



Accelerating Stroke Improvement

Making Progress?

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NHS Stroke Improvement
Programme

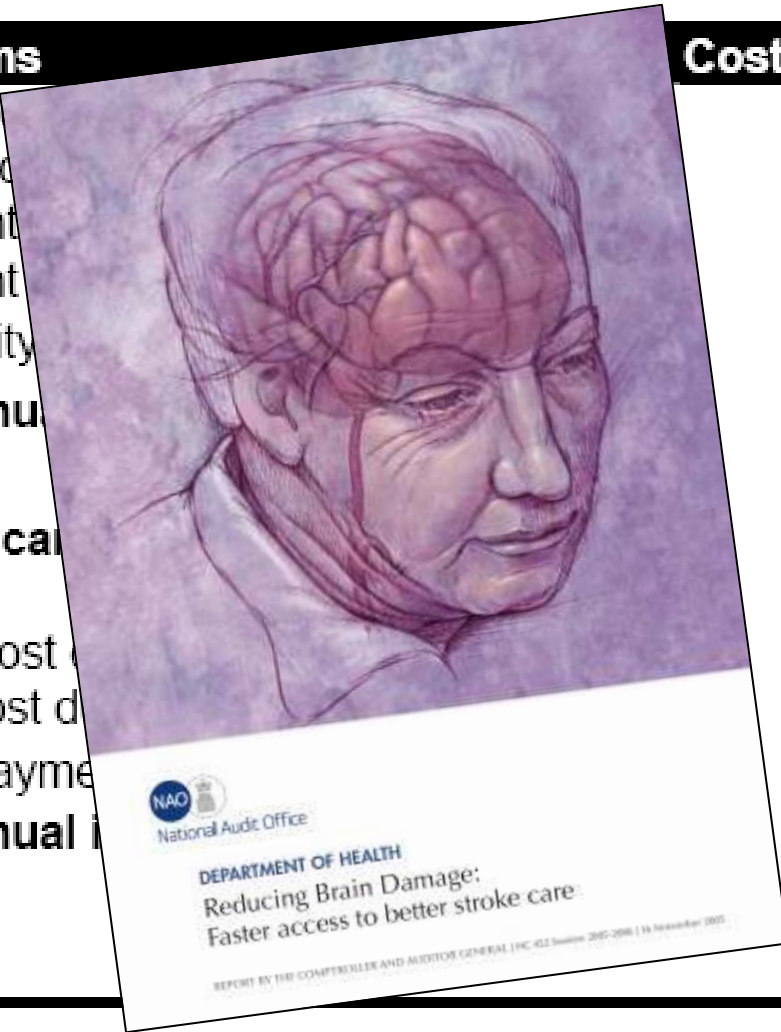
Consultant Stroke Physician
Royal Bournemouth & Christchurch NHS
Foundation Trust

StrokeImprovement

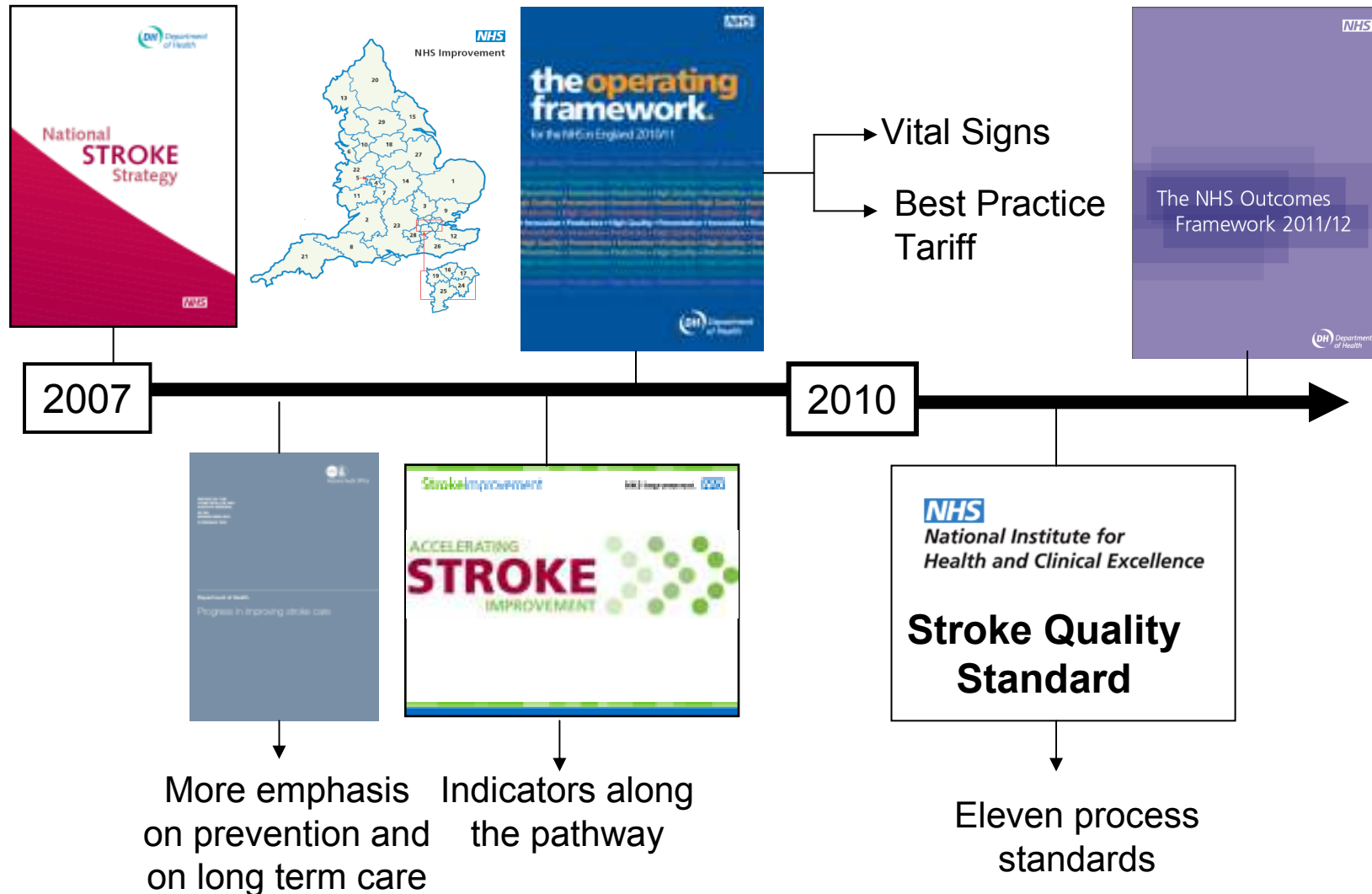
National Audit Office 2005

Value for Money of the Nation's Stroke Services

Cost items	Cost
Diagnostic	9,600,000
Inpatient care	530,000,000
Outpatient	46,200,000
Outpatient	507,200,000
Community	1,741,100,000
Total annual	2,834,100,000
Informal care	2,406,400,000
Income Lost	483,700,000
Income lost d	604,100,000
Benefit payme	686,600,000
Total annual i	1,774,400,000
Total	7,014,900,000



Stroke Improvement The Journey So Far





Main Areas of Accelerated Work

Domains

Joining Up Prevention

Implementing Best Practice in Acute Care

Improving Post Hospital and Long Term Care.

Key Areas of Focus

- AF Detection and Treatment
- Timely and effective management of TIA

- Direct Admission to a Stroke Unit
- Timely Brain Scan

- Early Supported Discharge
- Joint Care Plans using Single Assessment Process
- Review at 6/52, 6/12 and yearly
- Carers' Assessment
- Psychological Support

StrokeImprovement Transformed Awareness

NHS Improvement 



Wychbury Medical Group



 Point of Care Services Ltd



walking
the way
to health



HALESOWEN TOWN FC
FOUNDED 1873



Dudley Stroke Association



Lloydspharmacy



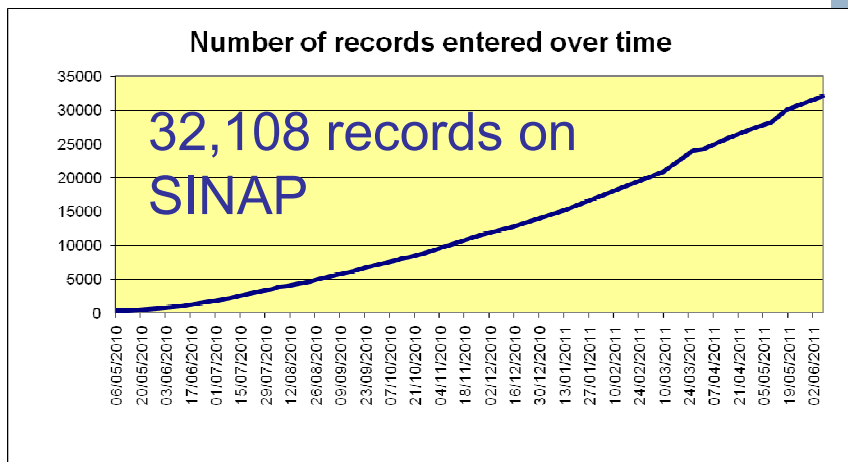
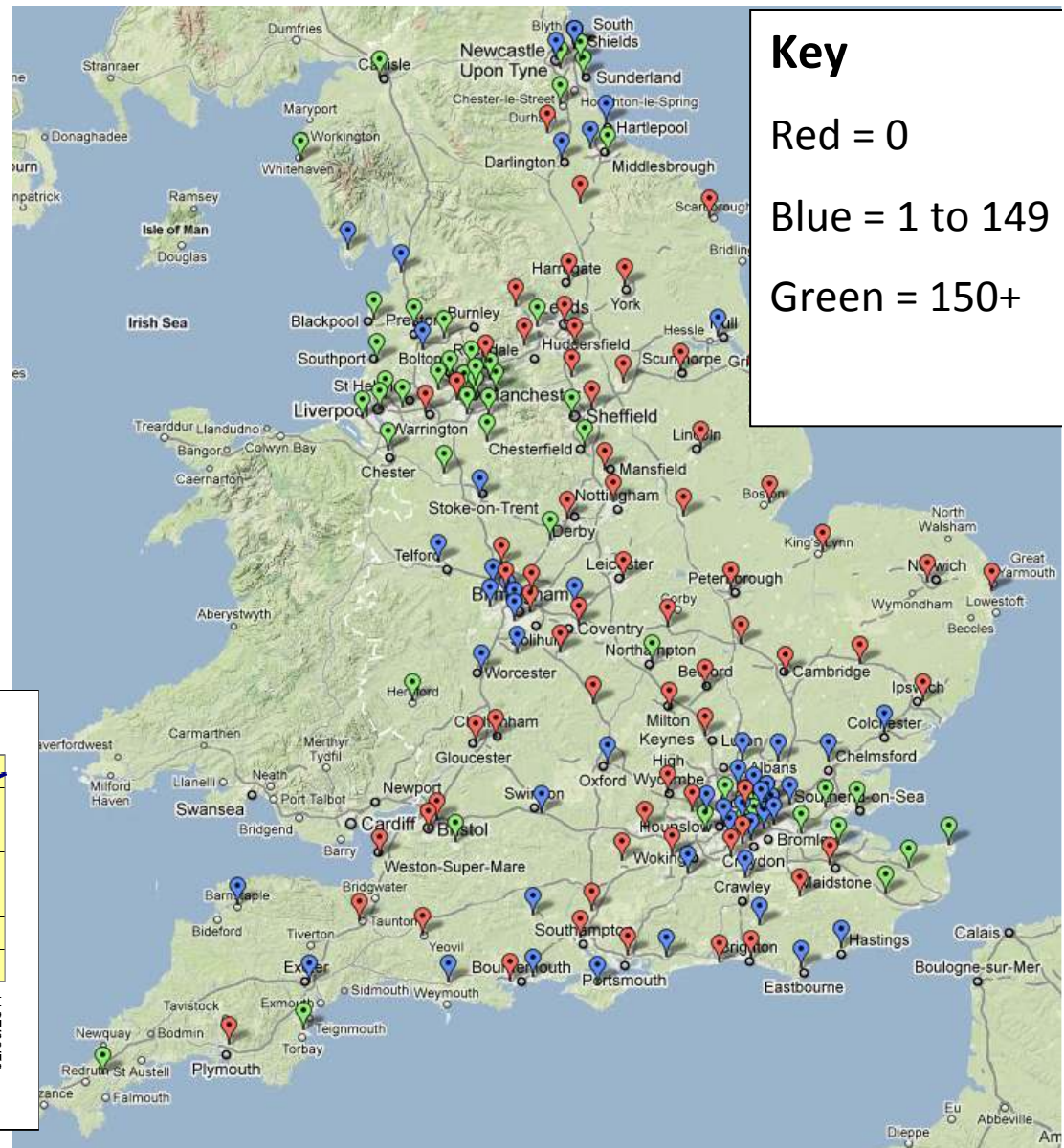
Black Country Cardiovascular Network

