Stroke Prevention

- Identify people with Atrial Fibrillation
- Optimise their management
- Prevent strokes

Why bother?
Because…

Stroke is the third most common cause of death in England

12,500 strokes a year are though to be attributable to AF

AF is common: 1.3 % UK population have AF (600,000 patients in England)

Warfarin or aspirin?

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Amongst patients with AF, half those who would benefit are not receiving it.

If this project was undertaken in every practice in the UK, 3000-6000 strokes could be prevented.

Warfarin or aspirin?

Warfarin reduces stroke risk by 64%

Aspirin reduces stroke risk by 22%

Warfarin increases haemorrhagic risk by 1.4%

Aspirin increases haemorrhagic risk by 1.6%

Guidelines

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- NICE AF guidelines - June 2006

- CHADS2 Score - Gage B, Waterman A, Shannon W (2001) – The CHADS2 score JAMA 285:2864

- SW London Cardiac and Stroke Network 2010 AF pathway – on its way!

CHADS2 Score, Thromboembolic Risk, and Effect of Warfarin in 11,526 Patients with Nonvalvular Atrial Fibrillation and No Contraindications to Warfarin Therapy†

Clinical parameter	Points
Congestive heart failure (any history)	1
Hypertension (prior history)	1
Age ≥75	1
Diabetes mellitus	1
Secondary prevention in patients with a prior ischemic stroke or a transient ischemic attack; most experts also include patients with a systemic embolic event	2

CHADS2 score	Event-rate, percent per year*		NNT
	Warfarin	No warfarin	
0	0.25	0.49	417
1	0.72	1.52	125
2	1.27	2.50	81
3	2.20	5.27	33
4	2.35	6.02	27
5 or 6	4.60	6.88	44

*The CHADS2 score estimates the risk of stroke, which is defined as focal neurologic signs or symptoms that persist for more than 24 hours and that cannot be explained by hemorrhage, trauma, or other factors, or peripheral embolization, which is much less common. Transient ischemic attacks are not included. All differences between warfarin and no warfarin groups are statistically significant except for a trend with a CHADS2 score of 0.

NNT = number needed to treat to prevent one stroke per year with warfarin.

Patients are considered to be at **low risk** with a score of 0, at **intermediate risk** with a score of 1 or 2, and at **high risk** with a score ≥3. One exception is that most experts would consider patients with a prior ischemic stroke, transient ischemic attack, or systemic embolic event to be at high risk even if they had no other risk factors and therefore a score of 2. However, the great majority of these patients have some other risk factor and a score of at least 3.

†Data from Go, AS, Hylek, EM, Chang, Y, et al, JAMA 2003; 290:2685; and CHADS2 score from Gage, BF, Waterman, AD, Shannon, W, JAMA 2001; 285:2864.

CHADS2 Score

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	Points
CCF	1
BP >160 systolic	1
Age >75 years	1
Diabetes	1
Previous Stroke or TIA	2

