Atrial fibrillation: 
A burden to the UK

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GP Partner Westcliffe Medical Group

Declaration of interests

• Funding has be variously given by: Abbot, Bayer, Boehringer-Ingelheim, Bristol Myers Squibb, Dawn, INRStar, Medtronic, Oberoi Consulting, Pfizer, Roche, Sanofi-Aventis, Servier

• I am an advisor to: ACSMA, AF Association, Anticoagulation Europe, Arrhythmia Alliance, National Stroke Association, SPAF Academy, Syncope Trust
Some important numbers

150,000
150,000 strokes per year across the UK.

18,000
18,000

18,000 strokes per year across South East of England.

£12,000
£12,000

The first year costs of caring for stroke patients

186,650
186,650 living with stroke in the South East of England.

£6,000
£6,000

Costs of caring for stroke patients per year

Years of Life Lost (YLL)

3rd commonest cause of YLL
A = All ages
B = 20-54yrs

YLL is an epidemiological measure that makes estimation of years of life lost from particular conditions

May not bear much resemblance to health care spending patterns, arguably more reflective of age at death and what age that cohort of people MAY have lived to.
Health risks – check out the blue bits

Risk Factors for Hypertension

- Age
- Fat
- Booze
- Cigs
- Stress.
- Secondary causes:
  - contraceptives
  - CKD
  - Diabetes
  - Medicine use
76% of patients with diagnosed HTN have BP <=150/90

And in numbers

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered pop</td>
<td>2,434,292</td>
</tr>
<tr>
<td>HTN register</td>
<td>316,766</td>
</tr>
<tr>
<td>meeting indicator (BP &lt;= 150/90)</td>
<td>244,691</td>
</tr>
<tr>
<td>exception coding</td>
<td>13,390</td>
</tr>
<tr>
<td>not met</td>
<td>72,075</td>
</tr>
<tr>
<td>not met or exception coded</td>
<td>95,465</td>
</tr>
</tbody>
</table>

And this is with a relatively loose BP target

And obviously it is important to also focus on HTN in CKD, DM, CHD etc etc – maybe more important given the underlying absolute risk

And also important to be mindful of the blunt tool that the QOF is.
Sub group of stroke:–
AF stroke

“Dear NHS – must and can do better”
AF prevalence – it's not something that is going to decline

NB the age specific prevalence seen in GRASP AF dataset

13% growth in Bradford in last 5 years
New cases + finding existing cases
1.5% prevalence in YH.
85% of prevalent cases CHADS2 >=1

AF and mortality – the Framingham study
*Circulation 1998*

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AF

no AF

Median survival

Age and sex at entry
Prevalence AF by practice
Prevalence AF a linear Relationship to over 65yrs

Expected Prevalence AF by practice
SAFE Study

Table 3 | Prevalence and detection rate of new cases by age at start of study and sex. Figures are numbers (percentages)

<table>
<thead>
<tr>
<th>Group</th>
<th>65-74</th>
<th>75-84</th>
<th>85+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>692/35 (1.9)</td>
<td>63/56 (1.3)</td>
<td>5/7 (0.2)</td>
<td>758/97 (1.9)</td>
</tr>
<tr>
<td>Women</td>
<td>803/37 (1.2)</td>
<td>80/40 (0.9)</td>
<td>0/0 (0.0)</td>
<td>883/77 (1.3)</td>
</tr>
</tbody>
</table>

12 month prevalence

<table>
<thead>
<tr>
<th>Group</th>
<th>65-74</th>
<th>75-84</th>
<th>85+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>81/121 (0.6)</td>
<td>91/120 (0.6)</td>
<td>7/10 (0.4)</td>
<td>180/242 (0.8)</td>
</tr>
<tr>
<td>Women</td>
<td>90/130 (0.7)</td>
<td>71/120 (0.5)</td>
<td>8/12 (0.6)</td>
<td>169/262 (0.6)</td>
</tr>
</tbody>
</table>

12 month new case detection

<table>
<thead>
<tr>
<th>Group</th>
<th>65-74</th>
<th>75-84</th>
<th>85+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>7/119 (0.6)</td>
<td>7/115 (0.6)</td>
<td>2/5 (0.2)</td>
<td>16/239 (0.7)</td>
</tr>
<tr>
<td>Women</td>
<td>20/123 (1.6)</td>
<td>34/118 (2.8)</td>
<td>4/12 (0.3)</td>
<td>58/253 (2.3)</td>
</tr>
</tbody>
</table>