Stroke Improvement Data Revolution

SINAP
NSA
ASI
SITS-MOST
Vital Signs
CQC
SSNAP

NHS Improvement 

Key
Red = 0
Blue = 1 to 149
Green = 150+

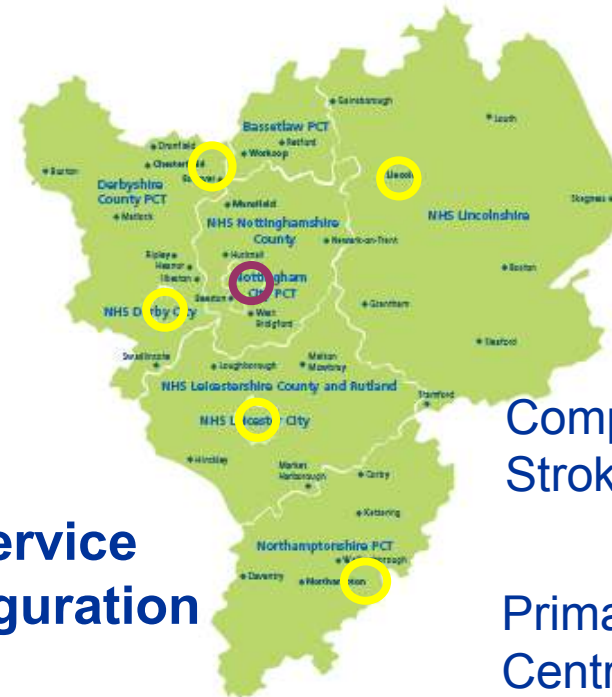


Stroke Improvement Innovation

NHS Improvement 



Direct to CT



Major Service Reconfiguration

Comprehensive Stroke Centre



Primary Stroke Centre



Telemedicine

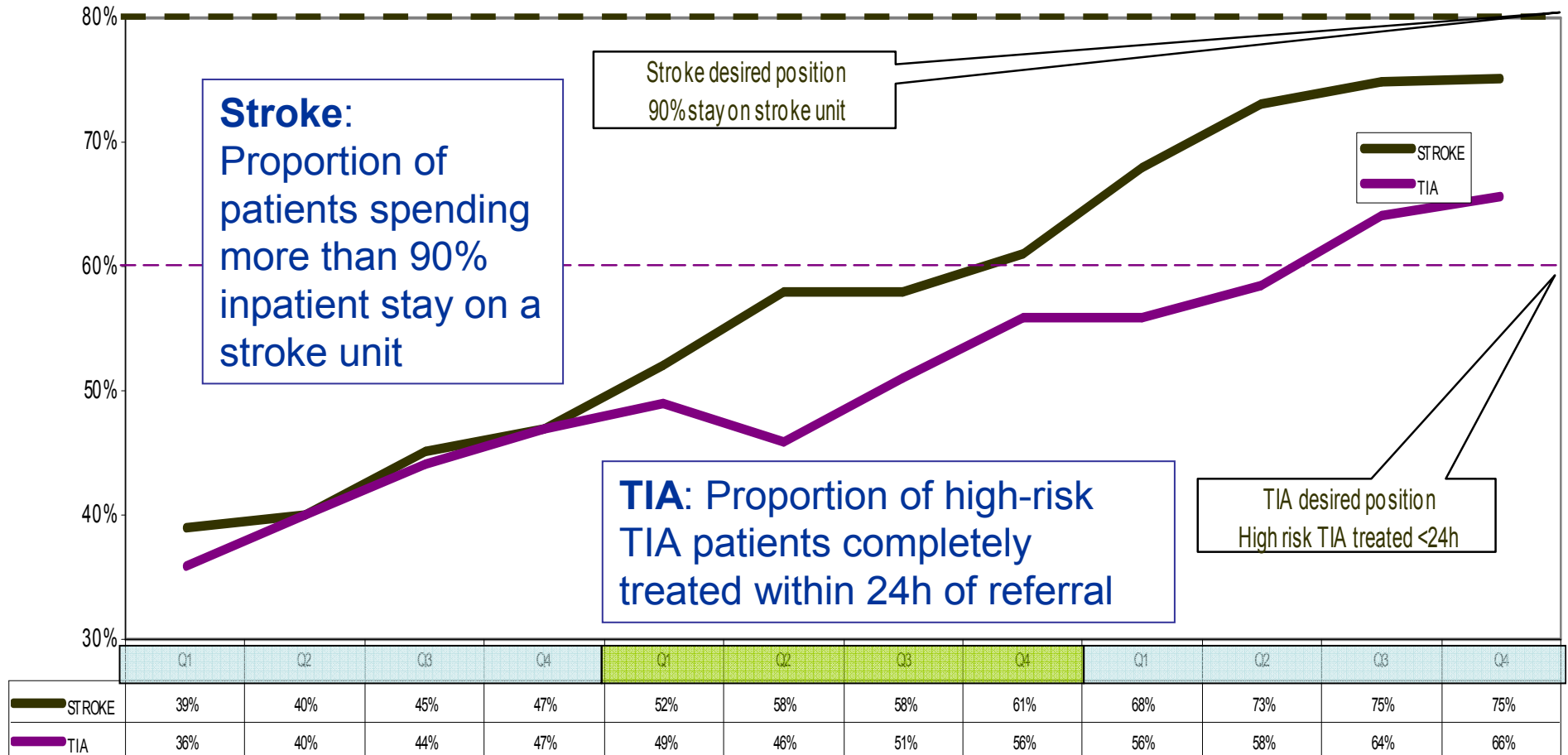


Stroke Specific Educational Framework

Stroke Improvement

Stroke and TIA Vital Signs

Trajectory to Target

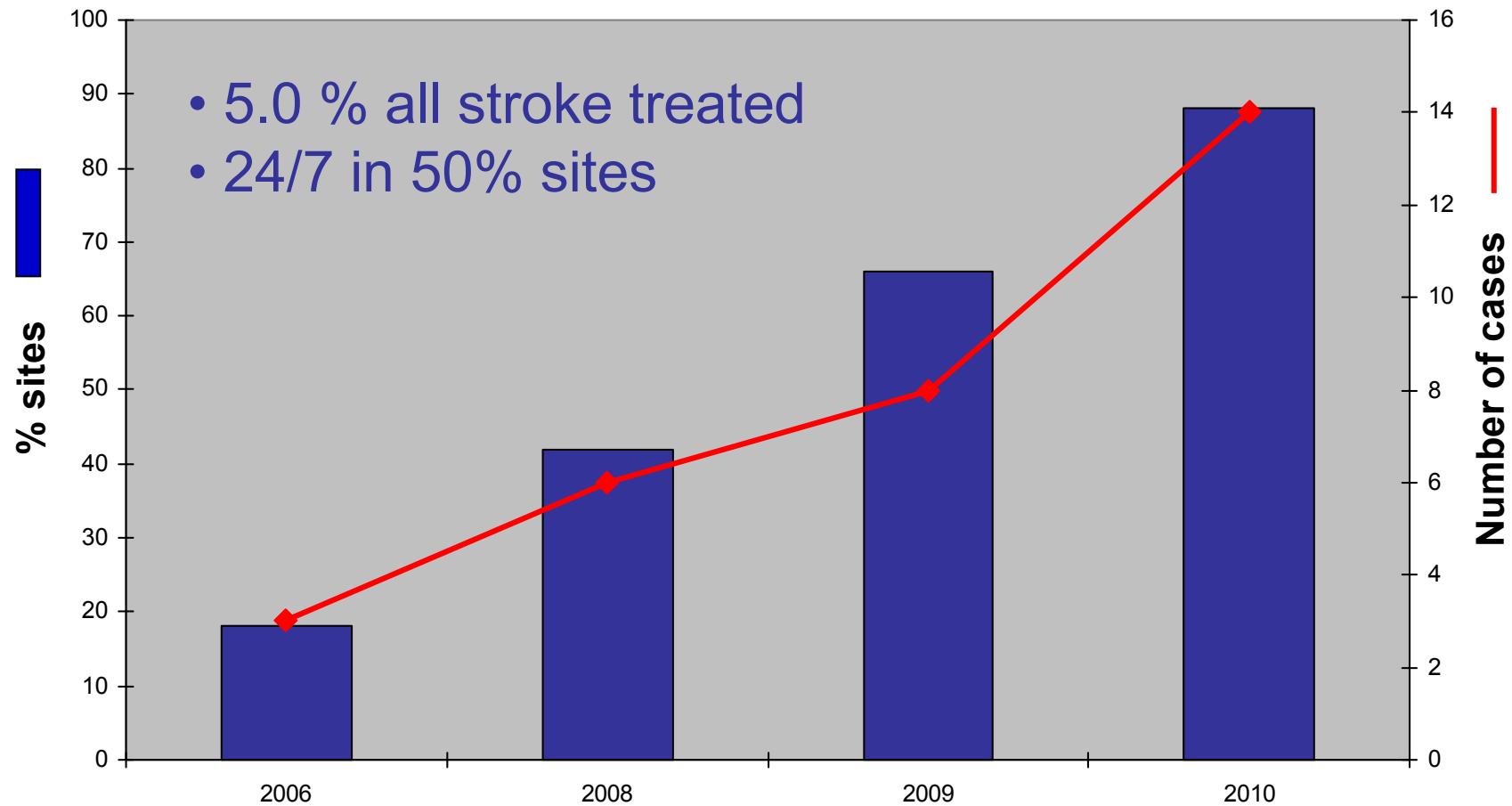


NB A definition change in Q1 08/09 means that direct comparisons with previous quarters may not necessarily be valid