http://www.medicine.ox.ac.uk/bandolier/band89/b89-3.html

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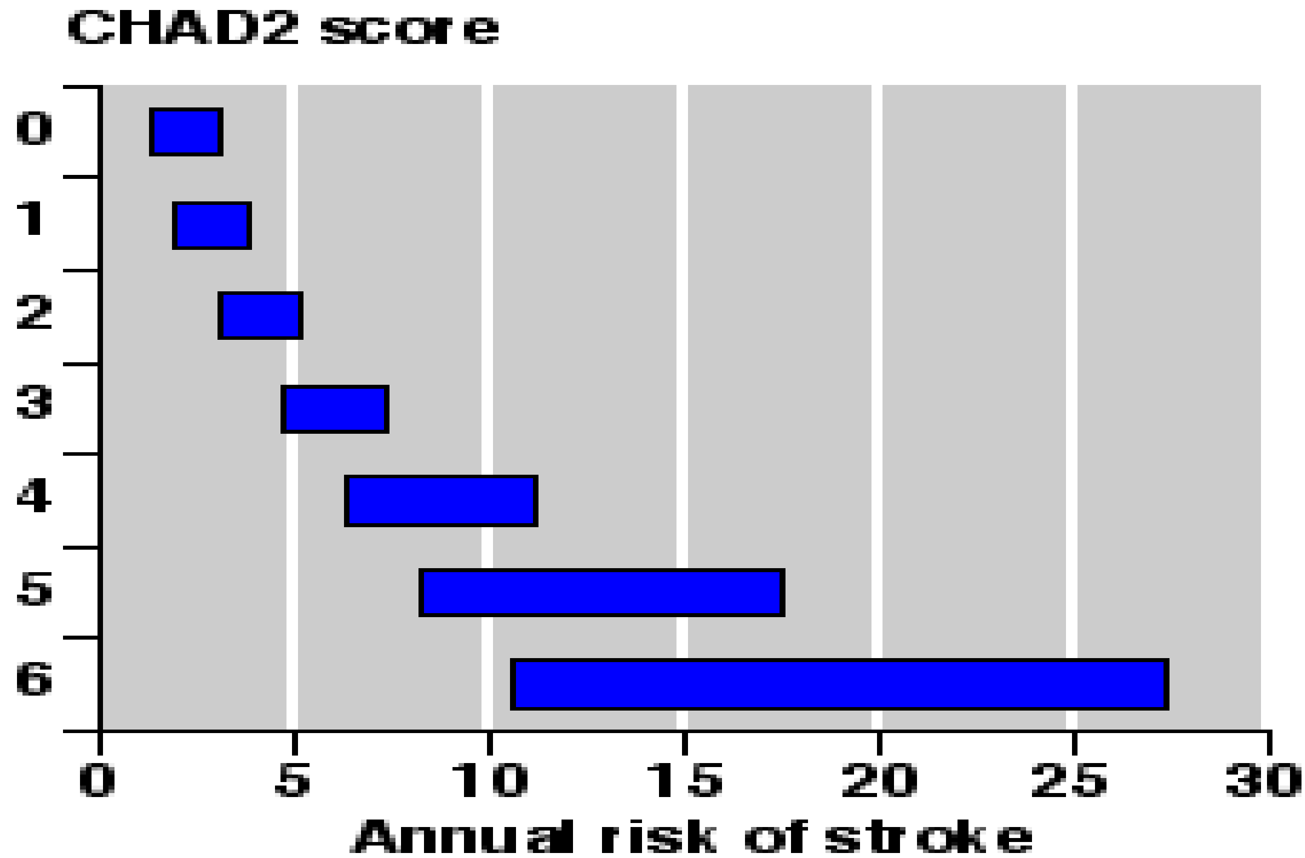

CHADS2 Score

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Total Score	Risk of stroke	Therapy indicated
0	Low	None
1	Med	Aspirin
2 or more	High	Warfarin

CHA2DS2-VASc

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	Risk Factor	Score
C	Congestive Heart Failure/LV dysfunction	1
H	Hypertension	1
A2	Age 75+	2
D	Diabetes	1
S2	Stroke/TIA/TE	2
V	Vascular Disease (CAD,MI,PVD,aortic plaque)	1
A	Age 65-74	1
Sc	Sex – female gender	1

Why bother?
Because…

- By treating people with warfarin for 1 year 1 stroke might be prevented (NNT = 37) - aspirin would be expected to have about half of this effect (NNT = 67)

First do no harm…

- If 1000 people received warfarin for 1 year 14 might expect a bleed (similar number as for aspirin)

Contra-indications to warfarin

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- BNF says peptic ulcer and severe hypertension
- Hypertension – once controlled is not a C-I
- History of:
  - Recent surgery or head injury (temporary C-I)
  - Major non-traumatic haemorrhage (e.g. gastro-intestinal)
  - Intra-cranial haemorrhage
  - Oesophageal varices
  - Endoscopically proven peptic ulcer disease in previous year
  - Known allergic hypersensitivity

