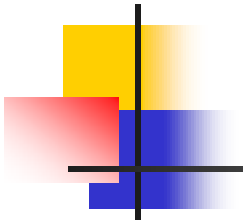
Fit for the Future: Developing and using an ‘evidence file’

Dr Quentin D. Sandifer
Deputy Regional Director of Public Health,
NHS South East Coast

To the APHA Scientific Meeting November 6 2007

Where to find us...



- A brief history
- The challenge
- The response
- The result

FIT FOR THE FUTURE EVIDENCE FILE

NHS South East Coast

2nd Edition
Published: February 1, 2007
Editor: Dr Quentin D. Sandifer, South East Coast Strategic Health Authority
Enquiries to: quentin.sandifer@southeastcoast.nhs.uk

What and why

- The purpose of this pack is to provide managers, clinicians and other stakeholders, including the public and the media, with an evidence-based information resource
- It is designed to answer (some) of the questions posed during the Fit for the Future process and stimulate local discussion
- The pack has been formatted purposely in PowerPoint™ to allow audience presentation and selection of content to audience need
- The intention is to add to or modify the pack in response to progress on Fit for the Future

Structure of pack

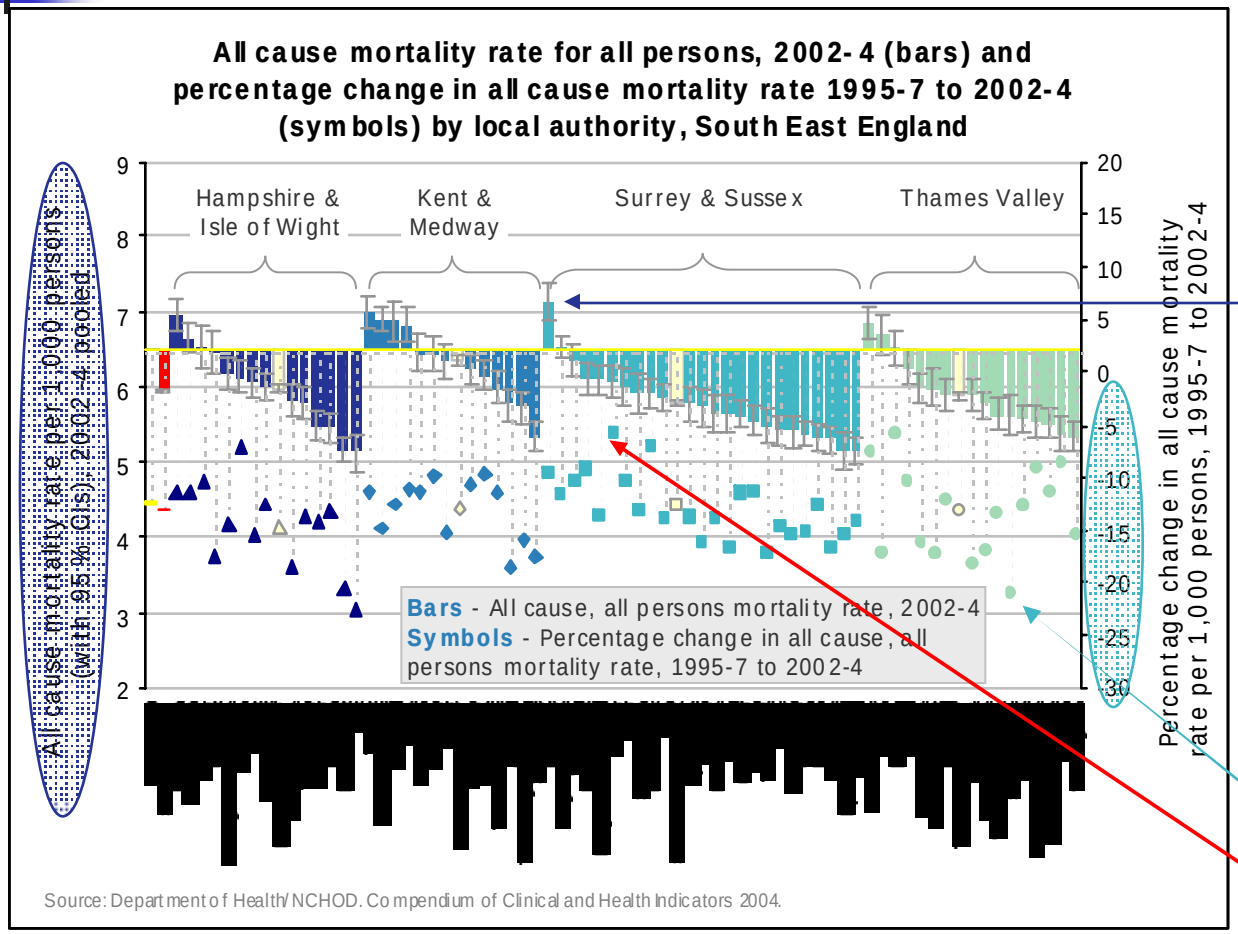
- Section 1: Demography
- Section 2: Health status
- Section 3: Health inequalities
- Section 4: Case for change
- Section 5: Redesign principles and factors
- Section 6: Urgent and emergency care
- Appendix: Supplementary charts

SECTION 3

HEALTH INEQUALITIES

See also charts in the Appendix

Mortality rates compare well with the national average



Low mortality…

Only seven (10.4%) of the 67 local authorities in the South East have significantly high all cause, all persons mortality (**bars**)