DH analysis of vital sign data

Stroke Improvement

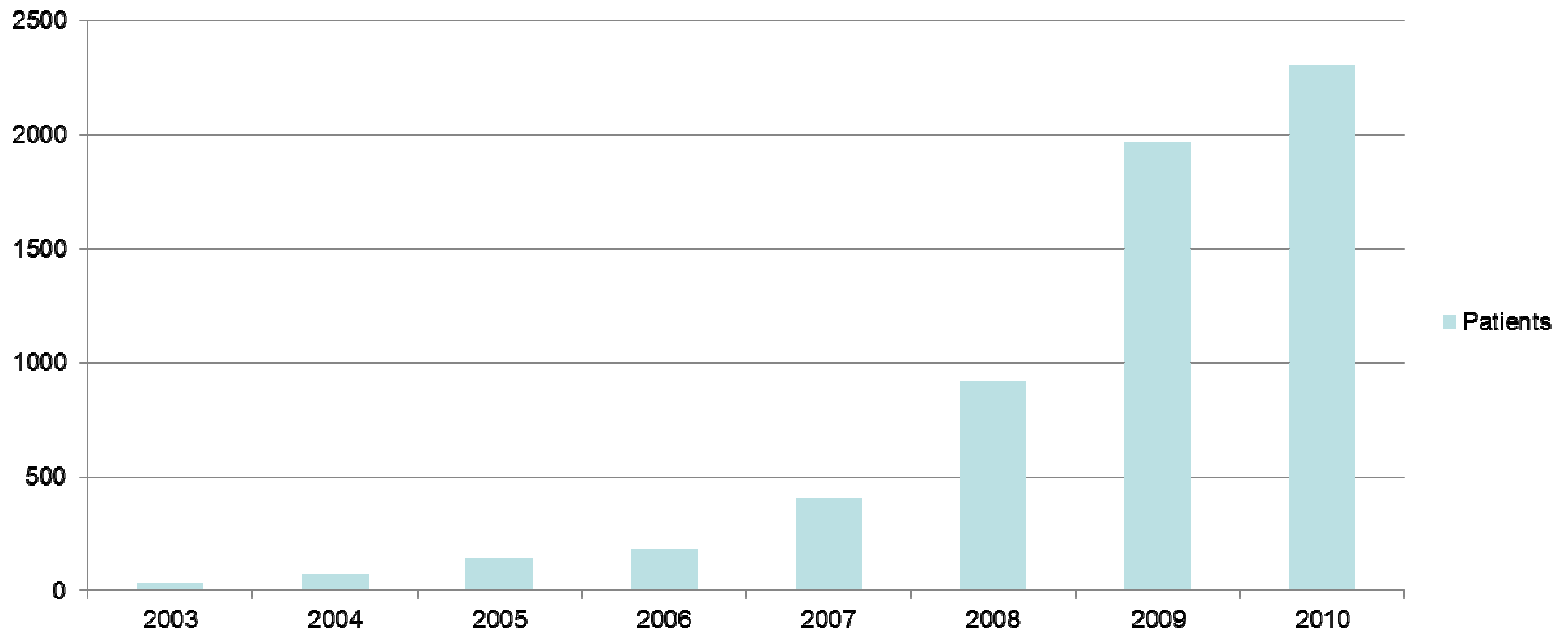
Provision of Thrombolysis



National Sentinel Stroke Audit 2010

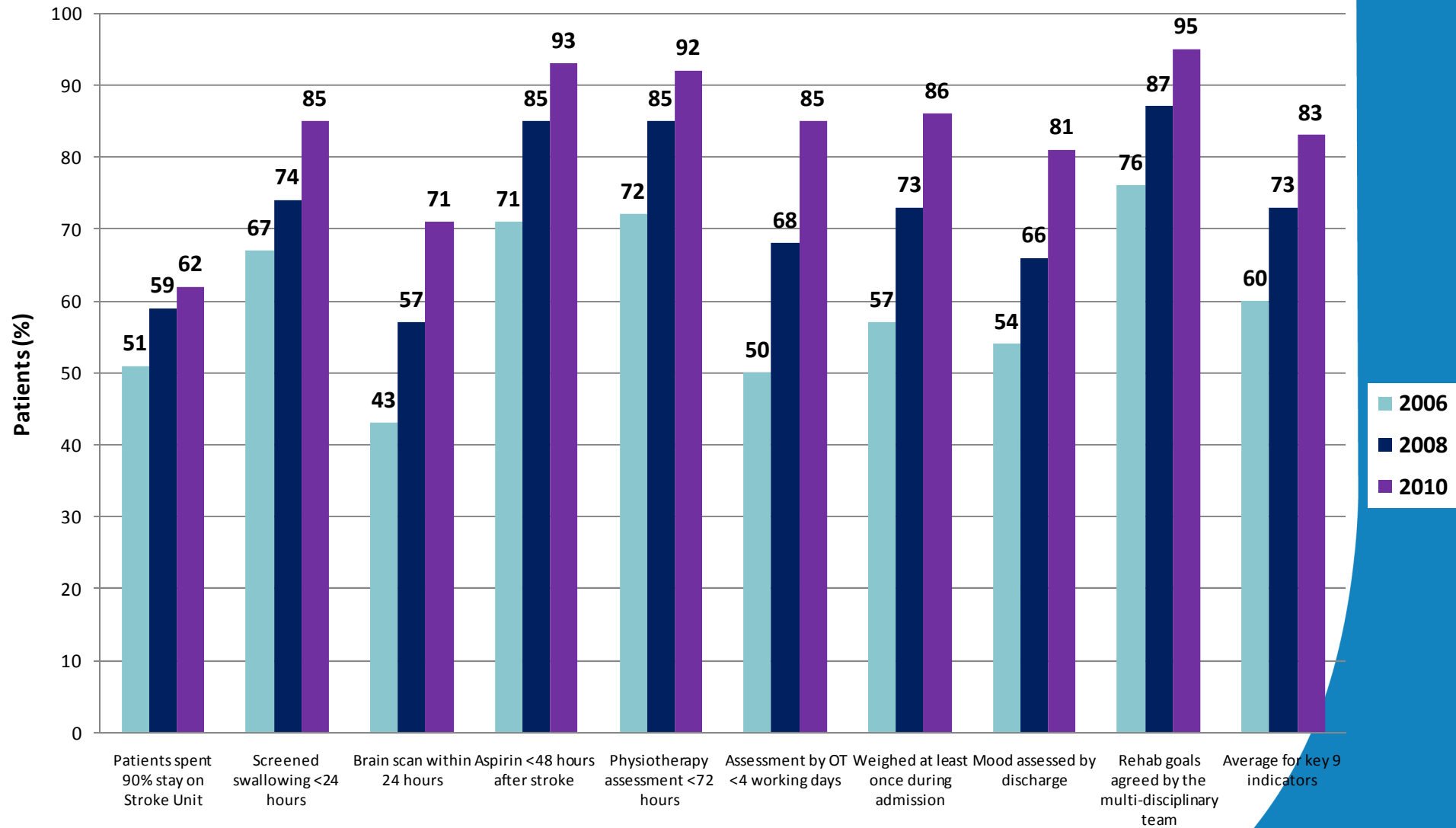
SITS: Safe Implementation of Thrombolysis in Stroke. Patients Treated in England

Patients Treated in England



	2003	2004	2005	2006	2007	2008	2009	2010
Patients treated	39	74	139	181	408	918	1,965	2,308

Nine Key Indicators - Changes Over Time in ENGLAND(%)