Long term trends in AF stroke

AF Stroke, YH 2002 - 2012

98% growth - coding and case ascertainment? Or True effect? population growth of c1% a year
Dear NHS..... Must do better

Marked under use of a cheap and effective intervention that cuts stroke risk by c60%
This is not news.
“overuse” of anti platelet medicine

Dear NHS..... Must do better

Even in really high risk patients
34% anticoagulated
Community dwelling AF stroke survivors
N=3500.
NNT = 10-12
CHART GRASP-AF: Dashboard

Audit of Atrial Fibrillation and CHA2DS2-VASc Scores

Select Risk Score
Practice
Total Practice Population 11286
No. with Atrial Fibrillation 385
Percent 3.46

AF Rate per 1000 patients

Risk factors in patients with AF

Prevalence of AF: 1.77%
Percentage of patients CHADS ≥ 1: 83.96%
Percentage of patients CHADS ≥ 1 on OAC: 46.29%
Percentage of patients CHADS ≥ 1 on AP: 35.04%

CHART Online data

- Data on 15th October 2013:
  - Number of practices uploading data: 2538
  - Number of patients with AF: 320,457
  - Prevalence of AF: 1.77%

  - Percentage of patients CHADS ≥ 1: 83.96%
  - Percentage of patients CHADS ≥ 1 on OAC: 46.29%
  - Percentage of patients CHADS ≥ 1 on AP: 35.04%
CHART Online data

- Data on 23rd June 2014:
  - Number of practices uploading data: 8020
  - Number of patients with AF: 320,457
  - Prevalence of AF: 1.8%
  - Percentage of patients CHADS ≥ 1: 84.0%
  - Percentage of patients CHADS ≥ 1 on OAC: 57.5%
  - Percentage of patients CHADS ≥ 1 on AP: 34.04%

AVERROES

<table>
<thead>
<tr>
<th>Reason</th>
<th>Apixaban (%)</th>
<th>Aspirin (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment that INR could be maintained in therapeutic range</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Assessment that INR could not or was unlikely to be measured at requested intervals</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>Uncertainty about patients ability to adhere to instructions regarding VKA Therapy</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>CHADS, score of 1 and VKA therapy not recommended by physician</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Patients refusal to take VKA</td>
<td>38</td>
<td>37</td>
</tr>
<tr>
<td>Multiple reasons for unsuitability of VKA therapy</td>
<td>51</td>
<td>52</td>
</tr>
</tbody>
</table>
AVERROES: Stroke or SEE
5600 patients, 36 countries, 522 centres

Cumulative Risk
No. at Risk
ASA 2791 2720 2541 2124 1541 626 329
Apixaban 2809 2761 2567 2127 1523 617 353

RR= 0.46
95%CI= 0.33-0.64
p<0.001

AVERROES - Major Bleeding

Cumulative Risk
No. at Risk
ASA 2791 2744 2572 2152 1570 642 340
Apixaban 2809 2763 2567 2123 1521 622 357

RR= 1.14
95%CI= 0.74-1.75
P= 0.56

AVERROES: Stroke or SEE

ASA 81-324 mg/d
Apixaban 2.5-5 mg bd

Occam’s Razor

- *The solution that requires the fewest steps should be preferred*

Leeds rapid access nurse led AF clinic

- 2010 /2011
- 829 patients seen
- 742 confirmed AF and AF not resolved
- 384 CHADS > 1
  - 359 anti-coagulated – 93%
  - Only 1 patient declined anti-coagulation
The Bradford AF Quality Improvement Program (QIP)

Acknowledgement:
• Greg Fell Public Health Consultant Bradford LA
• Maciek Gwozdziewicz South & West Yorkshire and Bassetlaw CSU
• Bradford Districts, Bradford City and ACW CCG

Approach was simple

• Clear quality standard
• Measurable at practice
• Make data available and public to all practices
• Achievable benchmark of care target for each practice – what level are the 2nd quintile performers achieving
• Ten evidence based strategies were consistently applied to the practices that were participating to encourage improvement.
• Bespoke support and advice to practice and more widely - Q&A / Expert events / training / Practice visits / IT tools
• 18 months.
### Management of Stroke Risk and Anticoagulants

**Patient confirmed to have Atrial Fibrillation on ECG recording**

- 56% of new FPs do not consider AF as a risk factor, despite existing guidelines.
- This highlights the need for awareness and education among GPs.

