
- Marked increase in premature death and disability from CVD
- Marked increase in Type 2 DM and CVD at an earlier age
- Marked increase in heart attack, stroke, kidney, eye, nerve damage
- Increase in CVD, acute kidney injury & renal replacement
New NICE 2017 Recommendation

- Systematically search primary care records for people:
  - younger than 30 years, with a total cholesterol concentration greater than 7.5 mmol/l and
  - 30 years or older, with a total cholesterol concentration greater than 9.0 mmol/l

as these are the people who are at highest risk of FH.

This should allow identification of thousands of new possible FH cases for referral and cascade testing.
Example of a ‘Bench to Bedside’ project
Familial Hypercholesterolaemia (FH)

1 in 250 people living with inherited FH

• From initial pilot in Wales, the BHF have since funded 27 FH nurse posts delivering the roll out of FH cascade testing services across 12 sites in England and Scotland to increase the identification, diagnosis and optimal management of people with FH to reduce risk of premature and avoidable CVD deaths.
8 sites (14 FH nurses) awarded BHF funding in 2014
Total: £1.2m investment covering 10.5 million patient population

Grampian x 2 nurses

Sunderland 2 nurses

Manchester X 1 nurse

Sheffield 2 nurses

Royal Brompton & Harefield x 2 nurses

Royal Free 2 nurses

Southampton x 2 nurses

Bristol X 1 nurse

PASS Database support for all BHF funded nurses
FH AWARDS 2015:
Total: £900,000 investment
covering approx. 11.5 million
patient population

Western Isles x 0.5
nurse

Yorkshire/Humber x 4 nurses

West Midlands X 5
nurses

Gloucestershire X 1
nurses with senior
nurse support

Royal Brompton
& Harefield NHS
Trust x 1.4 nurse

PASS Database support
for all BHF funded nurses
FH genetic diagnoses before & after BHF investment

6 fold Increase Since 2010
Why NHS Health Checks?

• Anecdotally, index cases are becoming harder to find in the established FH services

• The cost effectiveness paper concluded that increasing the number of index cases would significantly increase the cost effectiveness of cascade testing – the NHS Health Checks are one vehicle that could significantly increase index case identification

• NHS Health Checks routinely test for Total Cholesterol (TC) and ascertain family history of premature CVD
Evaluation of NHS HC

- 195,994 patients had their cholesterol checked as part of the NHS Health Check programme.
- Mean total cholesterol was 5.5 mmol/l.
- This translates into 2.5% of population with a TC >7.5mmol/l (Simon Broome cut off) and 0.3% with a level of above 8.5mmol/l.
Thank you