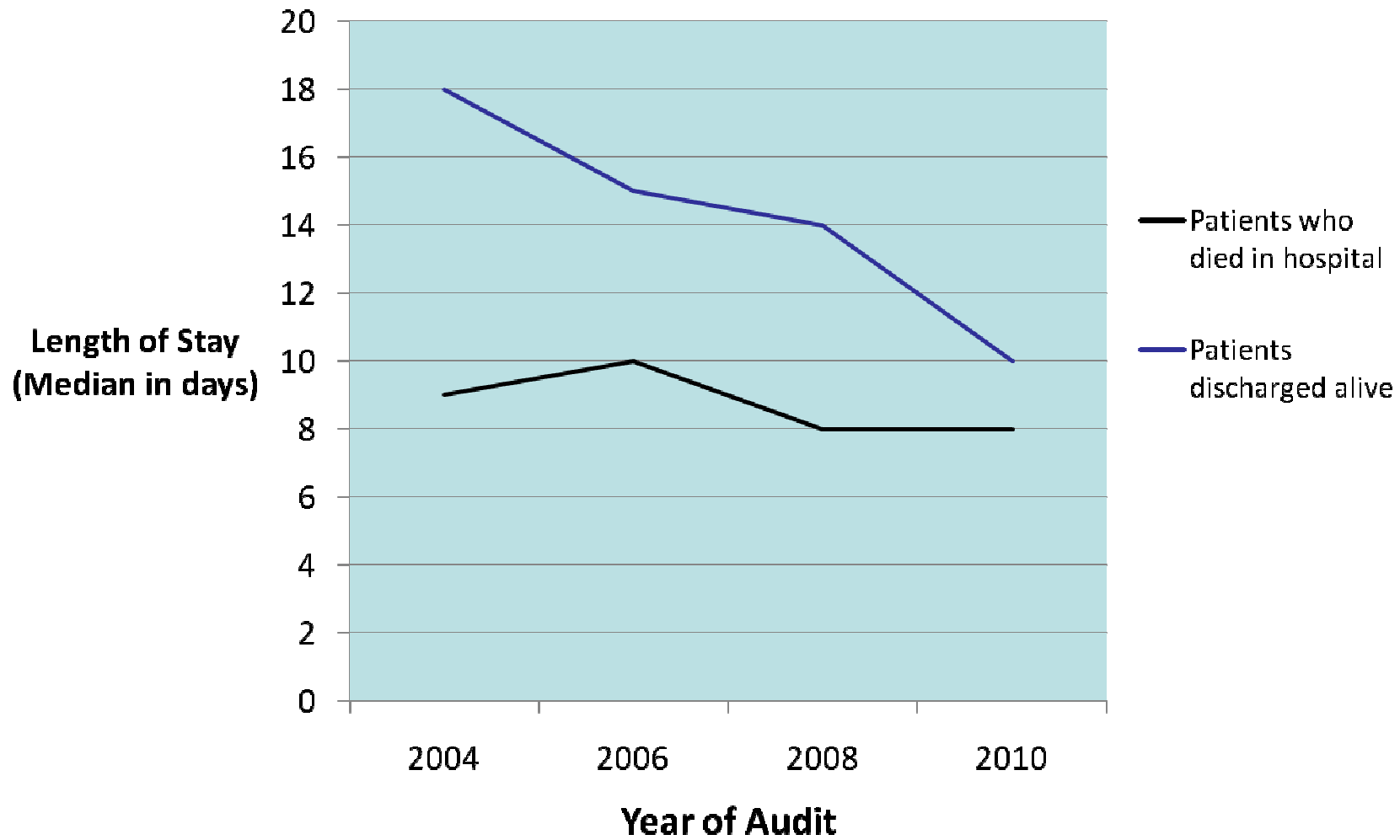
Key Indicator



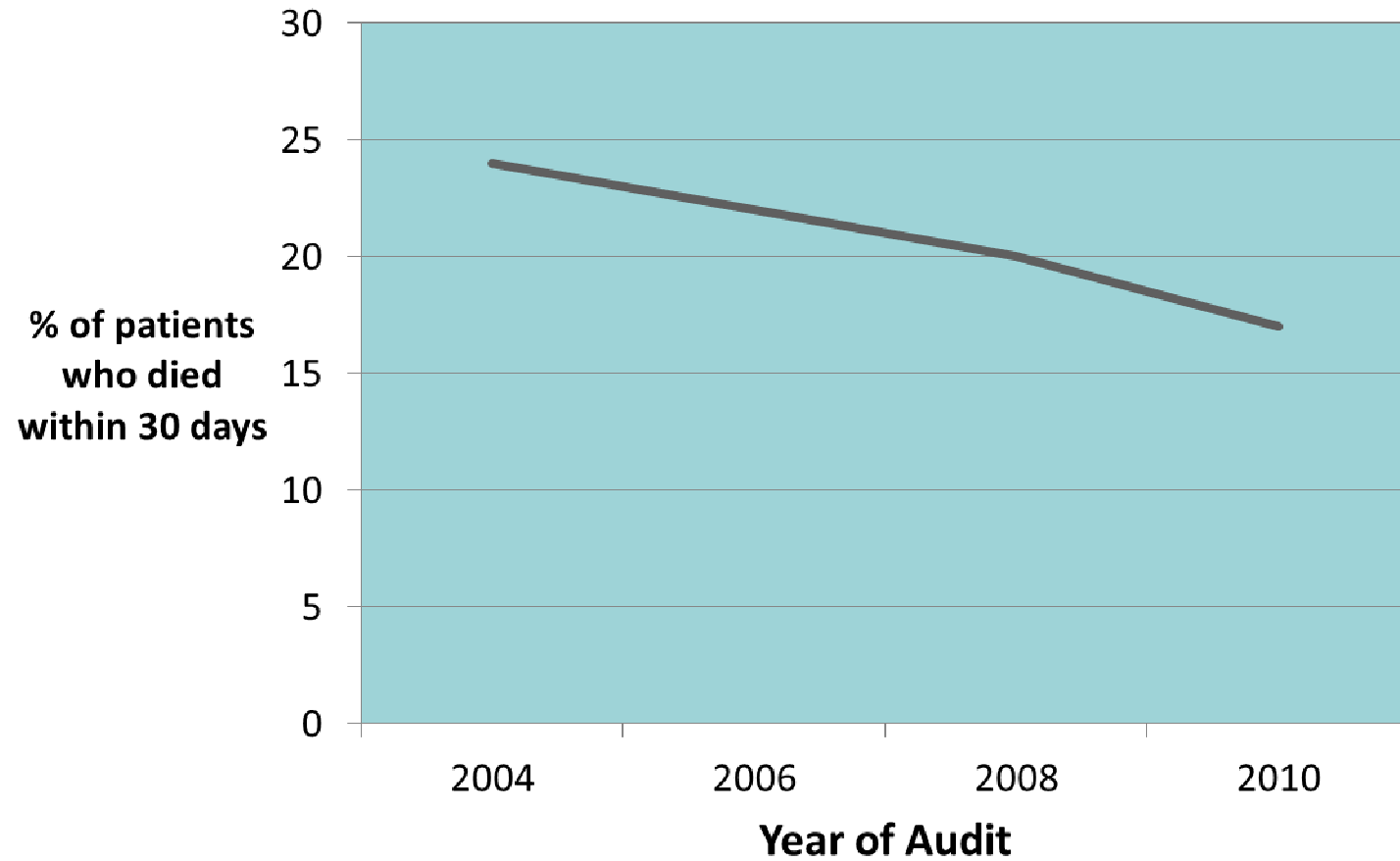
Royal College
of Physicians

Setting higher standards

Length of Stay over Time



30 Day Mortality Over Time

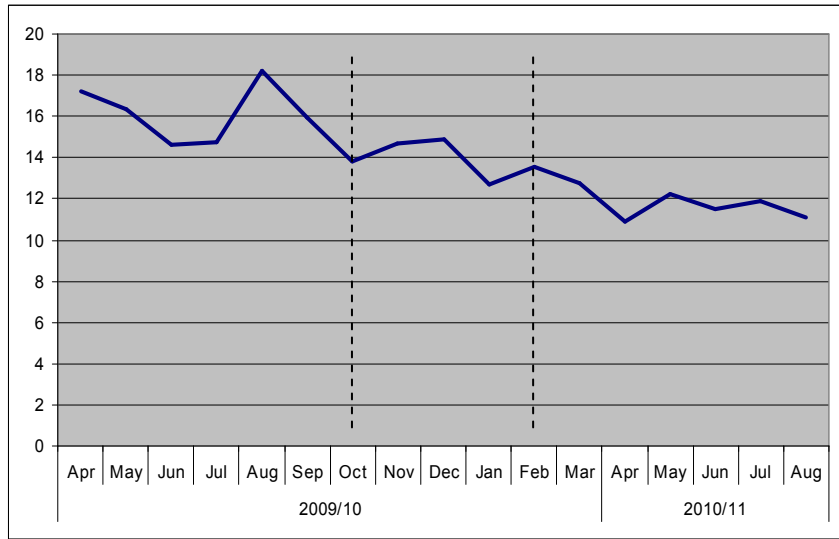


Royal College
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Setting higher standards

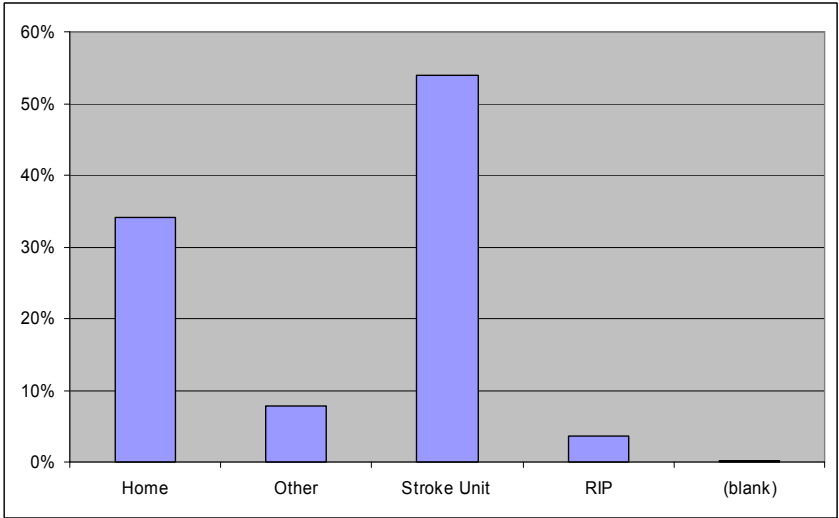
London: Productivity

Average length of stay



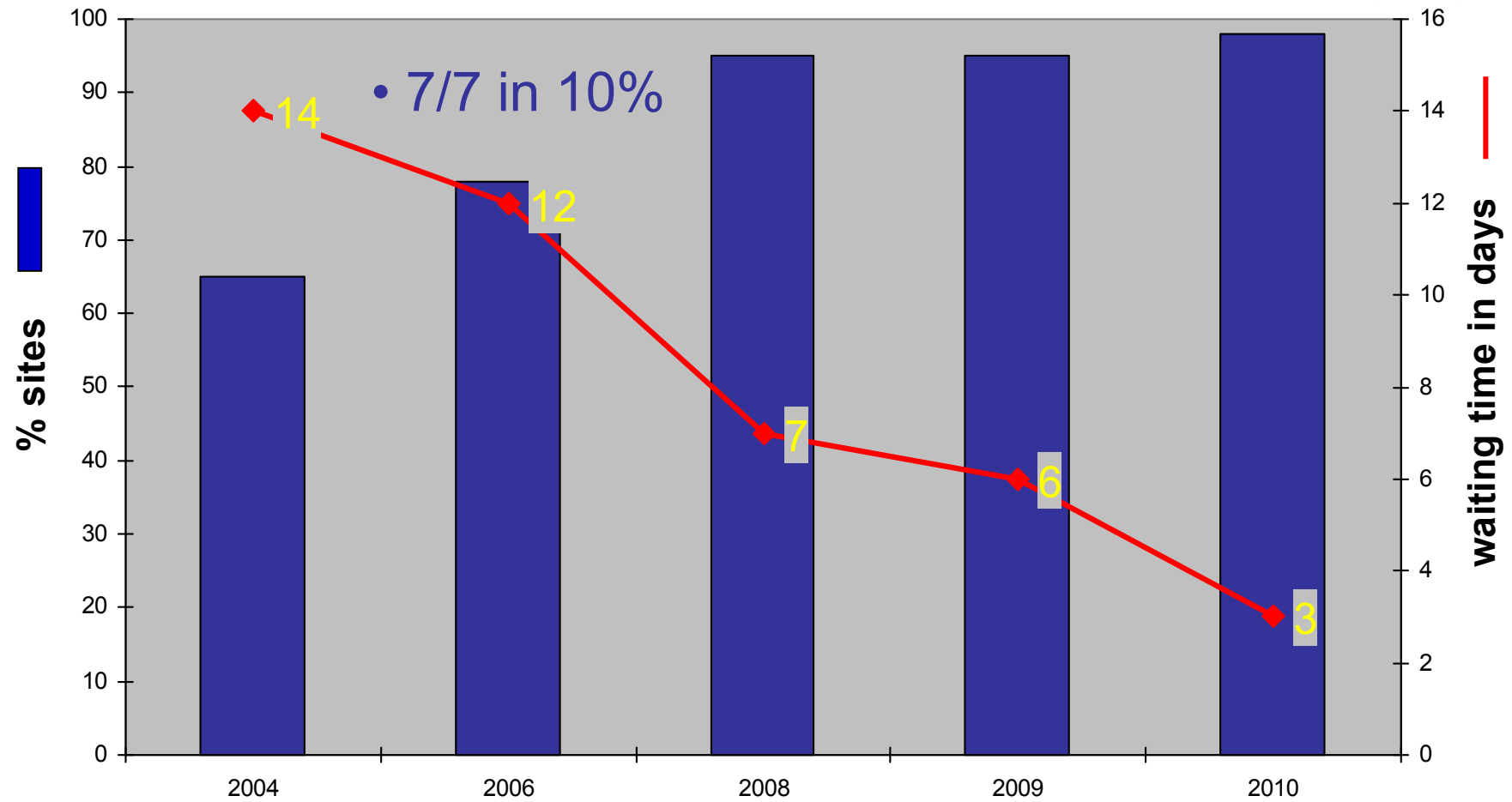
Average total length of stay fallen from 15 days in 2009/10 to 11.5 days in 2010/11 YTD.

