A retrospective evaluation of the NHS Health Check Programme in a multi-ethnic population

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Background

• National call for review of NHS Health Check Programme

• Need for evaluations of Programme
  – Increased diagnosis of undiagnosed conditions
  – Subsequent delivery of appropriate interventions

• Primary aim to evaluate these aspects

• Secondary aim to report prevalence of high risk of cardiovascular disease (CVD) using ≥10% cut point

• Evaluation used data from the Leicester City CCG

1 O’Dowd. BMJ 2014; 349: g6498.
Leicester City

Leicester City

Leicester City

Leicester City

Image sources: 
http://www.theguardian.com/uk-news/2015/dec/20/leicester-midland-success-story
Methods

• 2009 to 2014

• 65 practices in Leicester City CCG

• 53,799 valid Health Checks included in main analyses

• Routine data entered into SystmOne

• Extracted centrally by CCG

• Key variables extracted using Read Codes
Results
Invalid Checks

<table>
<thead>
<tr>
<th>Condition</th>
<th>&lt;40 years</th>
<th>&gt;74 years</th>
<th>Myocardial infarction</th>
<th>Cerebrovascular disease</th>
<th>Peripheral vascular disease</th>
<th>Type 1 diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Invalid Checks</td>
<td>1.7%</td>
<td>3.4%</td>
<td>0.7%</td>
<td>1.1%</td>
<td>0.4%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
Invalid Checks

Percentage of Checks that were Ineligible
Number of Checks Performed

![Line graph showing the number of checks performed from 2009-10 to 2013-14 with an upward trend from 2009-10 to 2012-13, followed by a decrease in 2013-14.]
Diagnoses

- Type 2 Diabetes
- High T2DM risk
- Hypertension
- Chronic Kidney Disease
- High CVD risk (≥10%)
- High CVD risk (≥20%)
Diagnoses

30% Diagnosed with at least one condition
Diagnoses

% of People with Condition

- Type 2 Diabetes
- High T2DM risk
- Hypertension
- Chronic Kidney Disease
- High CVD risk (≥10%)
- High CVD risk (≥20%)

- White
- South Asian
- Black
- Other
Co-Morbidities

Percentage of people with row condition who also have column condition

<table>
<thead>
<tr>
<th>Condition</th>
<th>Hypertension</th>
<th>≥20% CVD Risk</th>
<th>T2DM</th>
<th>High T2DM Risk</th>
<th>CKD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>19%</td>
<td></td>
<td>36%</td>
<td>12%</td>
<td>5%</td>
</tr>
<tr>
<td>≥20% CVD Risk</td>
<td>48%</td>
<td>13%</td>
<td>34%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>T2DM</td>
<td>39%</td>
<td>27%</td>
<td>18%</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>High T2DM Risk</td>
<td>27%</td>
<td>12%</td>
<td>62%</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>CKD</td>
<td>55%</td>
<td>5%</td>
<td>59%</td>
<td>7%</td>
<td>87%</td>
</tr>
</tbody>
</table>

% with ≥1 other condition
Treatments

% Diagnosed Receiving Appropriate Treatment

- T2DM: Metformin
- T2DM: Education
- High T2DM risk: Metformin
- CVD risk ≥20%: Statins
Expected National Figures

- Assuming…
  - 3 million eligible each year
  - 6.4% uptake (national average)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Expected number of diagnoses per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 2 diabetes</td>
<td>7133</td>
</tr>
<tr>
<td>High type 2 diabetes risk</td>
<td>8056</td>
</tr>
<tr>
<td>Hypertension</td>
<td>36,853</td>
</tr>
<tr>
<td>Chronic kidney disease</td>
<td>3530</td>
</tr>
<tr>
<td>High CVD risk ≥10%</td>
<td>58,537</td>
</tr>
<tr>
<td>High CVD risk ≥20%</td>
<td>21,147</td>
</tr>
</tbody>
</table>
Conclusions

• Identified high number of people at risk of vascular disease

• Translated into appropriate preventive measures to some extent

• Areas where further improvements could be made

• Possible to engage ethnic minority populations with respect to the Health Check Programme
Thank You


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