The Size of the Prize - doing things differently to prevent heart attacks and strokes at scale

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NHS England and Public Health England

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Senior Intelligence Programme Lead
NHS RightCare, NHS England
The Burden of Cardiovascular Disease

A quarter of all deaths

A quarter of the life expectancy gap
Prevention is about much more than the NHS ....
But the NHS has a key role to play

1. Population level interventions and action on wider determinants
2. Support for individual behaviour change
3. Early diagnosis and optimal treatment of the high risk conditions
CVD prevention in the NHS
The High Risk Conditions for CVD
Secondary Prevention
The High Risk conditions for CVD

Core Primary Care

- AF
- Stroke
- PVD
- CKD
- Dementia
- ‘Pre-diabetes’
- Cholesterol
- Diabetes

But late diagnosis and suboptimal treatment are common.
# High Risk Conditions for CVD: Rule of Halves

<table>
<thead>
<tr>
<th>Condition</th>
<th>Effect Description</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Blood Pressure</td>
<td>Every 10mmHg reduction lowers risk of CVD event by 20%</td>
<td>Detected 6 in 10, Controlled to 140/90 6 in 10</td>
</tr>
<tr>
<td>Atrial Fibrillation</td>
<td>Anticoagulation lowers risk of stroke by 2/3</td>
<td>Known AF and on anticoagulant at time of stroke 1 in 2</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>Every 1 mmol/l reduction lowers risk of CVD event by 25% each year</td>
<td>10 year CVD risk above 20% and on statins 1 in 3</td>
</tr>
</tbody>
</table>
Is everyone subject to the rule of halves?

It depends where you live.
Variation in routine GP management of High Blood Pressure

Percentage of patients with known hypertension treated to 140/90 (GP Practice), April 2016 - July 2017
Variation in routine GP management of Atrial Fibrillation

Percentage of patients in known AF before stroke admitted to hospital who had been prescribed anticoagulation prior to their stroke (CCG), April 2016 - July 2017
How much does it matter?
# The Size of the Prize in Cardiovascular Disease (CVD) Prevention

## Lancashire and South Cumbria

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

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<tr>
<th>Hypertension</th>
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<td>Estimated percentage of people with CVD risk &gt;=20% treated with statins</td>
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### 2. The burden: first ever CVD events, 2015/16

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

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<td>300 heart attacks</td>
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Lancashire and South Cumbria

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<th>13,550,700</th>
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<tbody>
<tr>
<td></td>
<td>Estimated adult population with undiagnosed hypertension</td>
<td>5,601,600</td>
</tr>
<tr>
<td></td>
<td>GP registered hypertensives not treated to 150/90 mmHg target</td>
<td>1,618,900</td>
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<tr>
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<th>GP registered population with Atrial Fibrillation (AF)</th>
<th>983,300</th>
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<tr>
<td></td>
<td>Estimated GP registered population with undiagnosed AF</td>
<td>422,600</td>
</tr>
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<td></td>
<td>GP registered high risk AF patients (CHA2DS2VASc ≥2) not anticoagulated</td>
<td>177,800</td>
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<td>66,450</td>
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<td>Heart Failure</td>
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<tr>
<td>Optimal anti-hypertensive treatment of diagnosed hypertensives averts within 3 years:</td>
<td>Up to £72.5 million saved</td>
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<tr>
<td>9,710 heart attacks</td>
<td></td>
</tr>
<tr>
<td>14,500 strokes</td>
<td>Up to £201.7 million saved</td>
</tr>
<tr>
<td>Optimally treating high risk AF patients averts within 3 years:</td>
<td>Up to £241.6 million saved</td>
</tr>
<tr>
<td>14,220 strokes</td>
<td></td>
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</table>
What can we do about it?

