



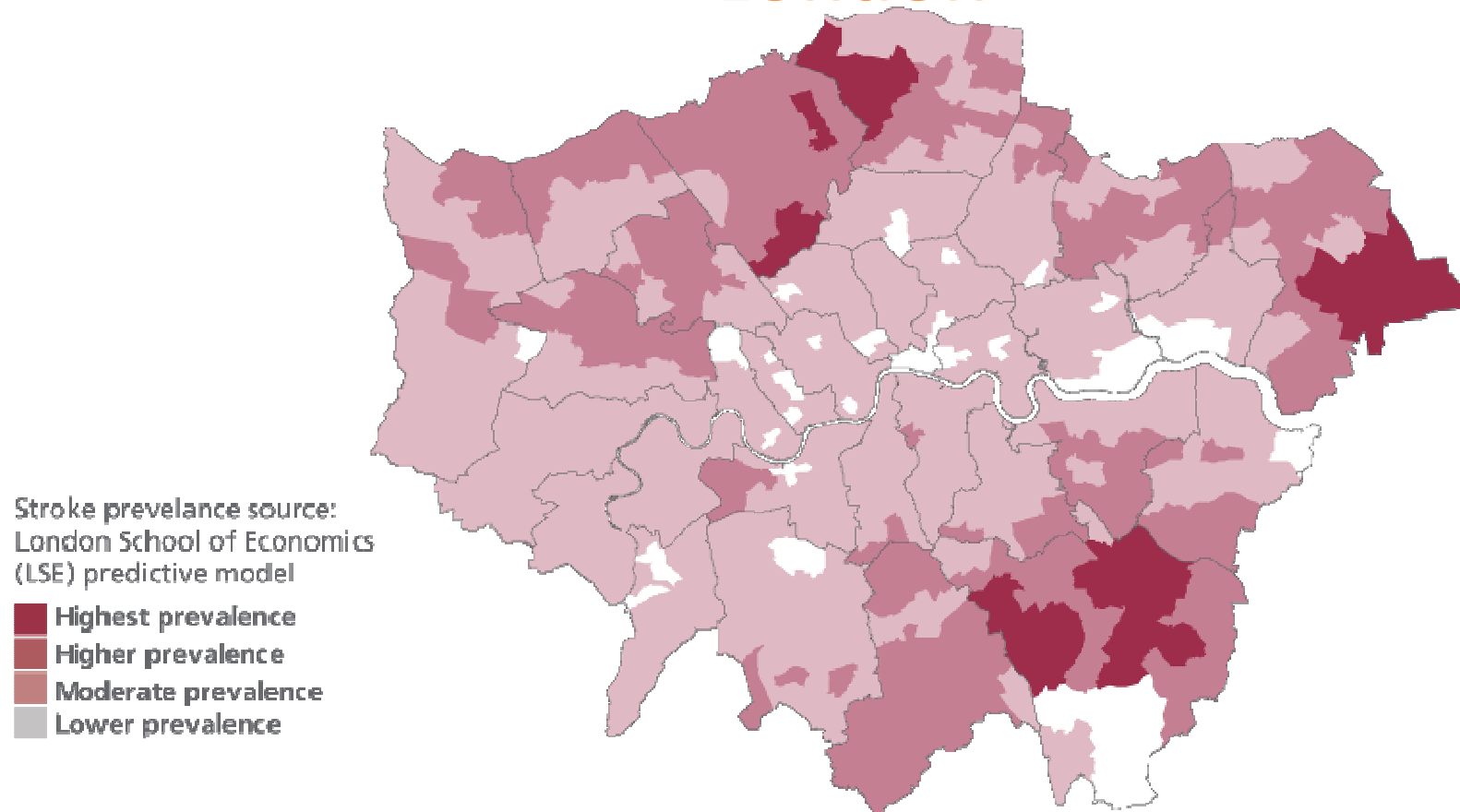
London Cardiac and Stroke Networks

The London Stroke Strategy: Impact on quality of hyperacute care

Hilary Walker and Tony Rudd on behalf of the
London Clinical Advisory Group



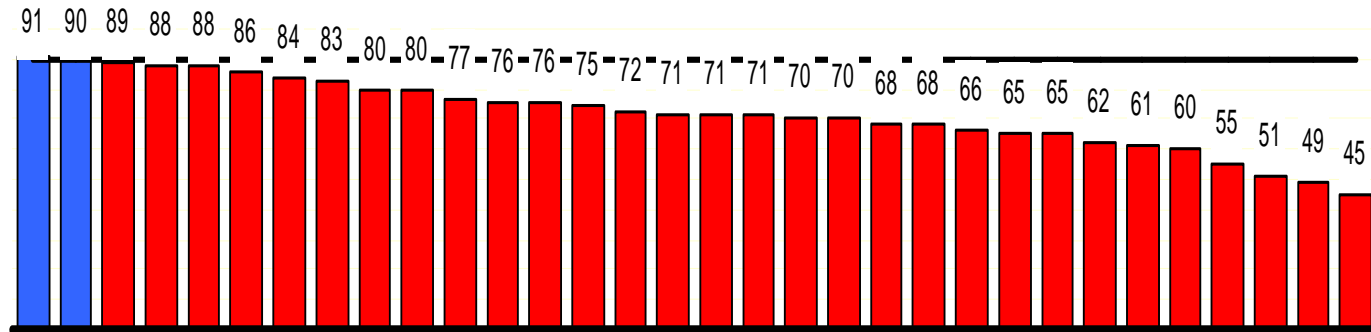
The scale of the problem of stroke in London



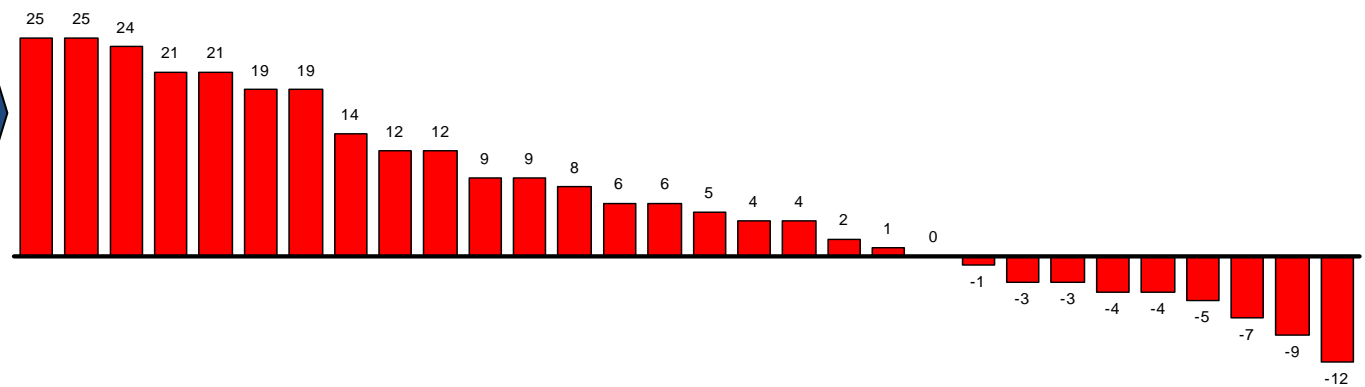
- Second biggest killer and most common cause of disability
- Population >8 million
- 8,500 strokes a year in London with 2000 deaths

A quick reminder of where we have come from

London Stroke Providers against Sentinel Audit 12 key indicators 2006



Change in London Stroke Providers against Sentinel Audit 12 key indicators 2006 vs 2004 scores



London Stroke Strategy

- Additional £21m per year for acute stroke care but only paid if hospitals delivering the required quality
- Centralise hyperacute (HASU) care into 8 units situated to provide easy access to the whole population (no more than 30 minutes by ambulance)
- All acute stroke patients admitted to HASU. This is not just a thrombolysis service
- 24 stroke units for on going rehabilitation
- Improve community care and longer term rehabilitation
- Neurovascular services for patients with TIA

