



South London Cardiac and Stroke Network

South London Revascularisation Report Version 2.0

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Contents

Chapter 1 Introduction	4
Chapter 2 Revascularisation rates in South London – actual and expected	5
Chapter 3 Rapid Access Chest Pain Clinic (RACPC)	12
Chapter 4 Angiography	16
Chapter 5 Angioplasty.....	22
Chapter 6 Primary Angioplasty	25
Chapter 7 MINAP	27
Chapter 8 STEMI and N-STEMI.....	35
Chapter 9 Cardiac Surgery	36
Chapter 10 Inter-Hospital Transfers.....	40
Chapter 11 Cardiac Rehabilitation	41

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List of Tables

Table 1 Revascularisation – Actual number, rate per million population (pmp), upper & lower confidence limits (99%) vs expected & statistical significance, 2006.....	6
Table 2 Revascularisation – Future projected numbers and percentage increase, based on growth scenarios of 1900, 2200 & 2500 per million population by the year 2015, for years 2010, 2015 and 2020, by area, South East London.....	7
Table 3 Revascularisation – Future projected numbers and percentage increase, based on growth scenarios of 1900, 2200 & 2500 per million population by the year 2015, for years 2010, 2015 and 2020, by area, South West London.....	8
Table 4 Hospital episodes and rates for angiogram per person (2006-2007).....	9
Table 5 Hospital episodes and rates for angioplasty per person (2006-2007).....	10
Table 6 Hospital episodes and rates for coronary artery bypass graft per person (2006-2007).....	11
Table 7 RACPC activity in South East London: number of patients seen in RACPC where referral was received within 24 hours.....	12
Table 8 RACPC activity in South West London: number of patients seen in RACPC where referral was received within 24 hours.....	13
Table 9 RACPC activity in South East London: number of patients seen in RACPC where referral was not received within 24 hours.....	14
Table 10 RACPC activity in South West London: number of patients seen in RACPC where referral was not received within 24 hours.....	15
Table 11 RACPC activity: Percentage of patients attending RACPC where pain was non-cardiac in origin.....	15
Table 12 Total angiography activity per quarter.....	16
Table 13 Day case, elective, inpatients and non-elective angiograph activity per quarter – South East London.....	18
Table 14 Day case, elective, inpatients and non-elective angiograph activity per quarter – South West London.....	19
Table 15 Angioplasty activity per quarter.....	22
Table 16 Primary Angioplasty activity in South London.....	25
Table 17 Thrombolytic treatment in hospitals in London (MINAP).....	28
Table 18 Primary angioplasty in England (MINAP).....	29
Table 19 Ambulance Services in England (MINAP).....	30
Table 20 Secondary Prevention medication in hospitals (MINAP).....	31
Table 21 Cardiac Networks (MINAP).....	32
Table 22 Care of patients with non-ST segment elevation infarction (NSTEMI) (MINAP).....	34
Table 23 Total Cardiac surgery activity in South London, per quarter.....	36
Table 24 Total non-elective cardiac surgery activity in South London, per quarter.....	39
Table 25 Ethnicity of patients referred to cardiac rehab in South East and South West London 2008/09, and nationally, 2007/08. (NACR).....	42
Table 26 Age and gender of patients attending cardiac rehab in South East and South West London 2008/09, and nationally, 2007/08. (NACR).....	43
Table 27 Reasons for patients not attending cardiac rehab in South East and South West London, 2008/09 and nationally, 2007/08 (NACR).....	44
Table 28 Reasons for referral to cardiac rehab in South East and South West London 2008/09, and nationally, 2007/08. (Number of patients) (NACR).....	45

