# The Size of the Prize in Cardiovascular Disease (CVD) Prevention

## Greater Manchester

### 1. The diagnosis and treatment gap, 2015/16

<table>
<thead>
<tr>
<th>Hypertension</th>
<th>Atrial Fibrillation (AF)</th>
<th>CVD risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated adult population with hypertension</td>
<td>GP registered population with Atrial Fibrillation (AF)</td>
<td>Estimated adult population 30 to 85 years with 10 year CVD risk &gt;20%</td>
</tr>
<tr>
<td>677,000</td>
<td>44,800</td>
<td>194,100</td>
</tr>
<tr>
<td>Estimated adult population with undiagnosed hypertension</td>
<td>Estimated GP registered population with undiagnosed AF</td>
<td>Estimated percentage of people with CVD risk ≥20% treated with statins</td>
</tr>
<tr>
<td>278,800</td>
<td>19,100</td>
<td>49%</td>
</tr>
<tr>
<td>GP registered hypertensives not treated to 150/90 mmHg target</td>
<td>GP registered high risk AF patients (CHA2DS2VASc &gt;=2) not anticoagulated</td>
<td></td>
</tr>
<tr>
<td>78,100</td>
<td>7,000</td>
<td></td>
</tr>
</tbody>
</table>

### 2. The burden: first ever CVD events, 2015/16

<table>
<thead>
<tr>
<th>Coronary Heart Disease</th>
<th>Stroke</th>
<th>Heart Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,800</td>
<td>3,700</td>
<td>2,450</td>
</tr>
</tbody>
</table>

### 3. The opportunity: potential events averted and savings over 3 years by optimising treatment in AF and hypertension, 2015/16

- **Optimal anti-hypertensive treatment of diagnosed hypertensives averts within 3 years:**
  - 470 heart attacks: Up to £3.60 million saved
  - 700 strokes: Up to £9.60 million saved
- **Optimally treating high risk AF patients averts within 3 years:**
  - 560 strokes: Up to £9.70 million saved

## What the evidence tells us

- Reducing blood pressure in all adults with diagnosed and undiagnosed hypertension by 5 mmHg: **reduces risk of CVD events by 10%**
- Statin therapy to reduce cholesterol by 1 mmol in people with a 10 year risk of CVD risk greater than 10%: **reduces risk of CVD events by 20-24%**
- Anti-coagulation of high risk AF patients: **averts one stroke in every 25 treated**

## CVD: high risk conditions

High risk conditions like high blood pressure, atrial fibrillation and high cholesterol are major causes of heart attack and stroke (CVD events). In the high risk conditions preventive treatment is very effective, but late diagnosis and under-treatment is common.

## Improving outcomes in CVD: case study

In Bradford Districts Clinical Commissioning Group: Over 24 months, more than 21,000 people had an intervention in lipid management, anti-coagulation or antihypertensive treatment to improve their health. Resulting in 137 fewer heart attacks and 74 fewer strokes compared to baseline.

### Footnotes:


Potential events calculated with NNT (TheNNT.com). For blood pressure, anti-hypertensive medicine for five years to prevent death, heart attacks, and strokes: 1 in 100 for heart attack, 1 in 67 for stroke. For AF, warfarin over 1.5 years: 1 in 25 for stroke. Numbers may be lower, as some patients may be on prior treatment.

### References:

Hypertension and AF populations and treatment estimates: QOF 2015/16.
CVD high risk AF estimate numbers: http://www.bmj.com/content/344/bmj.e4181.
CVD high risk statin treatment: http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002169
The graphic overleaf shows the size of the prize for CVD prevention in Greater Manchester.

The estimates of impact are indicative but they show the scale of the opportunity to prevent heart attacks and strokes by improving the detection and management of high risk conditions like atrial fibrillation, high blood pressure and high cholesterol. Achieving this at scale would deliver substantial savings in health and social care spend.

The NHS RightCare programme is now rolling out the CVD Prevention Pathway with a series of high impact interventions that will support your CCGs to deliver this improvement. And increasing uptake of the NHS Health Check offers a systematic approach to detecting people with undiagnosed high risk conditions.