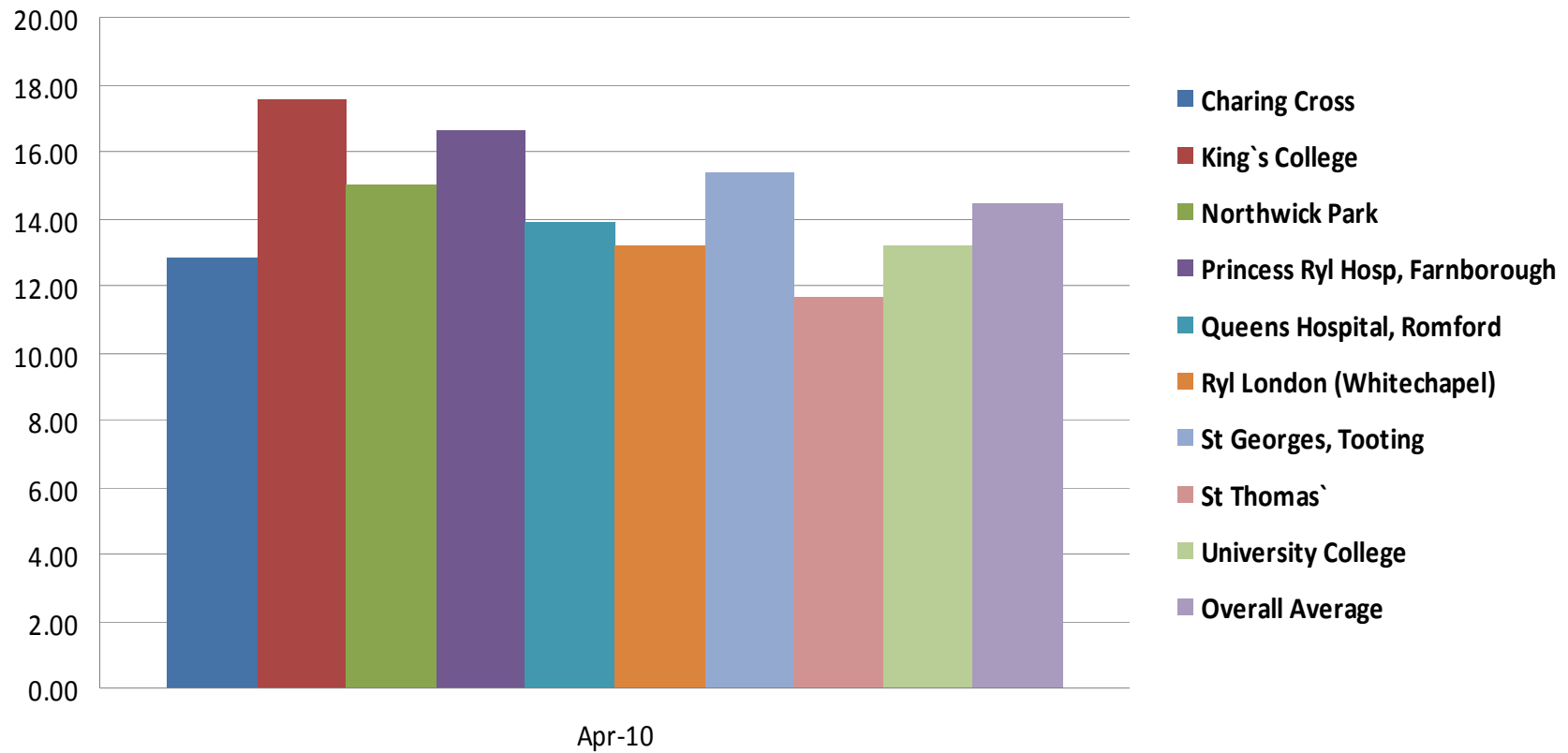
30-minute blue light ambulance travel time to the hyper-acute stroke units



The green area shows the areas that are within 30 minutes travel time (under ambulance blue light conditions) of a HASU