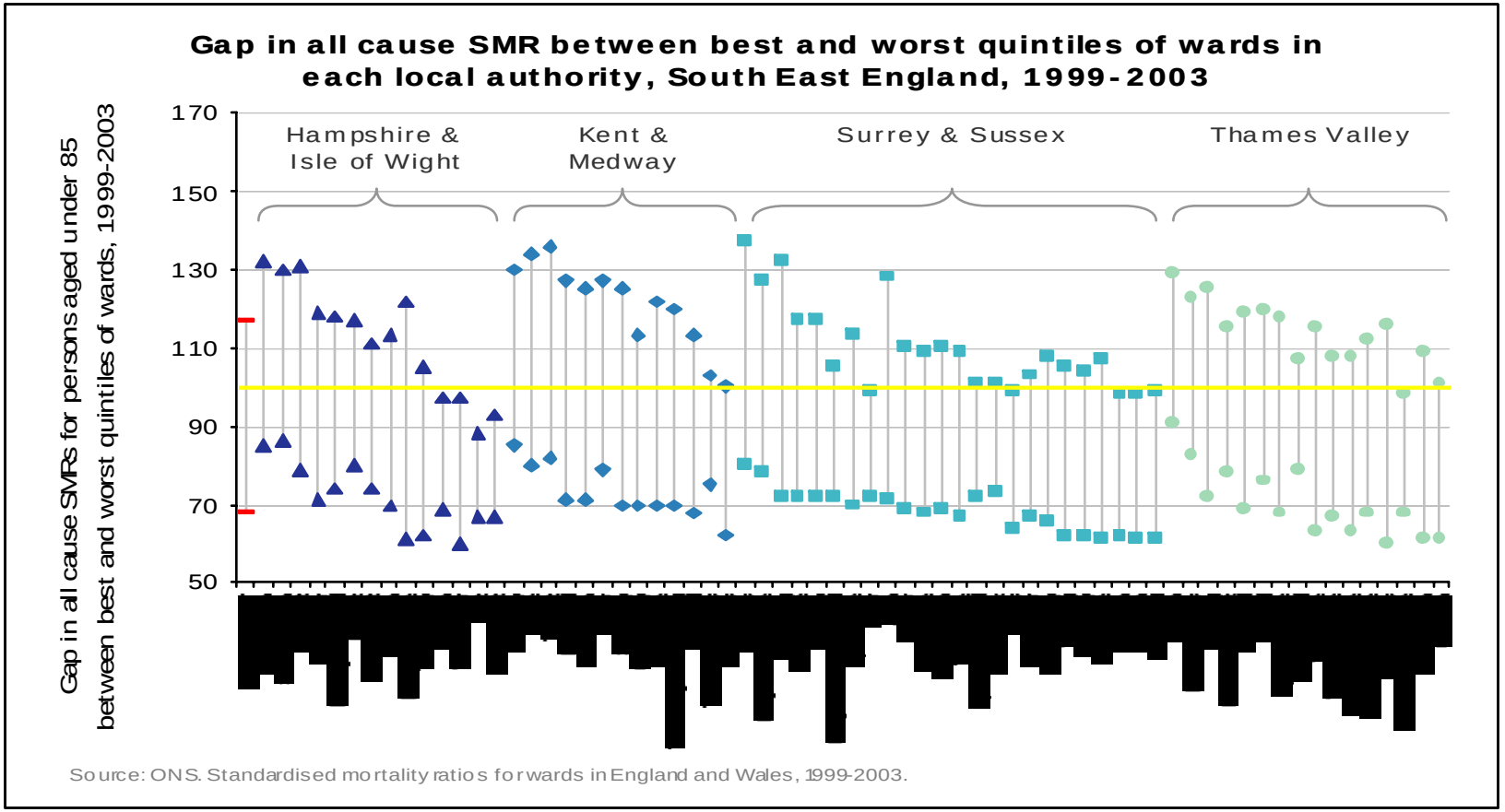
1 (Hastings) of these is in Surrey Sussex

4 (Thanet, Medway, Dartford, Swale) are in Kent and Medway

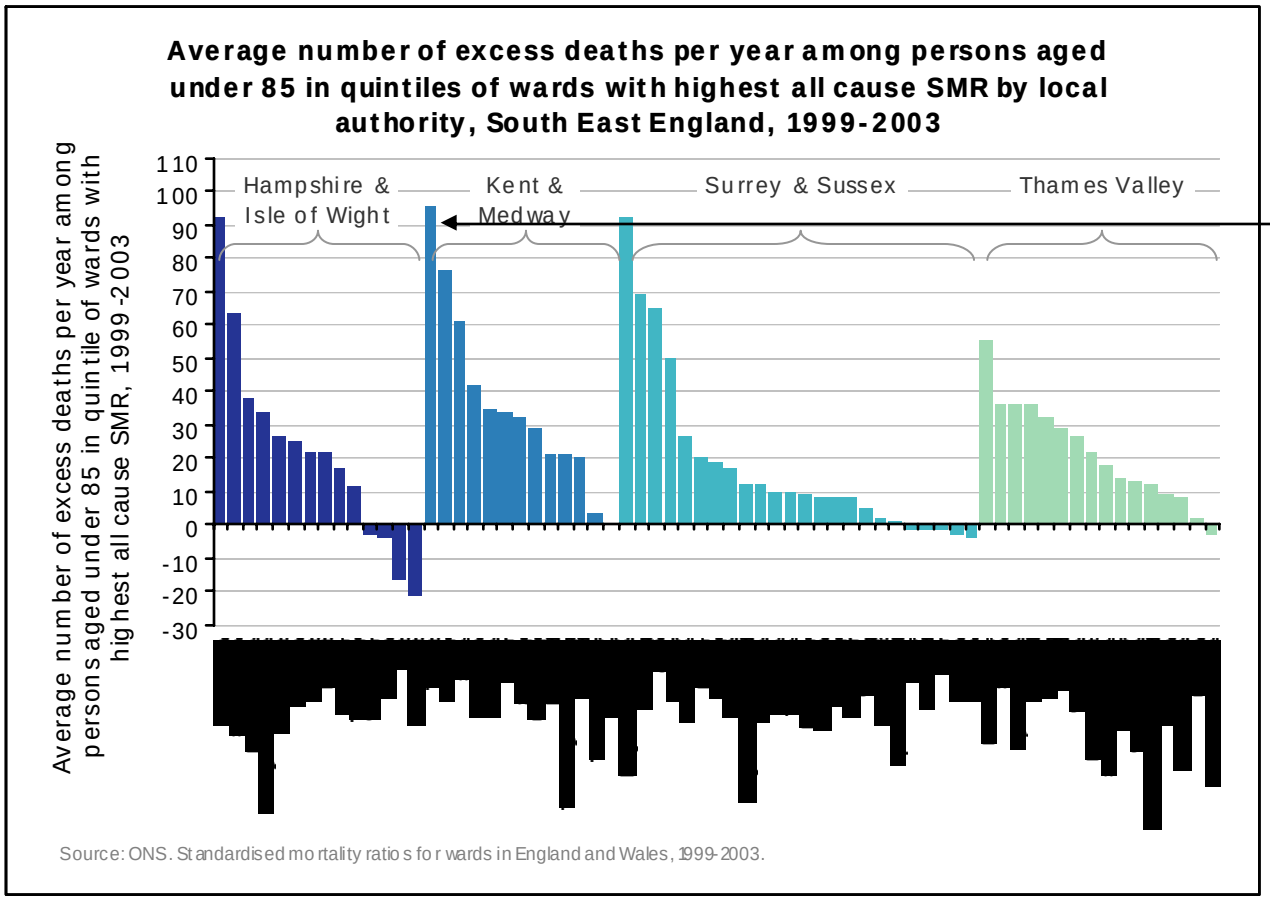
…and getting better

All cause mortality has fallen across the South East, although more quickly in some areas than others eg. -22.5% in Hart cf. -5.7% in Rother (**symbols**)