#### Risk Factors for Stroke

- **Age**: Over 65 years old
- **Hypertension**: Blood pressure of 140/90 mmHg or higher
- **Diabetes**: Known history of diabetes, regardless of blood glucose levels
- **Dyslipidemia**: High cholesterol levels or elevated triglycerides
- **Previous stroke or transient ischemic attack (TIA)**
- **Family history**: First-degree relative with a stroke
- **Chronic kidney disease**: Chronic kidney disease stage 3 or higher
- **Obstructive sleep apnea**: Sleep-disordered breathing
- **Prior anticoagulant therapy**: History of using anticoagulants

#### Anticoagulation Therapy

- **Option 1**:warfarin, adjusted to achieve an INR between 2.0 and 3.0
- **Option 2**:new oral anticoagulants (NOACs) such as dabigatran, rivaroxaban, apixaban, or edoxaban

#### Decision-Making Process

1. **Assessment of Risk Factors**: Identify patients at high risk of stroke.
2. **Choice of Anticoagulant**: Select the appropriate anticoagulant based on risk profile and individual patient characteristics.
3. **Monitoring and Titration**: Regularly monitor INR levels and adjust anticoagulant dosage as needed.
4. **Patient Education**: Educate patients about the benefits and risks of anticoagulation therapy and its importance in reducing stroke risk.

#### Management Plan

- **Initial Assessment**: Evaluate patient's stroke and bleeding risk factors.
- **Anticoagulation Therapy**: Choose the appropriate anticoagulant.
- **Monitoring**: Regularly monitor INR levels and adjust dosage as necessary.
- **Patient Education**: Provide clear instructions on the importance of regular monitoring and adherence to therapy.
AF QIP achievements

% of patients CHADS2 ≥ 1 and on Warfarin

- Current achievement
- All
- AFQIP Target (70%)

65% of patients with CHADS2 ≥1 on Warfarin

6% absolute improvement
AFQIP before and after across AFQIP practices

AFQIP improvement by CHADS2 fixed denominator

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

CHADS2=0 CHADS2=1 CHADS2=2 CHADS2=3 CHADS2=4 CHADS2=5 CHADS2=6

Sep-11 Mar-13

NNT=

NNT=13 NNT=20

% of patients CHADS2 ≥1 who are on Warfarin - Sep 11 vs. Mar 13

Ashwell Medical Centre
Bingley Medical Practice
Bowling Hall Medical Practice
Carlton Medical Practice
Dr Hamdani
Fairfield Group Practice
Farnley Medical Centre
Fishingall Medical Centre
Haworth Medical Practice
Heaton Medical Practice
Highfield Health Centre
Highfield Health Centre - Dr Motalif
Highfield Health Centre - Dr Mills &
Horsforth Medical Practice
Horsforth Medical Practice - Heworth Rd
Horsforth Medical Practice - Heworth Rd
Keighley Medical Centre
Kensington Street Health Centre - Dr
Yorkley Surgery
LCD Bradford at Hillside Bridge
LCD Bradford at Manningham Medical
Levants Medical Centre
Lin House Medical Centre
Little Horton Lane Medical Centre - Dr Fai
Low Moor Medical Centre
Maryland Medical Centre
Moorside Surgery
Oaceworth Health Centre
Park Crescent Medical Practice
Parkside Medical Practice
Parkside Medical Practice (Horton Park)
Primrose Medical Centre
The Bluebell Building - Dr Malik
The Local Surgery
The Ridge Health Practice
The Rockford & Woose Health Practice
The Surgery, Newton Way
Thornhill Medical Centre
Warlowe Medical Centre
Warlowe Medical Centre - Dr Masood
Willows Medical Centre
Willows Medical Centre
Woodfield Green Medical Centre
Woodroyd Centre - Dr Fawcett & partners
Woodroyd Centre - Dr Longfield & partners
The Bradford Moor Practice
Bilton Medical Centre
The Grange Practice
Shipley Medical Practice
Woodfield Centre

25/09/2014
Ischaemic AF Strokes 2013

- 85% of AF-related ischaemic strokes were OOR / discontinuation
- OOR patients ALL low INR

- 0.15
- 0.38
- 0.46

OOR  Discontinued  IR

Bradford Royal Infirmary