Journey Times

Avg Time from Scene to Hospital



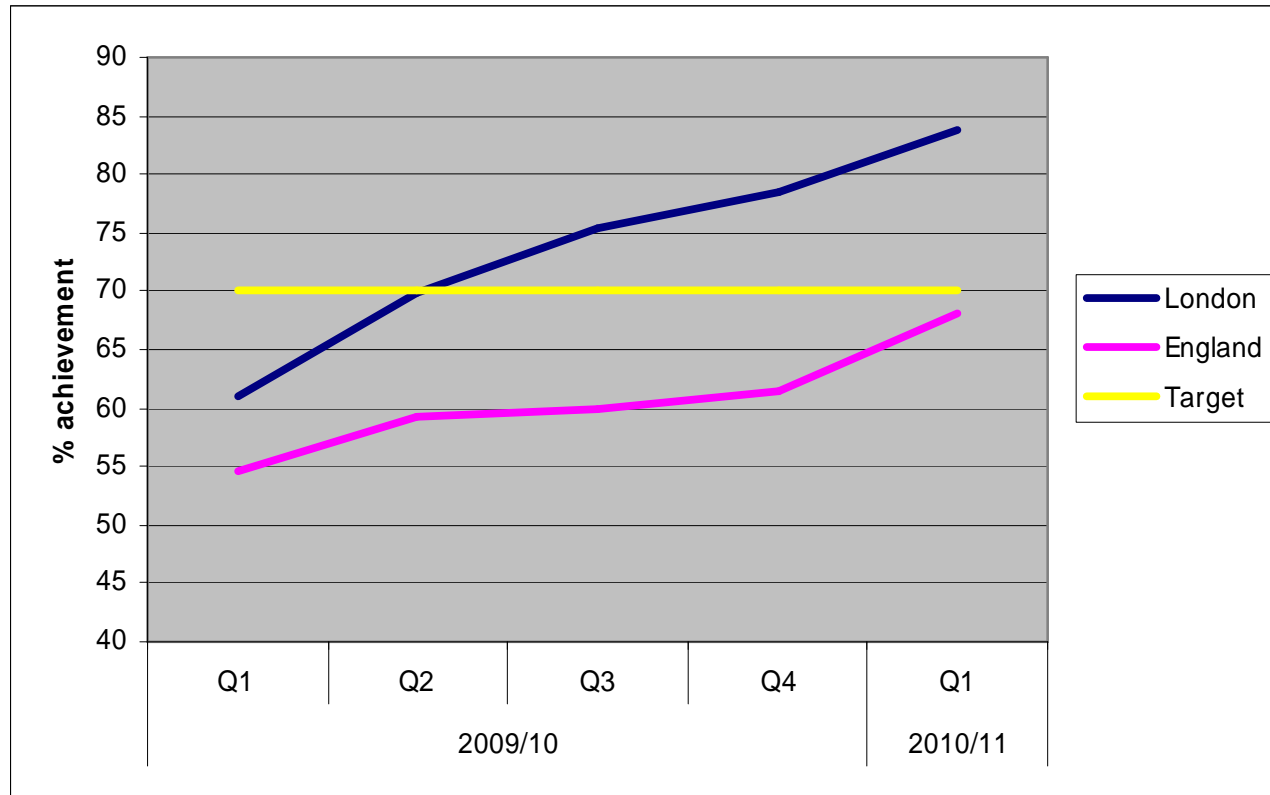
Early Data

- Data on 5227 patients between April and Sept 2011
 - 695 (13%) TIAs
 - 3228 (62%) strokes
 - 1304 (25%) mimics
- 4235 (81%) patients arrived by ambulance
- 135 (2.5%) in hospital strokes
- 38% brain imaging within 30 mins arrival
- 95% brain imaging within 24 hours