List of Figures

Figure 1 Total angiography activity per quarter.....	17
Figure 2 Day case, elective, inpatients and non-elective angiograph activity per quarter – South East London	18
Figure 3 Day case, elective, inpatients and non-elective angiograph activity per quarter – South West London	19
Figure 4 Angiography waiting times – South East London (1 of 2)	20
Figure 5 Angiography waiting times – South East London (2 of 2)	21
Figure 6 Angiography waiting times – South West London	21
Figure 7 Angioplasty activity per quarter	23
Figure 8 Angioplasty waiting times – South East London	23
Figure 9 Angioplasty waiting times – South West London	24
Figure 10 Primary Angioplasty activity in South London	25
Figure 11 Average Call to Balloon times in South London.....	26
Figure 12 Average Door to Balloon times in South London	26
Figure 13 Total Cardiac Surgery Activity in South London per quarter	37
Figure 14 Coronary Artery Bypass Graft waiting times in South London	37
Figure 15 Valves waiting times in South London	38

Chapter 1 Introduction

This report has been commissioned by the South East London and South West London Cardiac and Stroke Networks.

The key objectives of the report were to map a baseline of the revascularisation services provided in South London, and to show the activity of revascularisation services in South London.

The data shown in this report has come from six sources:

1. The Revascularisation rates have been provided by Dr Stephen Green at the Oxford Healthcare Associates, chief author of the Access to Cardiac Care in the UK. These figures, which are broken down by PCT, are not provided in the report and are unique to this piece of work.
2. Hospital Episode Statistics at HESonline
3. Activity data has been provided by individuals at each site.
4. The waiting times data has been provided by Department of Health, which in turn has received the data from each provider site.
 - a. The waiting times data are routinely collected by providers, submitted to DH, and distributed by Dr Stephen Green.
 - b. As the waiting times data is collected on a monthly basis, the waiting times data shows the number of patients waiting at the end of each month, and shows how long they have been waiting.
 - c. It is important not to confuse this with the total numbers of patients waiting throughout the year, and therefore total activity, as patients waiting for more than 4 weeks will be counted in more than one month.
5. Data for Chapter 7 has been taken directly from the MINAP report and data set.
6. The cardiac rehab data has been taken from the National Cardiac Rehabilitation Audit (NACR).

Where possible, data for the last financial year (2008/09) has been collected, and the first quarter of 2009/10 is also shown.

When tables show 'data not available' this is likely to mean that the data at the provider centre is not recorded or collected in the way requested for this report. When tables show 'data not submitted' this means no data has been received from the provider.

Any queries regarding data quality should be sent to the author.

Chapter 2 Revascularisation rates in South London – actual and expected

The report 'Access to Cardiac Care in the UK' published in May 2009 by Oxford Healthcare Associates, presented the results of a study commissioned by the British Cardiovascular Society, the British Heart Foundation and the Cardio & Vascular Coalition (CVC).

The study assessed and compared population access to the main cardiac interventions for the four countries of the UK, and focused on four cardiac interventions; angiography, revascularisation (including angioplasty and coronary artery bypass grafts), valve surgery, and electrophysiology and arrhythmia interventions.

The report presented data for the each Strategic Health Authority. Dr Stephen Green, chief author, has kindly provided this data split by PCT, and the data which is not given in the report are shown in Table 1, Table 2 and Table 3.

The expected revascularisation numbers are calculated by applying the 2006 UK revascularisation rate per million population (pmp) for males and females to the weighted population for males and females in each geographical area.

The expect revascularisation rate pmp is calculated by adding together the expected number of revascularisations for males and females in each geographical area, divided by the total population estimate (in millions) for each geographical area.

For a more detailed explanation of the data collection and methodology employed by the authors, please see the report.

Table 4, Table 5 and Table 6 show Hospital Episode Statistics for numbers and rates of angiography, angioplasty and CABG.

Table 1 Revascularisation – Actual number, rate per million population (pmp), upper & lower confidence limits (99%) vs expected & statistical significance, 2006.