Nevertheless, health inequalities are found in all parts of the South East



And these inequalities correspond to large differences in the numbers of deaths

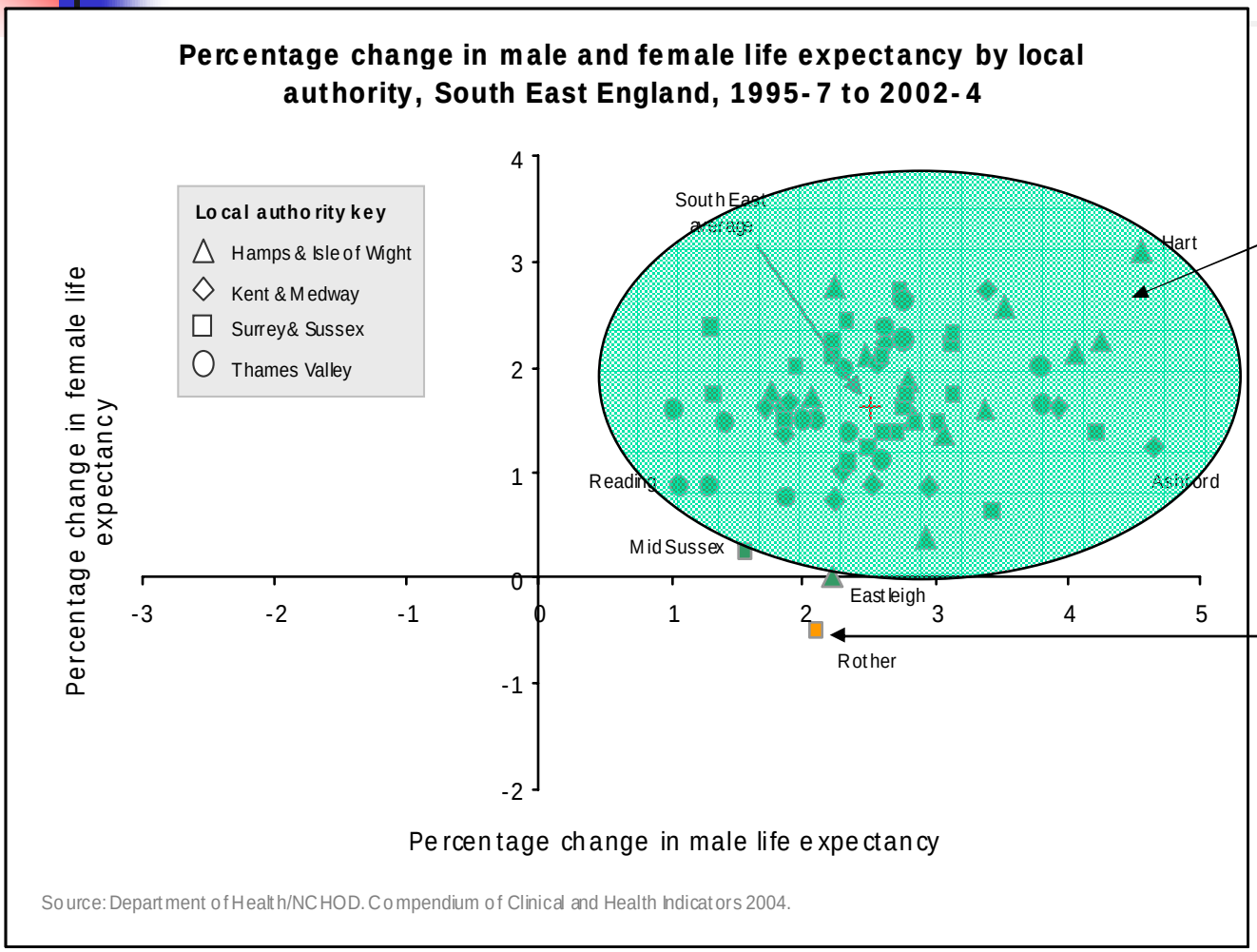


Substantial numbers of excess deaths

For example, the worst quintile of wards in Thanet has an average of 95 more deaths each year than expected

(The specific number of deaths depends on the SMR and the population of the local authority)

A similar pattern emerges when life expectancy is examined



Source: Department of Health/NCHOD. Compendium of Clinical and Health Indicators 2004.

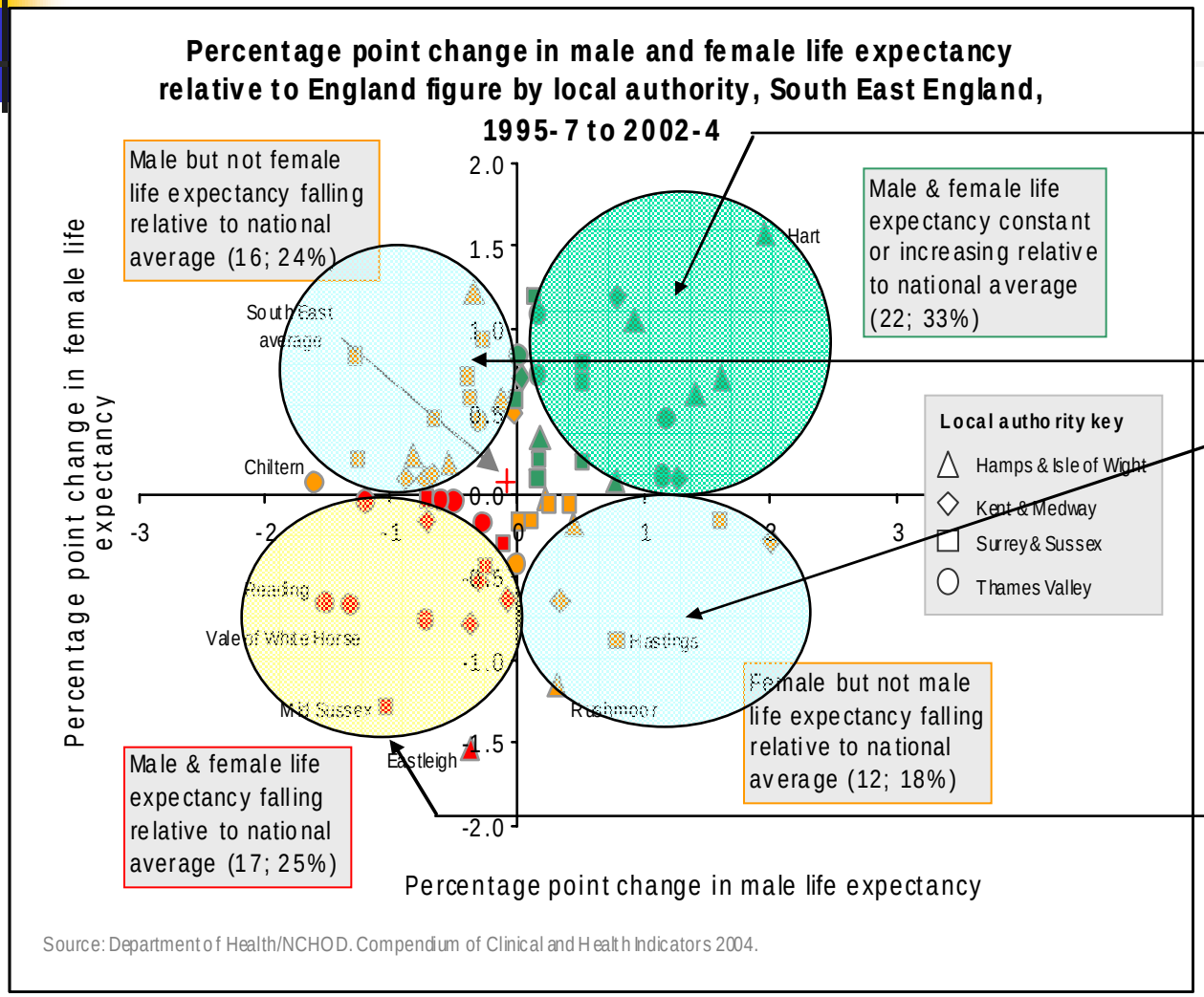
Overall life expectancy is getting better…