• More of the same is not likely to resolve the rule of halves that has been entrenched for decades

• We will only drive improvement by doing things differently
Mobilise wider PC team and the community: the potential

1. Clinical pharmacists and nurses systematically case-find the under treated patients and optimise treatment
2. Practice based pharmacists take on routine on management of high BP and AF.
3. Healthy living pharmacies systematically support shared decision making (e.g. statins and anticoagulants) and medicines adherence.
4. Community pharmacies routinely offer free pulse and BP testing with community pathway for diagnostics
5. Partnership with football clubs and retailers
6. Increase uptake of NHS Health Check
Why do we still see differences across the country around the type of care patients receive? NHS RightCare work is core in identifying through our data the reasons for these differences.
NHS RightCare: supporting mobilisation

DIAGNOSE
the issues and identify the opportunities with data, evidence and intelligence

DEVELOP
solutions, guidance and innovation

DELIVER
improvements for patients, populations and systems
# 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

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

<table>
<thead>
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<tbody>
<tr>
<td>5 million undiagnosed. 40% poorly controlled</td>
</tr>
<tr>
<td>30% undiagnosed. Over half untreated or poorly controlled</td>
</tr>
<tr>
<td>85% of FH undiagnosed. Most people at high CVD risk don’t receive statins</td>
</tr>
<tr>
<td>5 million with NDH. Most do not receive intervention</td>
</tr>
<tr>
<td>940k undiagnosed. 40% do not receive all 8 care processes</td>
</tr>
<tr>
<td>1.2m undiagnosed. Many have poor BP &amp; proteinuria control</td>
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## The Evidence

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<tr>
<td>BP lowering prevents strokes and heart attacks</td>
</tr>
<tr>
<td>Anticoagulation prevents 2/3 of strokes in AF</td>
</tr>
<tr>
<td>Behaviour change and statins reduce lifetime risk of CVD</td>
</tr>
<tr>
<td>Intensive behaviour change (eg NHS DPP) reduces T2DM risk 30-60%</td>
</tr>
<tr>
<td>Control of BP, HbA1c and lipids improves CVD outcomes</td>
</tr>
<tr>
<td>Control of BP, CVD risk and proteinuria improves outcomes</td>
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## The Risk Condition

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<thead>
<tr>
<th>Conditions</th>
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<tbody>
<tr>
<td>Blood Pressure</td>
</tr>
<tr>
<td>Atrial Fibrillation</td>
</tr>
<tr>
<td>High CVD risk &amp; Familial H/cholesterol</td>
</tr>
<tr>
<td>Non Diabetic Hyperglycemia ('pre-diabetes')</td>
</tr>
<tr>
<td>Type 1 and 2 Diabetes</td>
</tr>
<tr>
<td>Chronic Kidney Disease</td>
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## Detection and 2°/3° Prevention

<table>
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<th>Outcomes</th>
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<td>50% of all strokes &amp; heart attacks, plus CKD &amp; dementia</td>
</tr>
<tr>
<td>5-fold increase in strokes, often of greater severity</td>
</tr>
<tr>
<td>Marked increase in premature death and disability from CVD</td>
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<tr>
<td>Marked increase in Type 2 DM and CVD at an earlier age</td>
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<tr>
<td>Marked increase in heart attack, stroke, kidney, eye, nerve damage</td>
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<td>Increase in acute kidney injury &amp; renal replacement</td>
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Pathways aim to.....

- Provide a **clear set of resources** to support local health economies to concentrate their improvement efforts on where there is greatest opportunity to address variation and improve population health

- Bring **expert national clinical and patient perspective** into the NHS RightCare process

- **Standardise the solutions** – agreed national consensus on what optimal components are

- Highlight the ‘quick wins’ for rapid pathway optimisation including **best practice and case studies**
Physical ill-health and CVD prevention in people with severe mental illness (SMI)

NHS RightCare Pathways provide a national case for change and a set of resources to support Local Health Economies to concentrate their improvement efforts where there is greatest opportunity to address variation and improve population health.