HASU destination on discharge



35% of patients discharged home from HASUs. Estimate at beginning of project was 20%, and national mean is 15% at 3 days.

TIA services



National Sentinel Stroke Audit 2010

University Hospitals of Leicester

7 Day TIA Solution

- **Seven day service**, agreed with the PCT with a locally negotiated tariff, using this structure:
 - consultant-led clinic
 - Sat/Sun: 1 Band 6 nurse, 1 clinical aide or clinic clerk
 - SpRs help when available
 - morning attendance
 - **carotid ultrasound screening from 10:00 to 12:30**
 - MRI available 11:00 to 14:30 (5 slots), CT at weekends (5 slots)
 - consultant review from 13:00 onwards
 - Up to 7 patients a day
 - Vital Sign 66%

University Hospitals of Leicester 7 Day Doppler Service

**1 WTE extra staff
9am to 1pm
7 day service**

**Scanning room in
stroke unit**

**Instant reporting
stroke and TIA**

**Within
tariff**



StrokeImprovement

NHS Improvement 

East Kent Hospitals University Foundation Trust

7 Day TIA Solution

- Large geographical area (*1 hour travel from Margate to Ashford*), ageing populations in coastal resorts, three distinct combined stroke units
- 3 sites within one trust geographically separated Mon – Fri service on each site
- **Weekend service rotates** and patients travel to w/e site

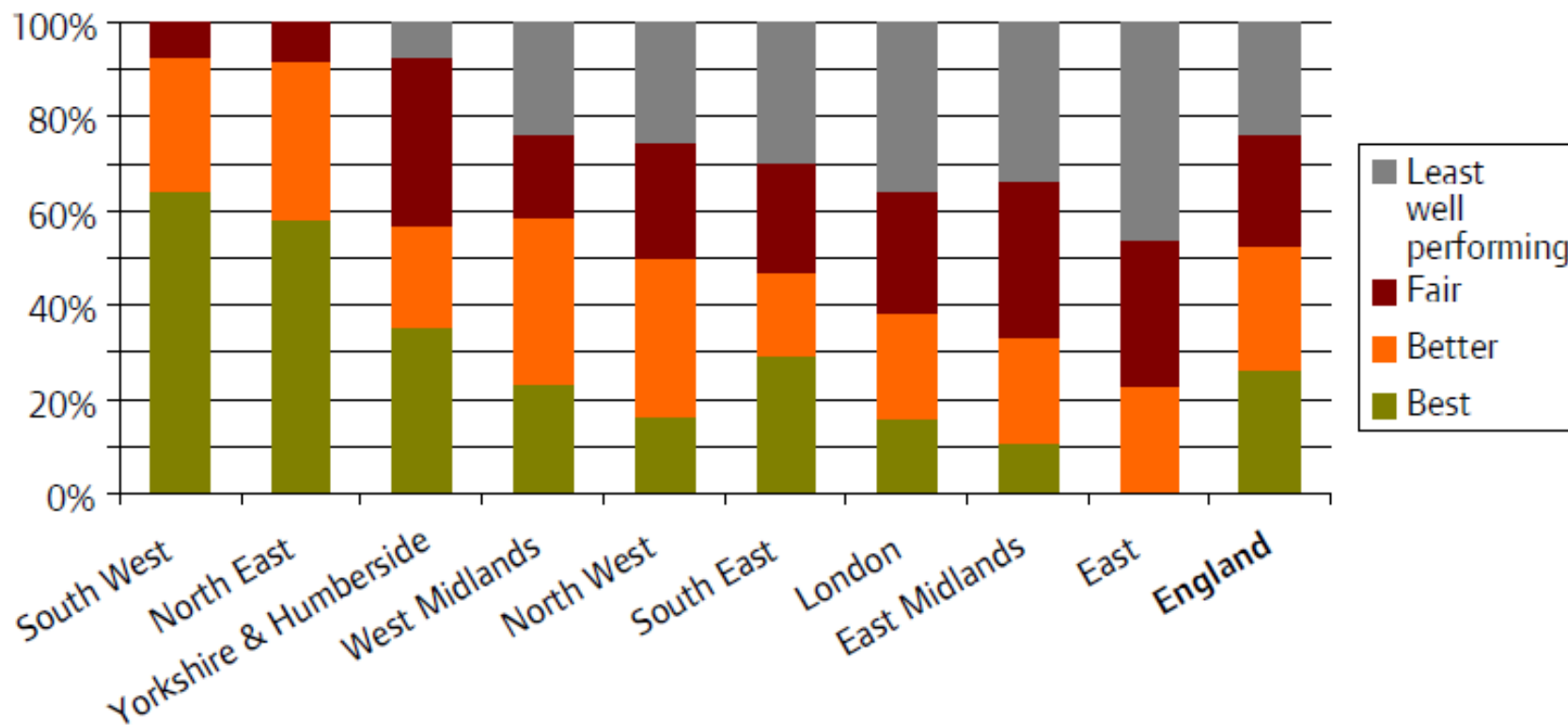




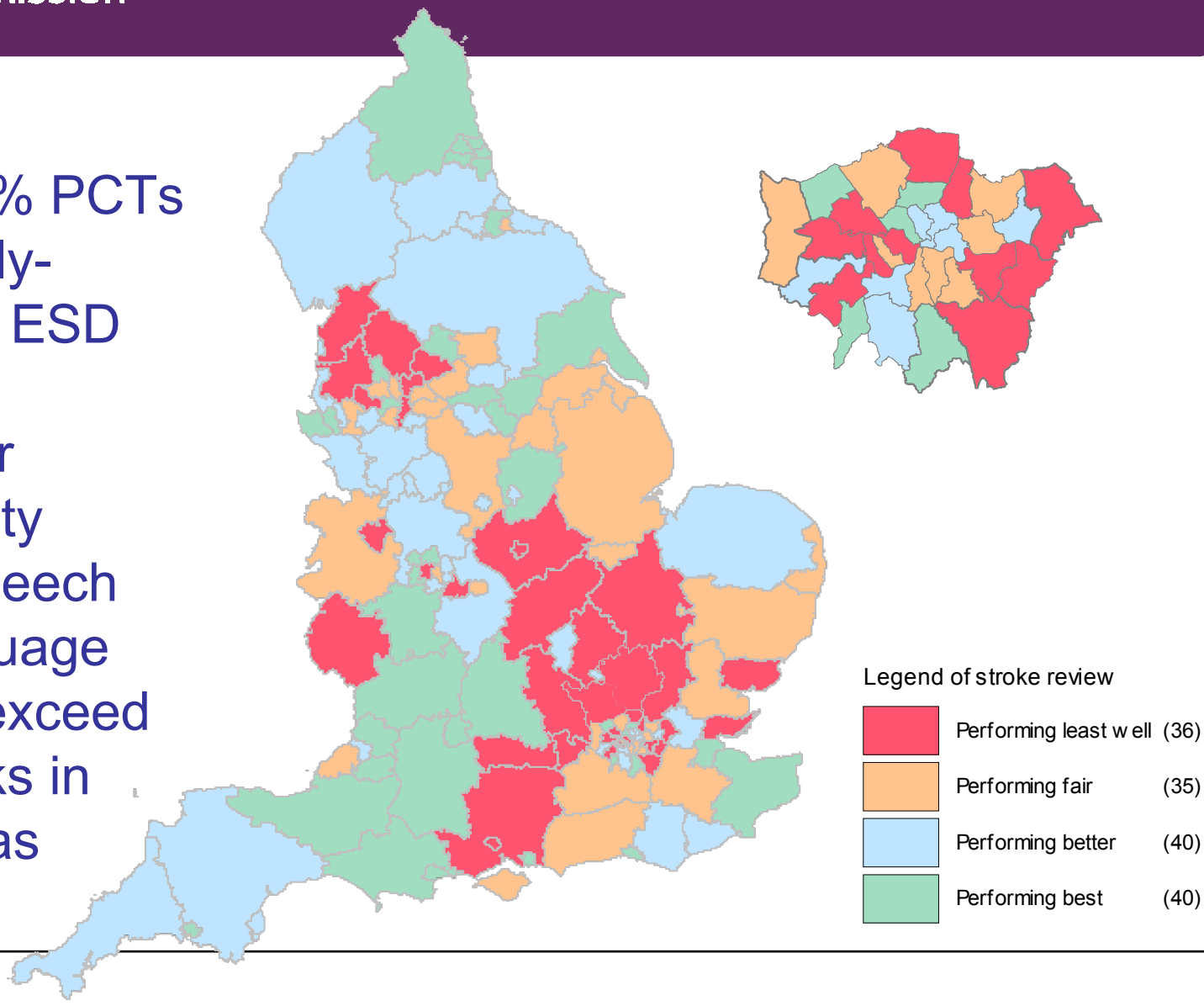
CareQuality
Commission

Supporting Life After Stroke

Percentage of PCTs



- Only 18% PCTs report fully-specified ESD service
- Waits for community based speech and language therapy exceed two weeks in 48% areas