Male and female life expectancy is improving across the South East

…with one exception

Female life expectancy in Rother has fallen slightly in recent years

Although some places are losing ground…



Getting better…

These areas are improving relative to the national average

…a mixed picture…

Life expectancy is increasing for one half of the population, but not the other

…getting worse

Male and female life expectancy is falling relative to the England average in a quarter of local authorities in the South East

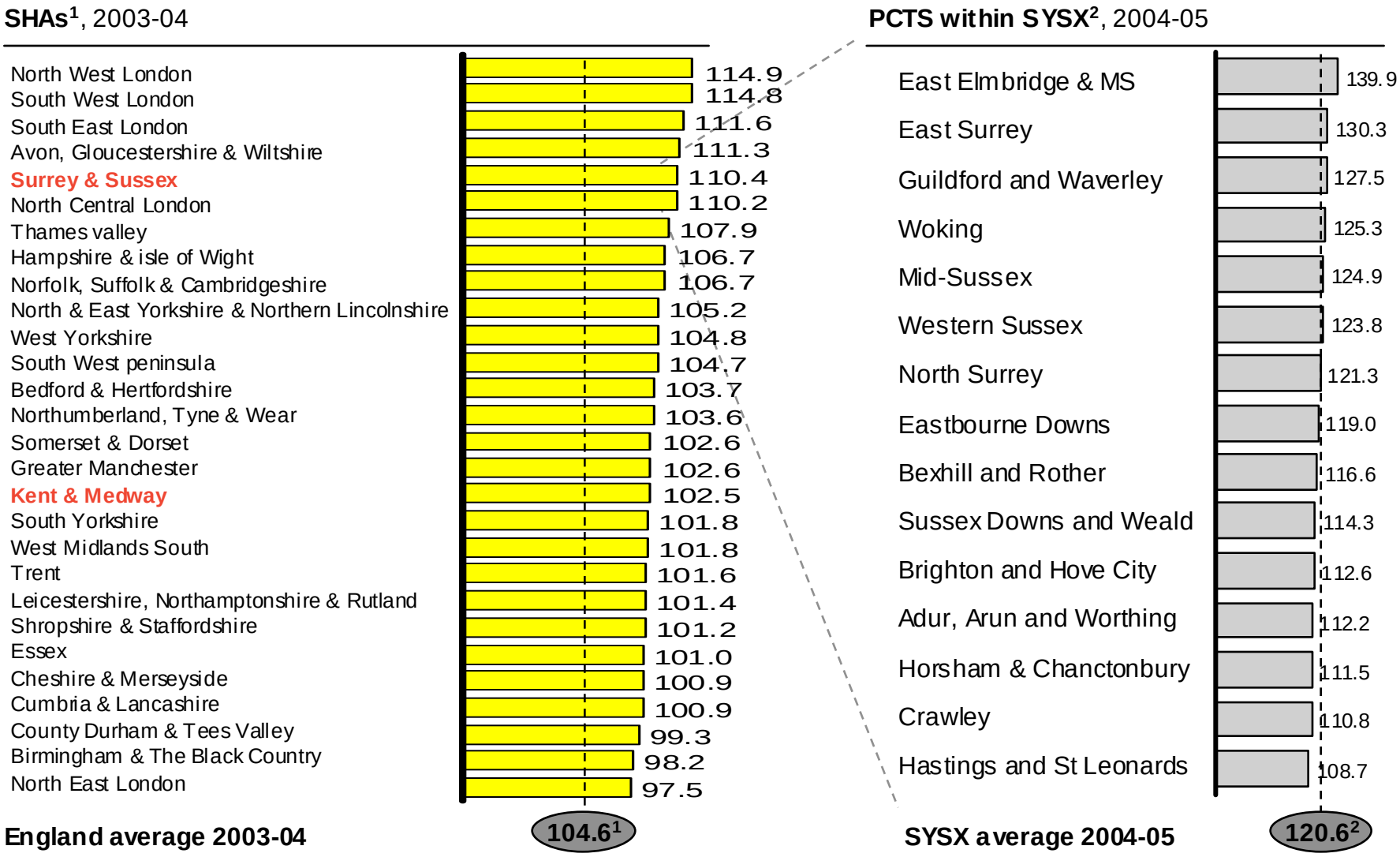
SECTION 4

CASE FOR CHANGE

July 22 2005 Version