<table>
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<th>Priorities for Improvement</th>
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<tr>
<td><strong>Targeted case finding to identify patients requiring physical health review</strong></td>
</tr>
<tr>
<td><strong>Proactive engagement and support to take up lifestyle interventions</strong></td>
</tr>
<tr>
<td><strong>Regular education and training for all staff engaged with and supporting people with SMI</strong></td>
</tr>
<tr>
<td><strong>Optimise planned care for physical health conditions to reduce emergency admissions</strong></td>
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The case for change

Key messages for commissioners
Lack of prompt identification of CVD risk factors (1)

<table>
<thead>
<tr>
<th>Priorities for optimisation</th>
<th>Rationale</th>
<th>Where to look/ Guidance</th>
<th>Implementation examples</th>
<th>Indicator</th>
</tr>
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<tr>
<td>Targeted case finding to identify patients requiring physical health care review</td>
<td>In England there are over 490,000 people with severe mental illness registered with a GP. They are more likely to develop CVD than the general population and at an earlier age. CVD is the biggest cause of premature mortality in this group. The risk factors for CVD are: • Smoking • Obesity • High alcohol consumption • High blood pressure • Raised cholesterol • Atrial fibrillation Having more than one of these risk factors has a disproportionate multiplicative effect on one’s risk of developing cardiovascular disease. The increased risk of CVD can also be related to effects of psychotropic medication. All adults on the severe mental illness register should receive the full list of recommended physical health assessments as part of a routine check at least annually (see NICE pathway - Monitoring physical and mental health). Assessments should be undertaken more frequently as required. The recommended physical health assessment is offered annually to all age groups and covers additional areas to the NHS Health Check (which is offered every 5 years to those aged 40-74). Consider aligning the two processes where possible for those aged 40-74.</td>
<td>NICE guidelines: • CG178 Psychosis and schizophrenia in adults: prevention and management (recommendation 1.5.3.1, 1.5.3.3), • CG185 Bipolar disorder: assessment and management • QS80 Psychosis and schizophrenia in adults, statement 6: Assessing physical health • PH15 Cardiovascular disease: Identifying and supporting people most at risk of dying prematurely (recommendation 1) • QS95 Bipolar in adults, statement 3 – involving carers in care planning</td>
<td>Bradford District Care Foundation Trust physical health review template in EMIS and SystmOne– improves consistency in the delivery of physical health assessment</td>
<td>There is a QOF mental health register for people with SMI NICE Menu Indicators: NM129 – The percentage of patients aged 18 years and over with schizophrenia, bipolar affective disorder and other psychoses who have a record of total cholesterol: HDL ratio in the preceding 12 months. NM130 The percentage of patients aged 18 years and over with schizophrenia, bipolar affective disorder and other psychoses who have a record of blood glucose or HbA1c in the preceding 12 months. NM16 - The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a record of BMI in the preceding 15 months NM17 The % of patients with schizophrenia, bipolar affective disorder and other psychoses who have a record of blood pressure in the preceding 15 months. In 2017/18 QOF...</td>
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RightCare support to local systems

- Delivery partners (DPs) are based in every region (27 nationally)
- Each region is supported by a central team who provide analytical, intelligence, PMO, communications and other central functions
- DPs work at CCG and STP level and facilitate bringing the local system together and supporting transformation at a local level
RightCare work to address AF  
(up to 2017)

Number of CCGs with a Delivery Plan referencing stroke and/or AF by Region

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<th>Region</th>
<th>Number of CCGs with Plans (%)</th>
<th>Total Number of CCGs/Region</th>
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<td>London</td>
<td>15 (47%)</td>
<td>32</td>
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<tr>
<td>Midlands and East</td>
<td>28 (46%)</td>
<td>61</td>
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<tr>
<td>North</td>
<td>31 (47%)</td>
<td>66</td>
</tr>
<tr>
<td>South</td>
<td>18 (36%)</td>
<td>50</td>
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<tr>
<td>Grand Total</td>
<td>92</td>
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# RightCare work to address AF (up to 2017)

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<td>Midlands and East</td>
<td>14 (82%)</td>
<td>17</td>
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<td>North</td>
<td>8 (88%)</td>
<td>9</td>
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<td>South</td>
<td>11 (85%)</td>
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Contact Us:

Matt.Kearney@nhs.net
@DrMattKearney

Glenda.Augustine@nhs.net
www.england.nhs.uk/rightcare