StrokeImprovement

Early Supported Discharge

NHS Improvement 



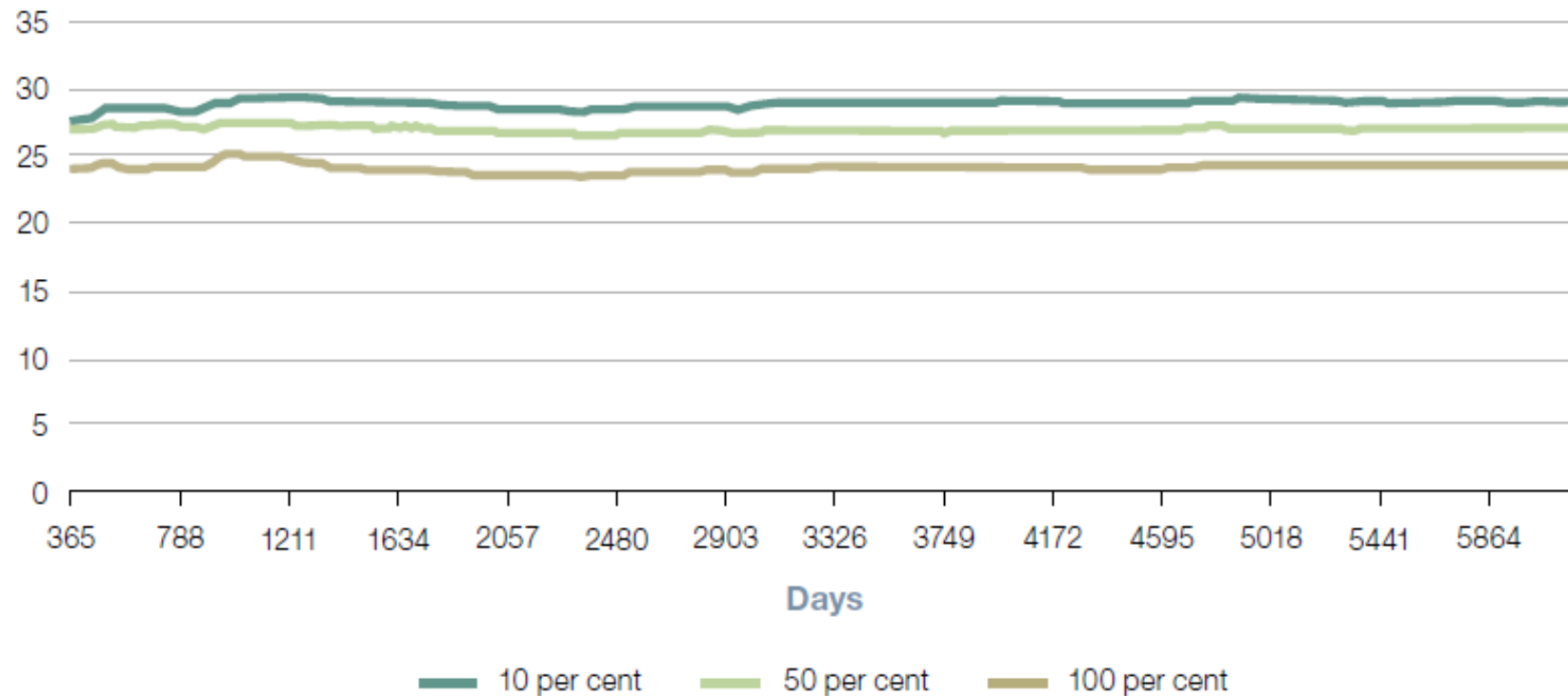
- **Purpose:** Improve outcomes, accelerate discharge home from hospital and provide rehabilitation and support in the home setting
- Only 18% PCTs report fully-specified ESD
- Fear of costs of ‘double running’
- Requires shared, patient-centred vision and trust

Stroke Interventions: Public Health Implications

Intervention	Absolute Risk Reduction for death and dependency	Eligible proportion of stroke patients	Death and dependency avoided in all stroke
Stroke Unit	5.6%	100%	5.6%
Early Supported Discharge	5.5%	40%	2.2%
Aspirin <48h	1.2%	85%	1.0%
rt-PA <3h	13.1%	10%	1.3%
Hemicraniectomy <48h	22.7%	0.5%	0.1%

ASU bed average Usage under alternative ESD provision schemes

Average Bed Usage



Quality and Productivity of ESD

Savings identified from change in pathway



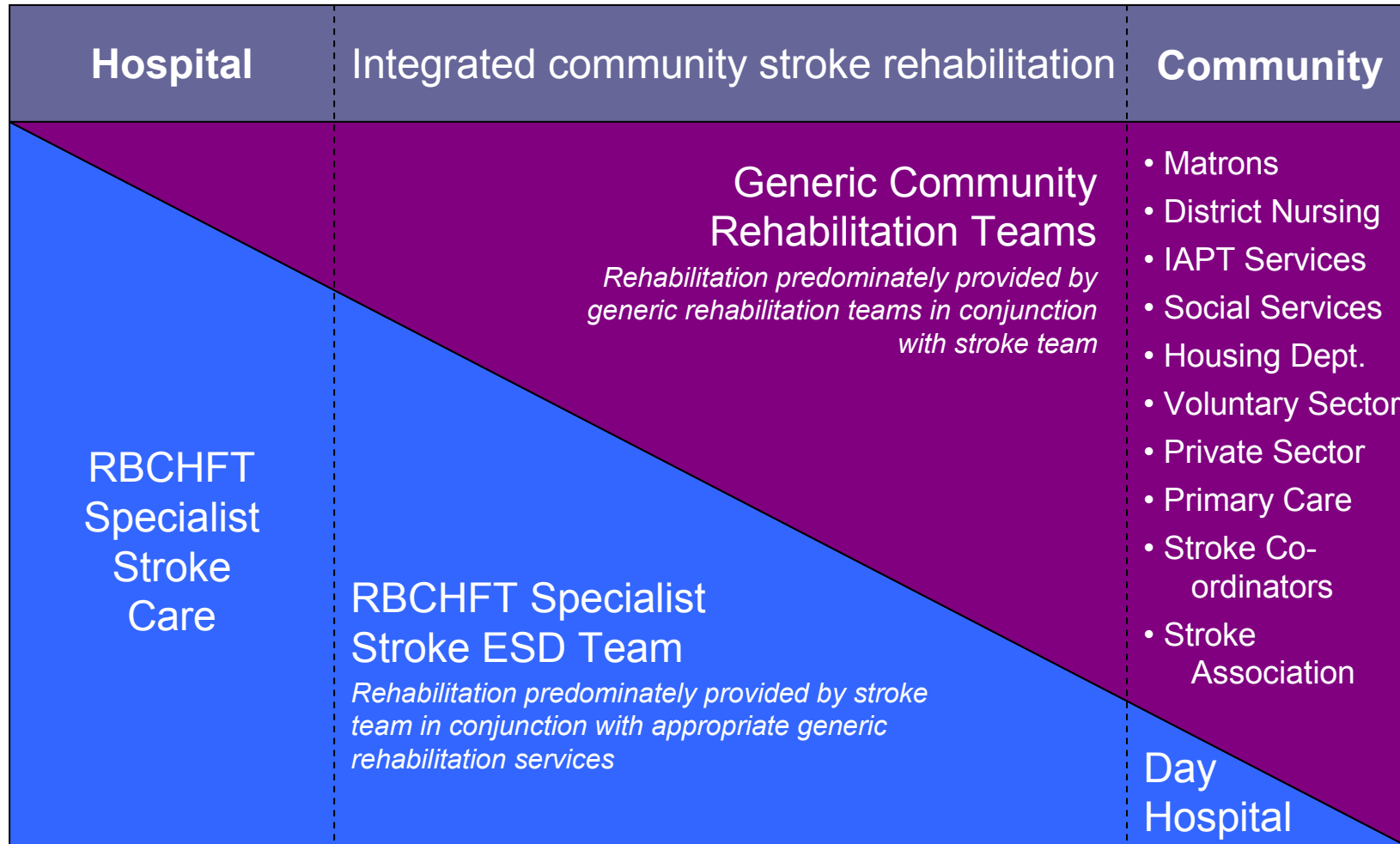
Reduced LoS before Trim Point

- unbundle tariff and PCT/other provider fund
- acute provider with 'vertical integration'

Reduction in excess bed-day costs beyond Trim Point

Reduction of beds/re-use of beds for elective work income

Residential/nursing home costs



ESD Pilot at Bournemouth

ESD Pilot at Bournemouth

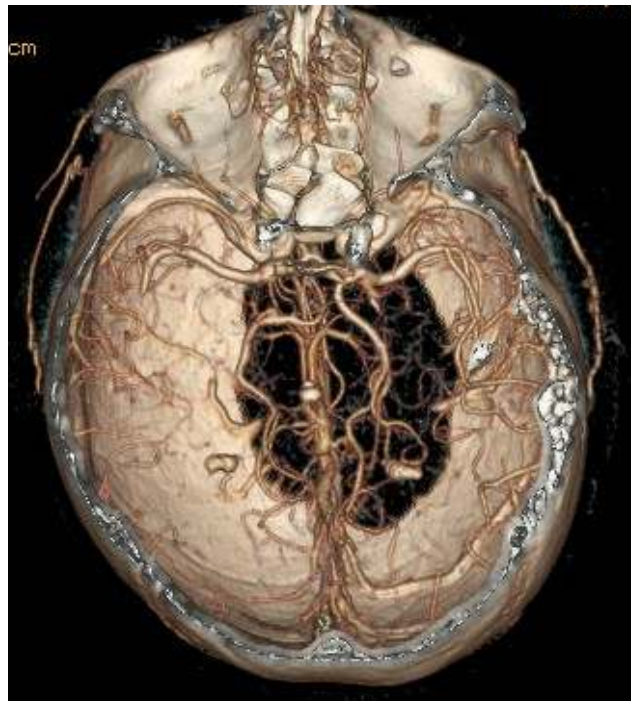
- 53 **patients** discharged with ESD support –averaging 8.8 new patients per week.
- 43 have completed their ESD input, and have now been discharged.
- Active caseload 15-20 at any given time.
- **Reduction in Length of Stay:**
 - In August, an estimated 247.43 bed days have been saved through discharging patients earlier with support of the ESD team.
 - The Trust is now implementing a phased reduction in inpatient bed numbers.