Other considerations

- Patient is known to be terminally ill
- Poor memory/cognitive function with no reliable carer
- Alcohol dependency/binge drinking
- At risk of falls (elderly, epilepsy)
- Long term NSAID use

Pathway for Management of AF in Primary care – in development

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1. Confirm as AF – ECG
2. Anticoagulate – CHADS2 score
3. Rate management (beta blocker)
4. Consider referral

What's involved?: Project example

Practice of 15,000 patients

Case note review of 72 patients

51% women, 49% men, average age 76 years

- 61% patients had a CHADS2 score of 2 or more
- 89% on antithrombotic agent (70% warfarin)
- 1 patient on no agent with no documented reason why
- Of 12 patients on aspirin or clopidogrel, 8 had no documented reason why they were not on warfarin

- Require case note review of 9 patients

What’s involved?

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- Run the software
- Go through the case notes of each patient identified
- Optimise management and document decisions
- Ensure all clinicians in your practice know what you are doing
- Teach everyone else how to manage AF so that new cases are managed appropriately
- Set up a pulse screening system to identify new cases

AF Screening

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- Wandle Practices AF Screening Project
- Oct 09 to Feb 10
- Patients over 65 years who presented to their practice – mostly during the flu vaccination campaign – were screened for AF using simple pulse palpation
- Practices earned £2 per patient screened and did an audit at the start and end of the project

AF Screening

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- 23 practices participated
- 15,250 patients over 65 years
- 6828 were screened (45%)
- 125 patients with existing AF who were not previously coded
- 27 new diagnoses

AF Screening

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Increase in prevalence of 0.67%

Cost £13k

Identified 27 new cases of AF

	Oct 09	Feb 10
Pts over 65	15250	14839
Over 65 with AF	779	856
Prevalence	5.1%	5.77%

AF Screening

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- Roll out project to all Wandsworth Practices (but no certainty about funding)
- When to repeat in Wandle – 3 years? In a more targeted population?
- Why should we do it?

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QOF

Existing AF QOF allocation:

- AF 01The practice can produce a register of patients with AF
- AF04 The % of patients with AF diagnosed with ECG or specialist confirmed diagnosis
- AF 03 The % of patients with AF who are currently treated with anti-coagulation drug therapy or an anti-platelet therapy

The current indicators for managing atrial fibrillation in QOF reward practices for treating appropriate patients with any anti- coagulation drug or anti-platelet therapy rather than specifically with warfarin.

QOF Changes

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- 2 formal submissions from DH and jointly from Roger Boyle & NHS improvement team made to NICE for changes to QOF to encourage improved quality outcomes and reflect current evidence base for AF.
- The advisory committee met in June 2010 and agreed to pilot these changes to incentivise the prescription of warfarin (a change to indicator 3).
- 6 month pilot until March 2011. *Any change to the existing QOF is not expected to be seen before 2012/13.*

What could QOF look like…

- The practice can produce a register of patients with AF. (Existing AF01)
- % patients with AF diagnosed after 1 April 2008 with ECG or specialist confirmed diagnosis. (Existing AF04 indicator unchanged)
- % of patients aged 65 or over who have undergone pulse assessment in the last 15 months. (New indicator)
- % of patients with AF in whom stroke risk has been assessed using an accepted scoring system (e.g. NICE, CHADS2, CHADSVAS) in the last 15 months (New indicator & pilot)
- % of patients at high risk of stroke who are receiving anticoagulants (unless a contra-indication or side-effects are recorded). (New indicator & pilot)

NB. not suggesting an increase in the overall number of points allocated to AF indicators, but a redistribution of existing points.

QIPP
Quality innovation productivity prevention

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- AF is one of the top 6 QIPP areas and is likely to be increasingly under the spotlight

AF Screening

NHS Wandsworth

- Roll out project to all Wandsworth Practices (but no certainty about funding)
- When to repeat in Wandle – 3 years? In a more targeted population?
- Why should we do it?
  - Good clinical care
  - Saves lives
  - QOF and QIPP