Early Data

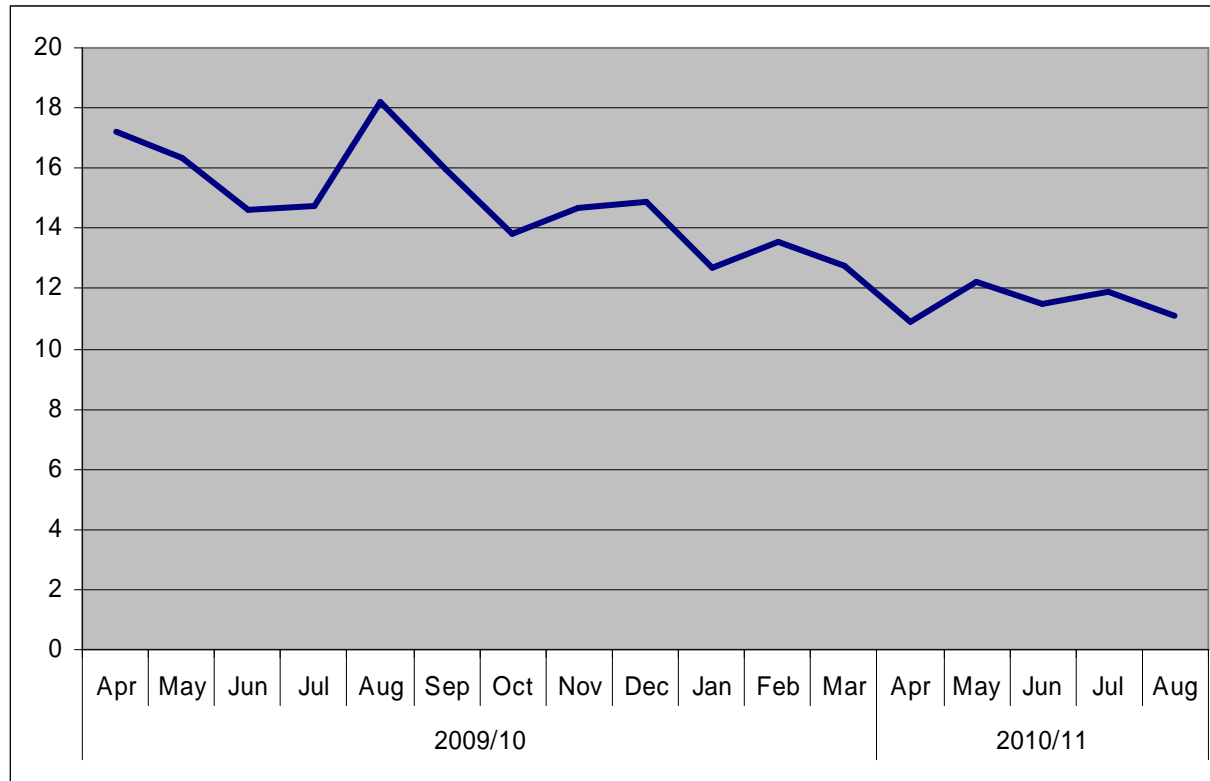
- 74% in a HASU within 4 hours of arrival hospital
- 14% thrombolysed (range between HASUs 9-27%)
- Median door to needle time 46 mins (range 10-504 mins)
- 93% swallow screened within 24 hours
- 86% of patients assessed by physiotherapist within 72 hours