Category	Average Inpatient Length of Stay (Days) Pre-ESD	Average Inpatient Length of Stay (Days) ESD Cohort	Average Number of Bed Days Saved Per Patient	Number of ESD Patients in Category	Estimated Number of Bed Days Saved Overall
Mild	6.7	4.53	2.17	15	32.55
Moderate	27.9	18.28	9.62	14	134.68
Severe/Complex	77.8	57.75	20.05	4	80.2
				TOTAL	247.43

StrokeImprovement

NHS Improvement 

Optimising Management of AF



Under Anti-Coagulation of AF

- 15% of all strokes are caused by AF and 12,500 strokes per year in England are directly attributable to AF
- Amongst patients with recognized AF, approx half of those who would benefit from warfarin are receiving it
- NICE estimate that of 355,000 patients who should be taking warfarin
 - 189,000 are actually receiving it
 - an additional 166,000 should be receiving it

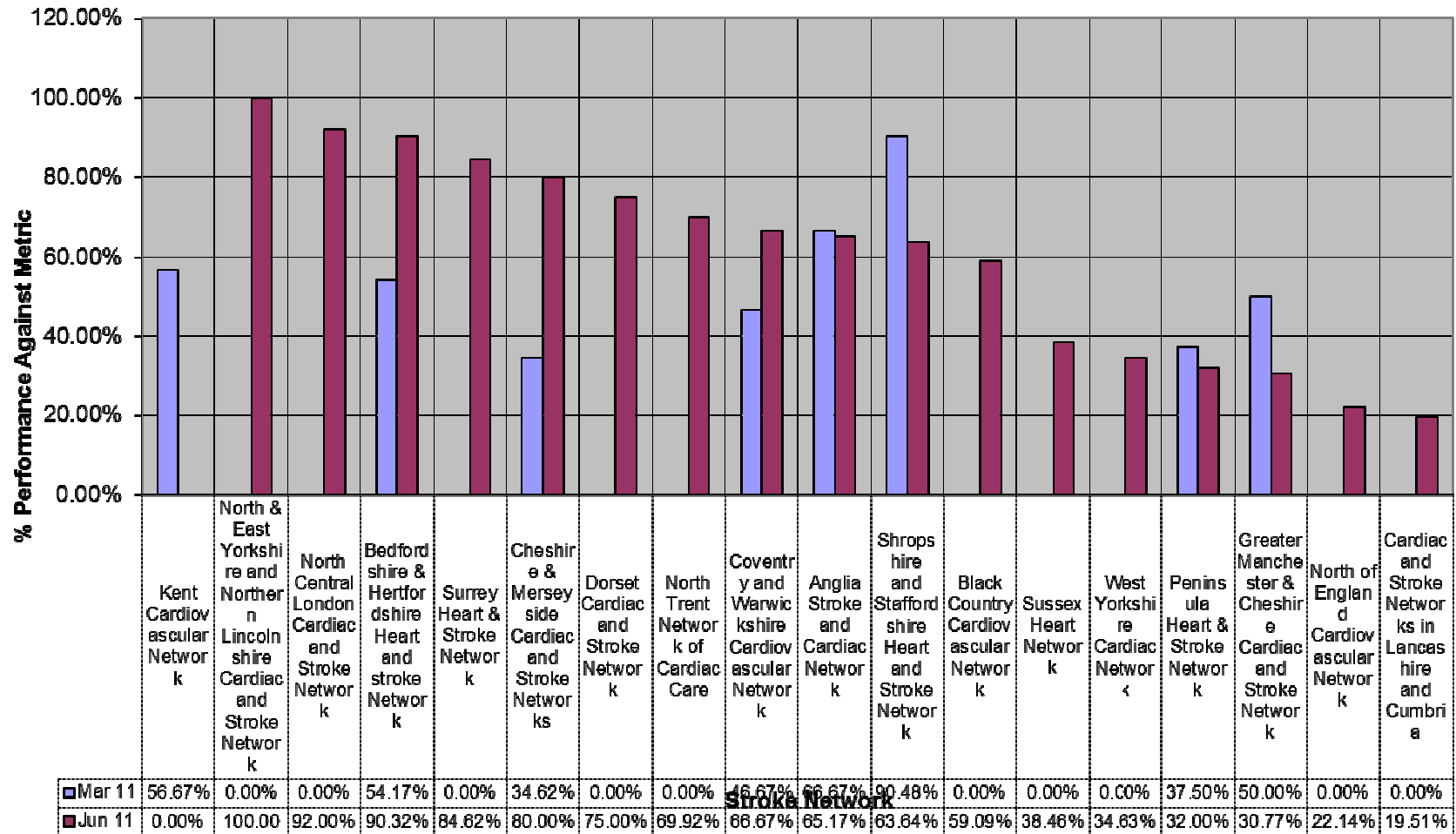
NICE costing report 2006

Strategies for Prevention of Recurrent Stroke

Intervention	Relative RR	Absolute RR/year	NNT/year
Antihypertensive therapy	24%	0.46%	217
Statins	16%	0.4%	250
ASA 50-150 mg after TIA or ischaemic stroke	18-22%	1.3%	77
ASA 50 mg + dipyridamole 400 mg versus ASA	23%	1.0-1.5%	67-100
Clopidogrel versus ASA	8%	0.5%	200
Surgery of a high-degree carotid stenosis	65%	3.1%	32
ASA in high-degree intracranial stenosis	?	?	?
Oral anticoagulation in cardiac source of embolism (AF) INR 2-3	68%	8%	12

ASI 1. Preventable Stroke.

Aspiration: 60% people with AF and ischaemic stroke on anticoagulation



Objective: To reduce the number of strokes caused by AF

- **Improved detection and diagnosis**
 - Raised awareness
 - Promote opportunistic detection
- **Optimal treatment for those diagnosed with AF**
 - Improved assessment of risk- GRASP
 - Appropriate management of risk
 - Improve anticoagulation services

Would AF Screening be Cost Effective?

166,000 patients not treated (NICE)

4,500 strokes prevented (NNT37)

Savings

£44,000 per stroke prevented (Saka)

£Millions

198

Costs

Screening

2

Treatment

53

Total cost saving

145

Choice of AF Screening Mode












- Systematic screening
- Opportunistic screening
 - Flu clinic
 - Flagging
 - Chronic disease management

Opportunistic Computer-Prompted AF Screening 5/08 – 5/09

- 83.3% screened opportunistically
- 13% with irregular pulse
- 6.3% had ECGs
- 36% had AF on ECG
- Number needed to screen 43
- Change in prevalence 1.32 -> 1.82%
- Prevalence of 65ys and older: 10.9%



Quality and Productivity

 <p>NHS Improvement</p> <ul style="list-style-type: none"> CANCER EMERGENCIES HEART LUNG STROKE <p>Heart and Stroke Improvement Atrial fibrillation in primary care: making an impact on stroke prevention National priority project final summaries October 2009</p> 	 <p>NHS Improvement</p> <ul style="list-style-type: none"> CANCER EMERGENCIES HEART STROKE <p>Heart and Stroke Improvement Commissioning for Stroke Prevention in Primary Care - The Role of Atrial Fibrillation</p> 
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GRASP AF

Guidance on Risk Assessment & Stroke Prevention for Atrial Fibrillation

- Free data extraction tool which runs on all GP computer systems under **CHART**
- Identifies patients at high, medium and stroke risk using **CHADS2** criteria
- Provides high quality patient level data as well as practice summary data in a dashboard. The latter can be uploaded to **CHART ONLINE** for PCT's to access
- Data extracted includes **CHADS2** score, antithrombotic prescribed as well as exception coding to taking Warfarin e.g. contraindicated or declined

Audit of Atrial Fibrillation and CHADS2 Scores

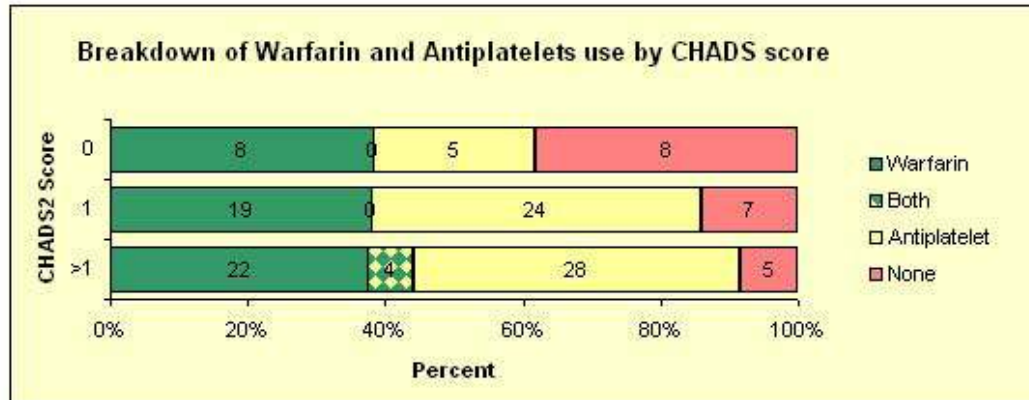
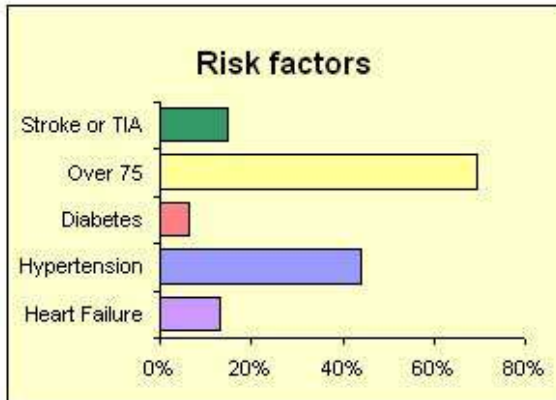
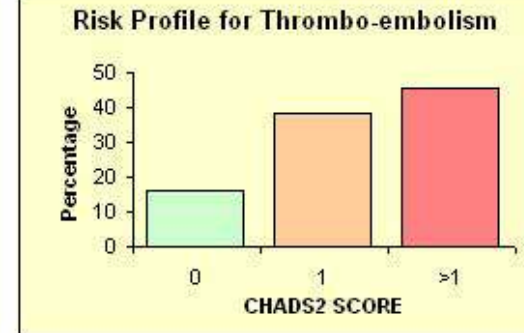
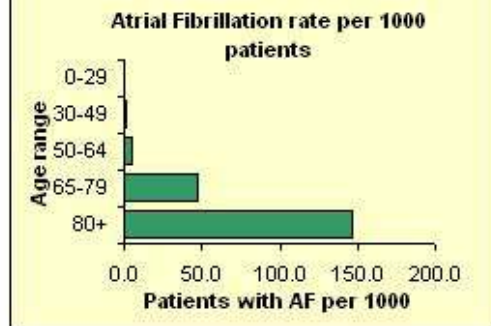
Classic View