SYSX spends more on healthcare than other SHAs

£m per 100k unified weighted population



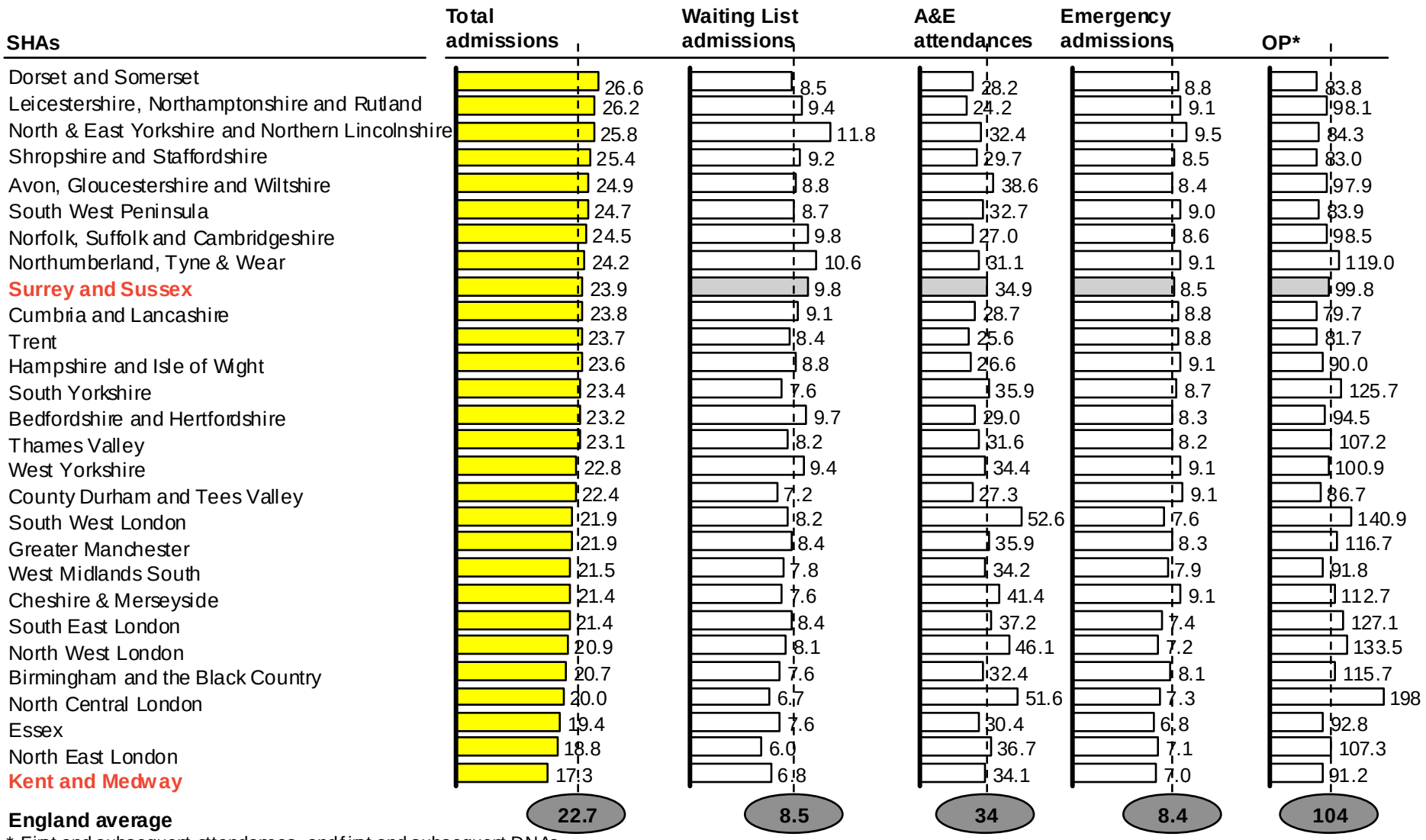
*Note SYSX figure from SHA cut and average for PCTs within SYSX are not same as sources are different (including different years)

Source: [1] SHA cut from Programme Budget Spend, 2003-04; [2] PCT cut from SYSX PCT finances 2004-05 team analysis

July 22 2005 Version

SYSX has high waiting list admissions

000s per 100k HCHS age and need weighted population, 2003-4



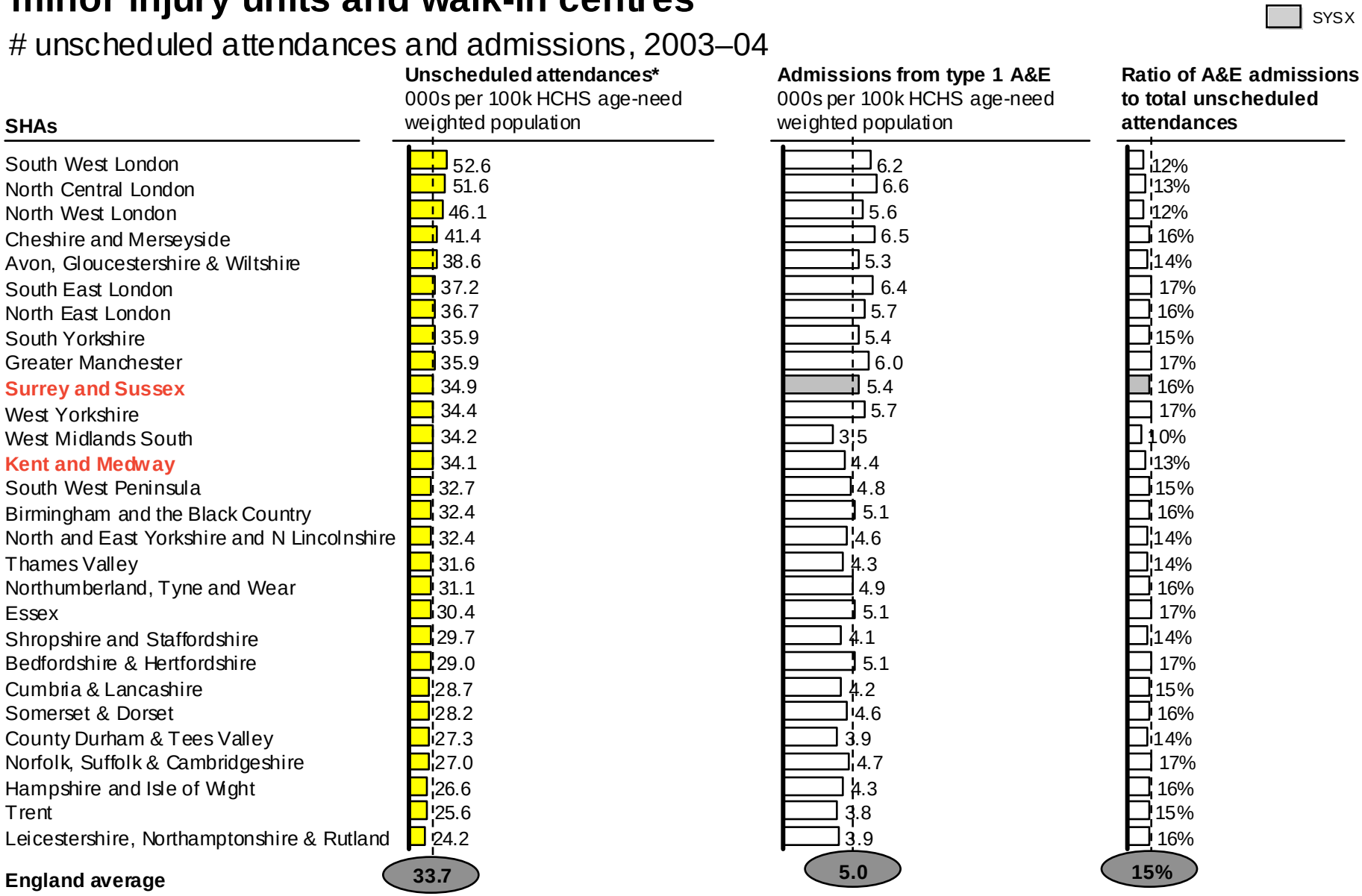
* First and subsequent attendances, and first and subsequent DNAs

