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

#### Leicester, Leicestershire and Rutland





1. The diagnosis and treatment gap, 2015/16				
	Estimated adult population with hypertension	254,900		
	Estimated adult population with undiagnosed hypertension	103,800		
Hypertension	GP registered hypertensives not treated to 150/90 mmHg target	30,600		
	GP registered population with Atrial Fibrillation (AF)	17,600		
Atrial	Estimated GP registered population with undiagnosed AF	8,600		
Fibrillation (AF)	GP registered high risk AF patients (CHA2DS2VASc >=2) not anticoagulated	2,700		
A	Estimated adult population 30 to 85 years with 10 year CVD risk >20%	74,500		
CVD risk	Estimated percentage of people with CVD risk ≥20% treated with statins	49%		

2. The burden: first ever CVD events, 2015/16				
Coronary Heart Disease	2,250			
Stroke	1,150			
Heart Failure	1,050			

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	180 heart attacks	Up to £1.30 million saved²
hypertensives averts within 3 years:	270 strokes	Up to £3.80 million saved <sup>1</sup>
Optimally treating high risk AF patients averts within 3 years:	220 strokes	Up to £3.60 million saved¹



# 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.

<sup>&</sup>lt;sup>1</sup> Royal College of Physicians (2016). Sentinel Stroke National Audit Programme. Cost and Cost-effectiveness analysis. Technical report

<sup>&</sup>lt;sup>2</sup> Kerr, M (2012). Chronic Kidney disease in England: The human and financial cost

#### The graphic overleaf shows the size of the prize for CVD prevention in Leicester, Leicestershire and Rutland.

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.

#### Cardiovascular Disease Prevention: Risk Detection and Management in Primary Care

Cross Cutting: 1. NHS Health Check systematic detection of high BP, AF, NDH, T2DM, CKD, high cholesterol, CVD risk 2. System level action to support guideline implementation by clinicians 3. Support for patient activation, individual behaviour change and self management The Interventions Detection, CVD risk Type 2 Diabetes High BP detection AF detection and Diabetes detection CKD detection assessment, preventive and treatment anticoagulation and management and treatment intervention treatment 30% undiagnosed. 85% of FH 5 million undiagnosed. 940k undiagnosed. 1.2m undiagnosed. 5 million un-The undiagnosed & most diagnosed - 40% Most do not receive 40% do not receive Many have poor BP Over half untreated people at high CVD risk **Opportunities** & proteinuria control poorly controlled or poorly controlled intervention all 8 care processes do not receive statins Control of BP, HbA1c Control of BP, CVD **BP** lowering Behaviour change Intensive behaviour Anticoagulation risk and proteinuria The Evidence prevents strokes prevents 2/3 of and statins reduce change (eg NHS DPP) and lipids improves CVD outcomes and heart attacks strokes in AF life time risk of CVD reduces T2DM risk 30-60% improves outcomes Blood High CVD risk & **NDH** Type 1 and 2 **Chronic Kidney Atrial** The Risk **Pressure Fibrillation** Familial H/cholesterol. ('pre-diabetes') **Diabetes** Disease Condition Detection and 2°/3° Prevention

50% of all strokes & heart attacks, plus CKD & dementia

**Outcomes** 

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 heart attack, stroke, kidney, eye, nerve damage Increase in CVD, acute kidney injury & renal replacement