Practice:

Reference Date for Audit 03/07/2008

Total Practice Population 9824

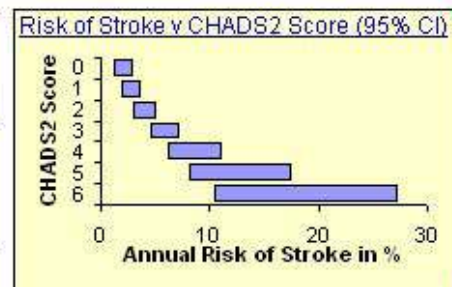
	Total	Percent
No. with Atrial Fibrillation	130	1.32
Percent of over 65s with AF		8.12



Strokes Expected Annually in the 33 high risk untreated

2.0

(95% CI 1.4 to 2.6)

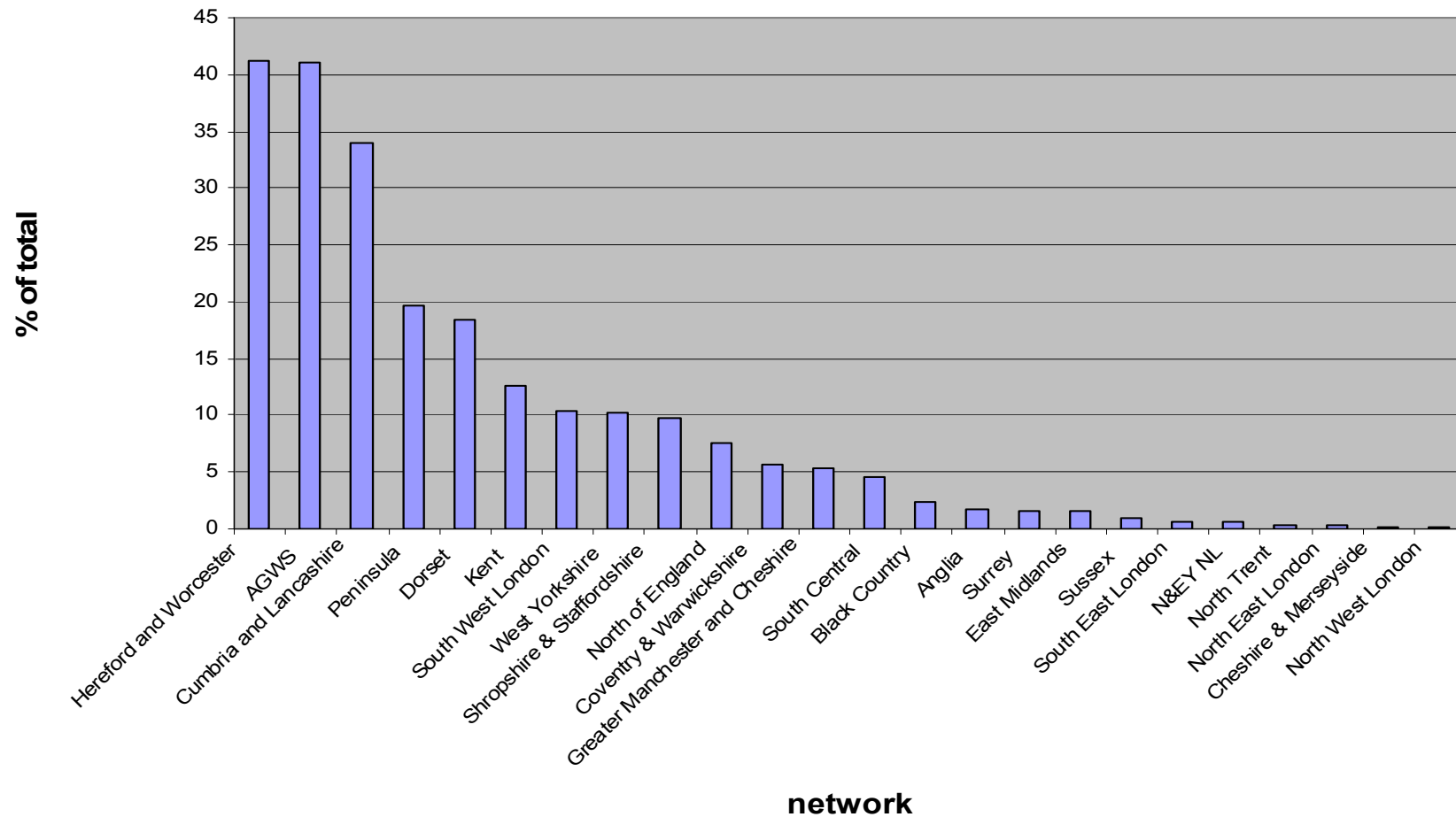


[ADVICE](#)

[REFERENCES](#)

[PODCAST](#)

GRASP data- % of all practices by network



GRASP Data- Prevalence of AF

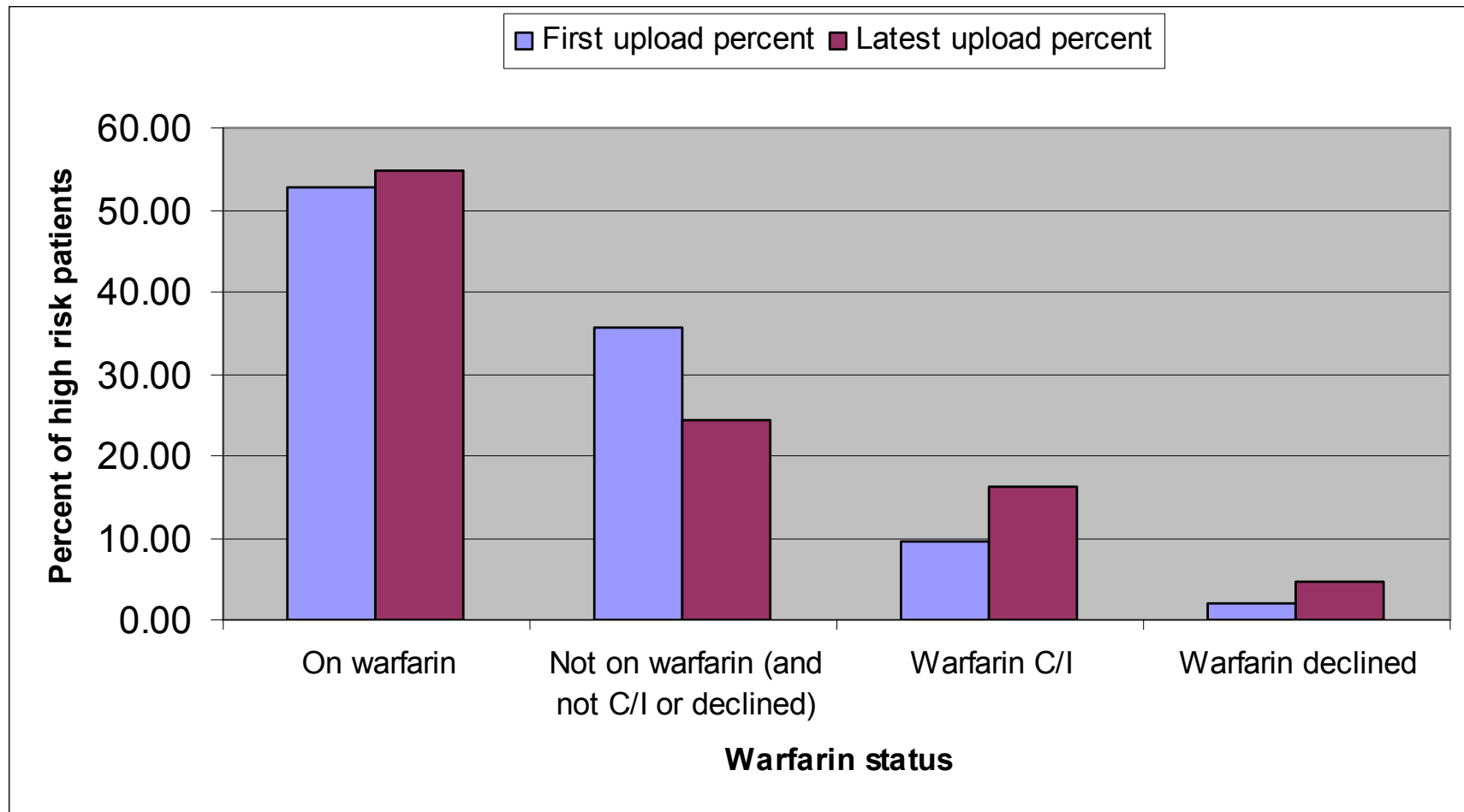
All Networks Feb 2011	Number patients with AF	Prevalence of AF (%)
Total	132,499	1.72

Total list size: 6,269,538

GRASP Data- Number by CHADS2 Score

CHADS2 score	Number of patients (%)
0	13,025 (17.2%)
1	20,606 (27.3%)
>1	41,892 (55.5%)
Total	75,523

GRASP Data- Warfarin Prescribing

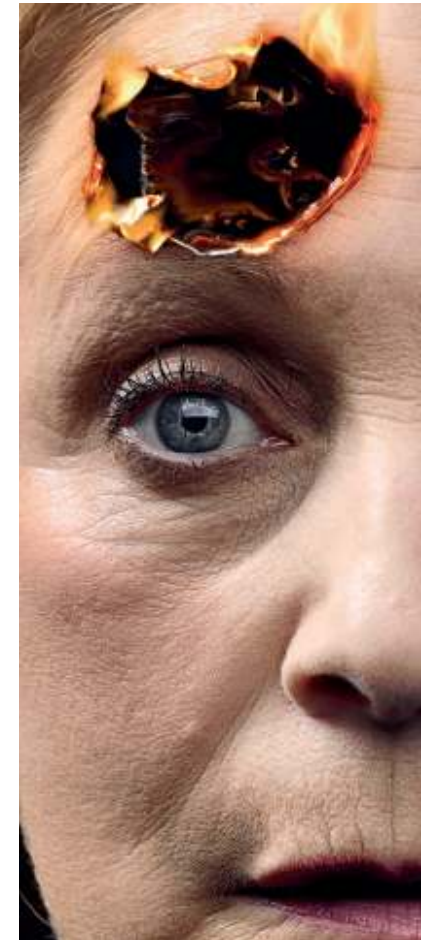


Accelerating Stroke Improvement

Making Progress?

Key Factors

- 1. Raised Awareness***
- 2. Co-produced National Policy***
- 3. Leadership***
- 4. National Audit and Data***
- 5. Whole-System Engagement***
- 6. Networks***





NIMAST Conference 2011

The Stroke Journey

21st October 2011

Lagan Valley Island Centre