Early Outcomes



% of patients spending 90% of their time on a dedicated SU

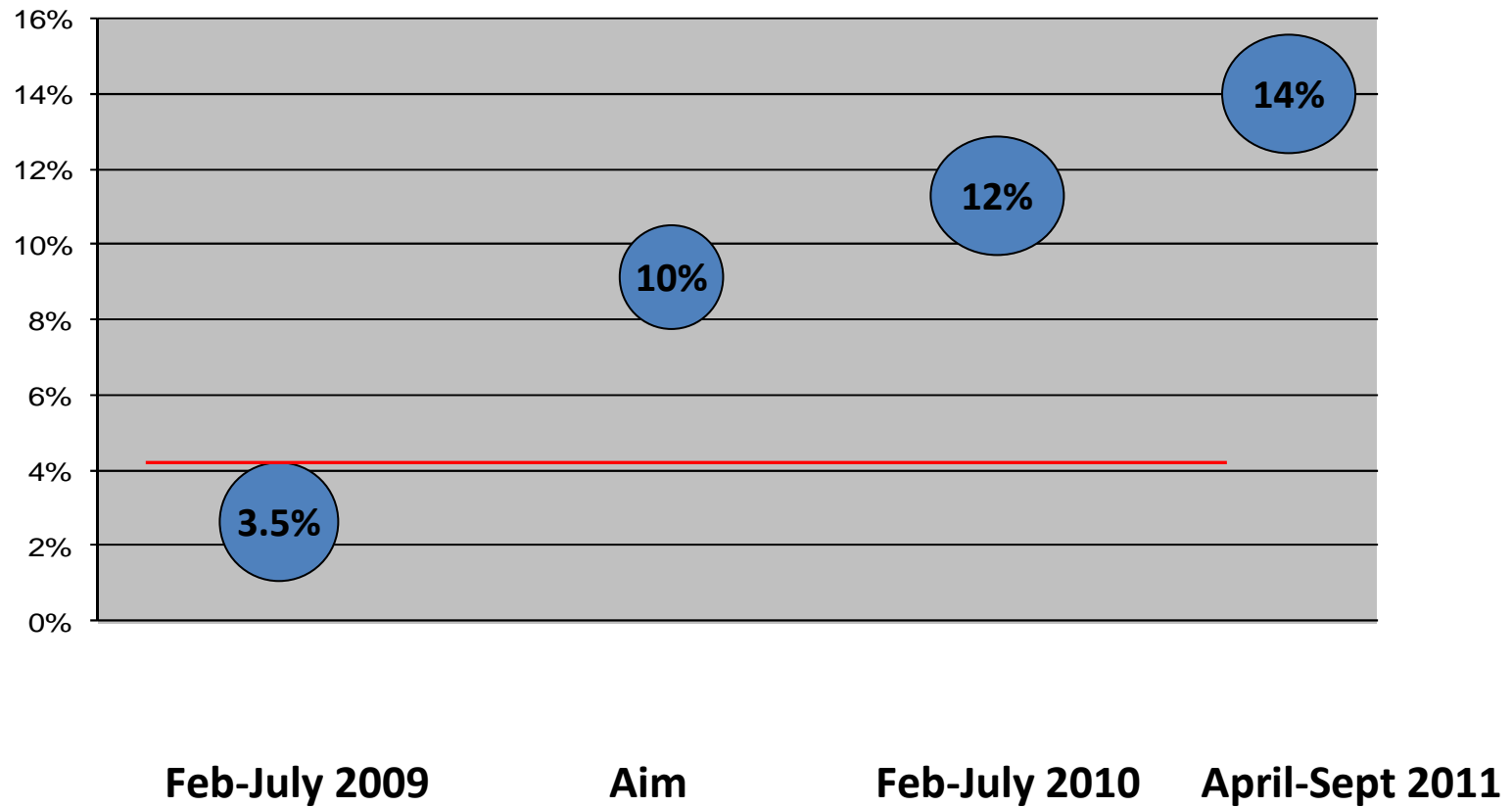
Early Outcomes



Average length of stay

Early Outcomes

Thrombolysis rates



Cost-effectiveness analysis of the London Stroke Service

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Model comparisons

- Before-and-after comparison:
 - Before: July 2007 – July 2008
 - After: July 2010 to present
- This is an imperfect comparison!
- We have adjusted for national trends (decline) in mortality and LOS
- All unit costs in 2010/11 prices
- Cost-effectiveness depends on changes in health outcomes and resource use

Results based on 6438 strokes per annum

Differences in	Unadjusted	Adjusted
Differences in total costs at 30 days	3,307,677	3,763,472
Differences in total deaths at 30 days	-214	-68
Differences in total QALYs at 30 days	51	44
Incremental cost per death averted at 30 days	15,451	55,371
Incremental cost per QALY gained at 30 days	64,478	86,106
Differences in total costs at 90 days	-5,393,533	-3,544,210
Differences in total deaths at 90 days	-238	-98
Differences in total QALYs at 90 days	112	86
Incremental cost per death averted at 90 days	Dominant	Dominant
Incremental cost per QALY gained at 90 days	Dominant	Dominant
Differences in total costs at 10 years	-21,318,180	-22,786,954
Differences in total QALYs at 10 years	4,492	3,886
Incremental cost per QALY gained at 10 years	Dominant	Dominant

Summary points

- Based on our calculations, the new London stroke model represents good value for money when costs and benefits beyond 30 days are accounted for
- Our cost-effectiveness model is of necessity a stylised representation of the real world
- We have populated it with the best available data, but these data are imperfect
- Our study design is a before-and-after study; we have attempted to account for trends in mortality and LOS over time, but there may be other factors that changed over time that we have not accounted for
- But, even after much sensitivity analysis the conclusions remain unchanged
- Our final report is as yet unpublished; we are awaiting scrutiny by a peer-reviewed journal

London Stroke Care: How is it working now?

- In the latest round of the National Sentinel Audit of stroke care in 5 of the 6 top performing hospitals were in London. All of the HASUs were in the top quartile of performance
- London is providing better quality stroke care for less cost