Source: HAS; Public HES; team analysis

July 22 2005 Version

Surrey and Sussex has above average attendances in A&E, minor injury units and walk-in centres

unscheduled attendances and admissions, 2003–04

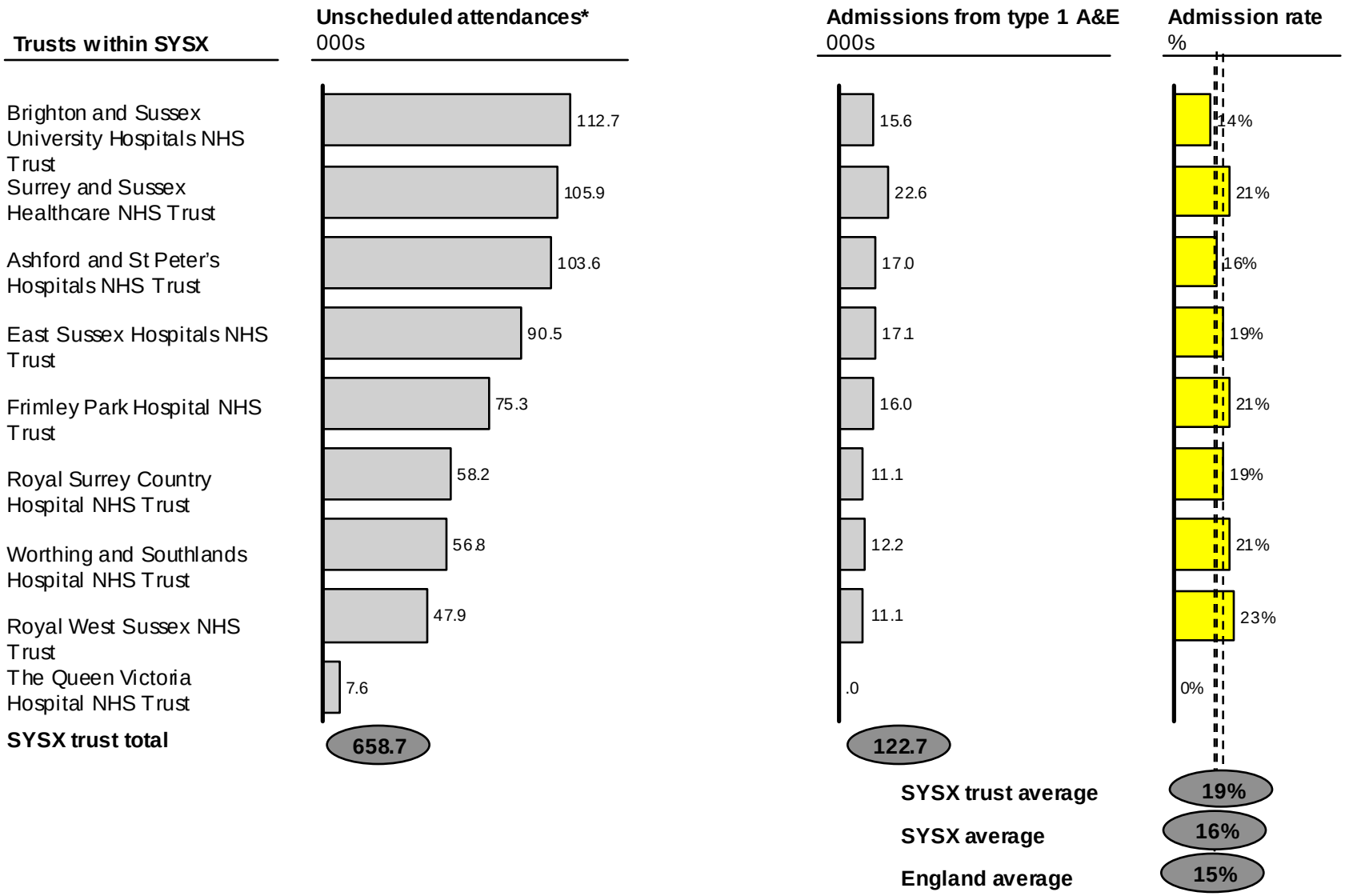


* Including Minor Injury Units and Walk In Centres
Source: HAS; team analysis

July 22 2005 Version

SYSX Acute Trusts have above average rates of admission from A&E

A&E attendances, admissions and admission rates, 2003–04

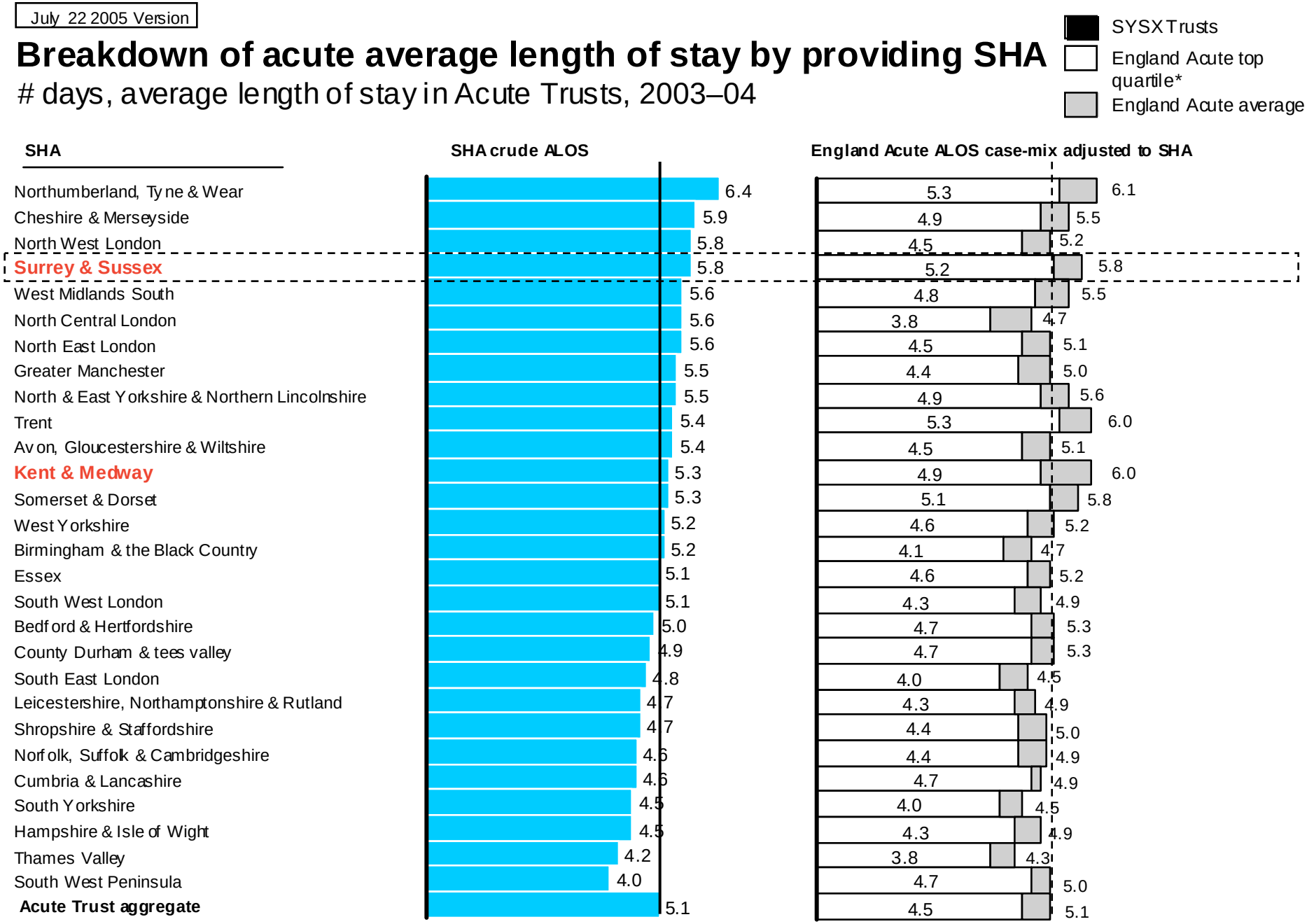


* Including Minor Injury Units and Walk In Centres run by trusts
Source: HAS; team analysis

July 22 2005 Version

Breakdown of acute average length of stay by providing SHA

days, average length of stay in Acute Trusts, 2003–04



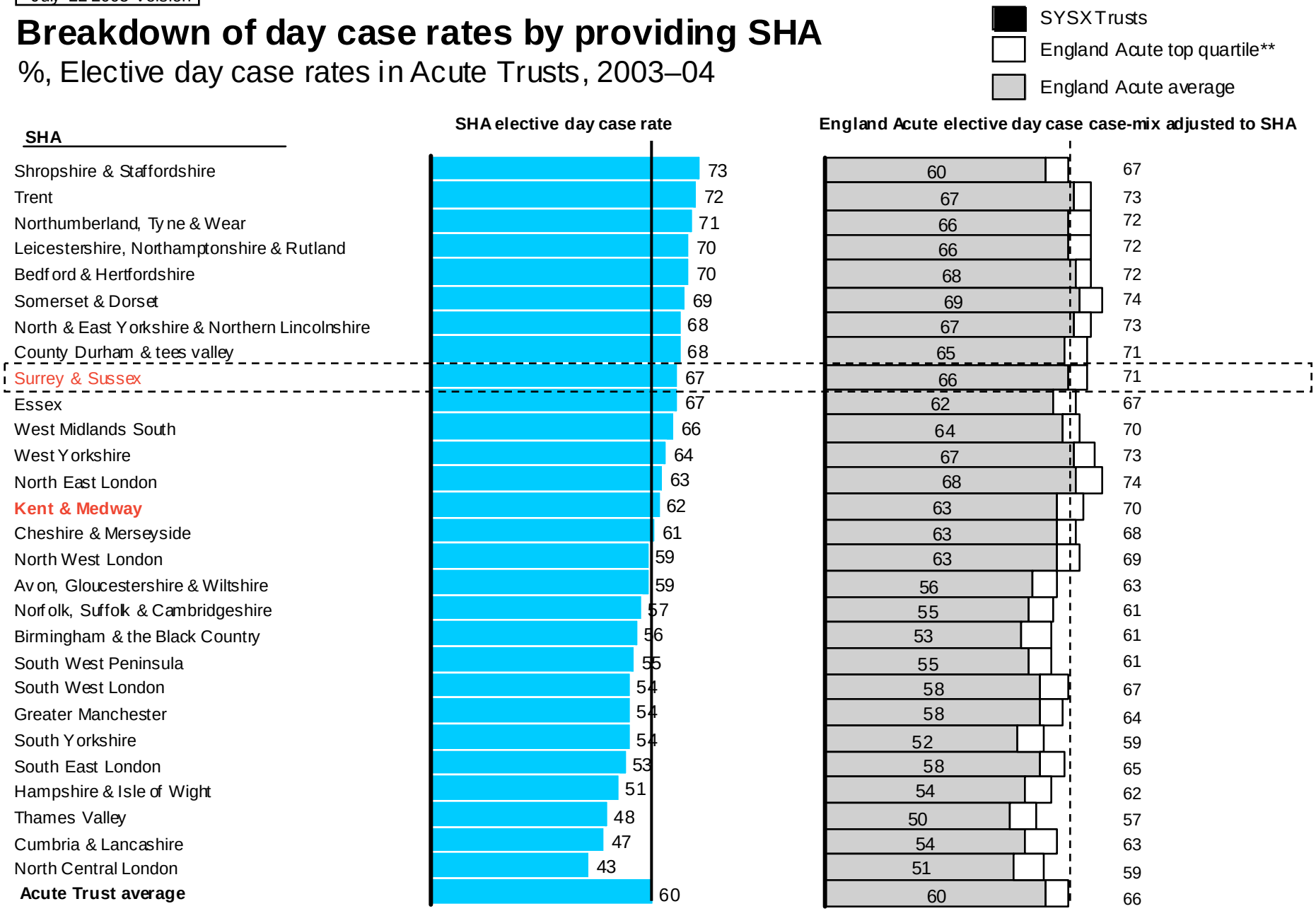
*Top quartile based on SHAs, does not include uncoded activity

Source: Record level HES, 2003–04; team analysis

July 22 2005 Version

Breakdown of day case rates by providing SHA

%, Elective day case rates in Acute Trusts, 2003–04



*Top quartile based on SHA

Source: Record level HES, 2003–04; team analysis

Benchmarking suggest large reductions in hospital bed days are feasible

	SYSX spells 000	SYSX ALOS (all ages)	Kaiser ALOS (>65)	Medicare California ALOS (>65)	Medicare USA ALOS (>65)
• Stroke	4.8	**14.73**	4.26	5.84	6.53
• COPD excl bronchitis	3.1	**5.63**	3.80	5.35	5.37
• Bronchitis and asthma	2.7	**6.46**	3.09	4.23	4.41
• Coronary bypass	0.3	**10.45**	9.64	8.62	9.98
• Acute MI	3.0	**5.02**	4.35	5.14	5.46
• Heart failure and shock	2.3	**7.07**	3.70	5.28	5.37
• Angina pectoris	4.0	**3.15**	2.20	2.58	2.56
• Primary hip replacement	2.4	**9.29**	4.54	5.41	5.46
• Primary knee replacement	2.5	**8.90**	4.18	4.53	4.39
Potential bed days saved (000)			102	76	71

Comparison suggests there is much scope to reduce LOS in hospitals

Source: Ham et al. 2003. *Hospital bed utilisation in the NHS, Kaiser Permanente and the US Medicare programme*, BMJ, 327:1257-60, rHES 03/04

Clinical case for change 1/7

- Units (or staff) treating more patients achieve better outcomes – volume effect

- Trend toward specialisation and sub-specialisation with growing evidence of better outcomes for certain diagnoses treated in specialised units or by specialised teams – resource centralisation effect

- Effective Health Care December 1996
- Soljak M; BMJ 2002; 325:787-8
- Improving Outcomes Guidance, NICE November 2004
- Intercollegiate Working Party for Stroke, National Clinical Guidelines for Stroke, Royal college of Physicians 2004

Clinical case for change 2/7

Specialization can have a great impact on quality

Treatment	Mortality reduction Percent	Comments
Pancreatectomy	63%	• Difference between hospital volume =1 and >10 per year
Abdominal aortic aneurysm	58	• Difference between few (<6) and many procedures in hospital per year
Colorectal resection	42	• Difference between surgeon volume <5 and >10
Breast cancer	37	• Difference between yearly hospital volume <10 and >150
Intestinal operations	29	• Difference between hospitals performing more and less the 40 operations a year
Acute myocardial infarction	17	• 30 day mortality difference between 1st and 4th quartile

Source: NHS: Effective Health Care December 1996; Journal of clinical oncology

Clinical case for change 3/7

- Advances in technology may favour centralisation – angioplasty as treatment for acute heart attacks, a technique that should only be undertaken in specialised units

- American College of Cardiology/American Heart Association Clinical Competence Statement June 2000

- Advances in technology may also favour moving care into community (including home) settings
  - Near patient testing
  - Telehealth and telecare systems

Clinical case for change 4/7

- Centralisation and decentralisation are not mutually exclusive
  - Centralisation is vital for some services where there is evidence of a positive relationship between large volumes of activity and clinical outcome

Delivering high quality surgical services for the future. Royal College of Surgeons of England, 2006

  - Decentralisation may be appropriate where advances in technology or changes in staff skill use allow services previously delivered in hospitals to be delivered in other settings closer to the patients home

Our health, our care, our say. Department of Health, 2006

Clinical case for change 5/7

- Expert opinion from Medical Royal Colleges on population base to support specific services
  - Major trauma 3 million
  - Emergency surgery 450,000 – 1 million (depending on surgical speciality)
  - Level 3 neonatal care 1 million
  - Paediatric surgery 500,000

Better care for the severely injured. Royal College of Surgeons and British Orthopaedic Association, 2000
Delivering high quality surgical services for the future. Royal College of Surgeons of England, 2006
The provision of vascular services. The Vascular Society of Great Britain and Ireland, 2004
Report of the Neonatal Intensive Care Services Review Group. Department of Health, 2003.
Children's surgery – a first class service. Royal College of Surgeons (Paediatric Forum), 2000

Clinical case for change 6/7

- Specific arguments supporting need for change apply to maternity
  - Units delivering more than 4000 births per year should have 24/7 consultant cover
  - Obstetric units also require dedicated obstetric anaesthetic services

The future role of the consultant. Royal College of Obstetricians and Gynaecologists, 2005
Towards safer childbirth: minimum standards for the organisation of labour wards. Royal College of Obstetricians and Gynaecologists and Royal College of Midwives, 1999.
CNST Maternity Clinical Risk Standards. NHS Litigation Authority, 2006

Clinical case for change 7/7

- Changes in medical workforce and a growing trend towards consultant led care, linked to
  - European Working Time Directive (and)
  - Changes to junior medical training (Modernising Medical Careers)

- Modernising Medical Careers – The new curriculum for the foundation years in postgraduate education and training, Department of Health, April 2005

SECTION 6

URGENT AND EMERGENCY CARE

Urgent care, travel times and the “golden hour” 1/6

- Much of the evidence on the relationship between travel time, treatment and clinical outcome is focused on trauma
- This frequently refers to the “golden hour”

Urgent care, travel times and the “golden hour” 2/6

- The “golden hour” paradigm is founded on the idea that *trauma* patients have better clinical outcomes if they receive definitive care within 60 minutes of the occurrence of their injuries

- There are no sufficiently large, well-controlled studies in civilian populations to support or refute the concept of the “golden hour”

- Lerner EB, Moscati RM, Acad Emerg Med 2001; 8(7): 758-60

Urgent care, travel times and the “golden hour” 3/6

- Two other issues may also be relevant:
  - identification of patients for whom total out-of-hospital time will affect outcome (‘rapid field assessment’)
  - the actions taken before the patient reaches the definitive care setting (‘pre-hospital response’)

Urgent care, travel times and the “golden hour” 4/6

- An appraisal of the literature suggests that pre-hospital assessment may not identify those patients for whom total out-of-hospital time will affect outcome and even if such patients are identified then outcome may be not affected positively by pre-hospital intervention

- The role of paramedics in either discharging patients from the scene or deciding on appropriate destinations has not been adequately studied to confirm its safety and effectiveness in the UK

- Cooke M et al, NCCSDO 2004

Urgent care, travel times and the “golden hour” 5/6

- The evidence for pre-hospital intervention is strongest for arterial reperfusion after acute myocardial infarction (AMI), that is, thrombolysis after heart attack
- Boyle R. *Mending hearts and brains – Clinical case for change*; London: Department of Health, 2006
- Best practice recommends extending paramedic thrombolysis for appropriate patients where the call to hospital time is greater than 30 minutes
- Carver J, Boyle R, Chamberlain D, Fisher J, Quinn T, Henderson K and Dancy M. *Review of Early Thrombolysis*; London: Department of Health, 2003
- In the future primary angioplasty may become the first treatment for AMI – this is a specialised technique that will be undertaken in specialist centres
- Boyle R. *Mending hearts and brains – Clinical case for change*; London: Department of Health, 2006

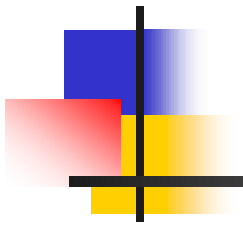
Urgent care, travel times and the “golden hour” 6/6

- Evidence to-date on the impact of walk-in centres and urgent care centres (for example, minor injuries services) on GP services or attendances at A&E is inconclusive

- Cooke M et al, NCCSDO 2004

- Conclusion – what is more important is getting to the right hospital, not necessarily the nearest hospital

- Emergency Access - clinical case for change: Report by Sir George Alberti, the National Director for emergency access



S1: DEMOGRAPHY

Slides courtesy of Del Herridge, Kent and Medway HIS and Graham Evans, Senior Analyst at South East Coast SHA

S3: HEALTH INEQUALITIES

Slides courtesy of Robert Kyffin, Senior Public Health Intelligence Officer at GOSE and Graham Evans, Senior Analyst at South East Coast SHA

S4: BEHAVIOUR AND LIFESTYLE

Slides courtesy of Graham Evans, Senior Analyst at South East Coast SHA

S7: Hospital utilisation series

Data from UHCE Epidemiological Database (courtesy of Professor Michael Goldacre) and SEPHO HES analysis

- So what did we learn?

- Closing comments and open mike