Area Name	Significance (99% CI)	No. of Revascs	Observed pmp	LCL (99%)	UCL (99%)	Expected pmp	Variance pmp	Variance No.	Variance pmp (%)
South East London	Higher	2,171	1,409	1,333	1,489	1,188	221	341	19%
South West London	Higher	2,168	1,625	1,537	1,718	983	642	857	65%
Bexley	Higher	432	1,950	1,716	2,205	1,322	627	139	47%
Bromley	Higher	463	1,546	1,368	1,742	1,089	458	137	42%
Croydon	Higher	715	2,121	1,923	2,334	1,159	962	324	83%
Greenwich	Not Significant	329	1,477	1,276	1,700	1,426	52	12	4%
Kingston upon Thames	Higher	257	1,650	1,396	1,932	934	716	112	77%
Lambeth	Not Significant	275	1,011	861	1,179	1,082	-71	-19	-7%
Lewisham	Not Significant	321	1,256	1,082	1,447	1,240	16	4	1%
Merton	Higher	298	1,506	1,290	1,744	826	680	134	82%
Richmond upon Thames	Higher	279	1,554	1,323	1,807	1,012	542	97	54%
Southwark	Higher	351	1,304	1,132	1,494	1,047	257	69	24%
Sutton	Higher	281	1,524	1,300	1,774	970	554	102	57%
Wandsworth	Higher	338	1,210	1,047	1,390	900	310	87	34%

(Oxford Healthcare Associates)

Table 2 Revascularisation – Future projected numbers and percentage increase, based on growth scenarios of 1900, 2200 & 2500 per million population by the year 2015, for years 2010, 2015 and 2020, by area, South East London.

Area Name	Actual/ projected nos.	Revascularisation Numbers				Increase over 2006			% Increase over 2006			Annual Change - Y/Y (%)		
		2006	2010	2015	2020	2010	2015	2020	2010	2015	2020	2006-2010	2006-2015	2006-2020
South East London	Actual	2,171												
	1900 pmp	1,830	2,030	2,275	2,381	-140	104	211	-6%	5%	10%	-2%	1%	1%
	2200 pmp		2,157	2,634	2,757	-14	464	587	-1%	21%	27%	0%	2%	2%
	2500 pmp		2,311	2,993	3,133	140	823	963	6%	38%	44%	2%	3%	3%
Bexley	Actual	432												
	1900 pmp	293	327	366	374	-105	-66	-58	-24%	-15%	-13%	-7%	-1%	-1%
	2200 pmp		346	424	434	-86	-8	1	-20%	-2%	0%	-5%	0%	0%
	2500 pmp		371	482	493	-61	50	61	-14%	11%	14%	-4%	1%	1%
Bromley	Actual	463												
	1900 pmp	326	364	400	410	-99	-62	-52	-21%	-13%	-11%	-6%	-1%	-1%
	2200 pmp		387	464	475	-76	1	12	-16%	0%	3%	-4%	0%	0%
	2500 pmp		415	527	540	-48	64	77	-10%	14%	17%	-3%	1%	1%
Lambeth	Actual	275												
	1900 pmp	294	324	361	381	49	86	106	18%	31%	39%	4%	2%	2%
	2200 pmp		344	418	442	69	143	167	25%	52%	61%	6%	3%	3%
	2500 pmp		369	475	502	94	200	227	34%	73%	82%	8%	4%	4%
Lewisham	Actual	321												
	1900 pmp	317	348	391	414	27	70	93	9%	22%	29%	2%	2%	2%
	2200 pmp		370	453	480	49	132	158	15%	41%	49%	4%	3%	3%
	2500 pmp		397	515	545	76	194	224	24%	60%	70%	5%	4%	4%
Greenwich	Actual	329												
	1900 pmp	318	350	392	411	21	63	82	7%	19%	25%	2%	2%	2%
	2200 pmp		372	454	476	43	125	147	13%	38%	45%	3%	3%	3%
	2500 pmp		398	516	541	69	187	212	21%	57%	65%	5%	4%	4%
Southwark	Actual	351												
	1900 pmp	282	318	364	390	-33	13	39	-10%	4%	11%	-2%	1%	1%
	2200 pmp		337	421	452	-14	70	101	-4%	20%	29%	-1%	2%	2%
	2500 pmp		361	479	513	10	128	162	3%	36%	46%	1%	3%	3%

(Oxford Healthcare Associates)

Table 3 Revascularisation – Future projected numbers and percentage increase, based on growth scenarios of 1900, 2200 & 2500 per million population by the year 2015, for years 2010, 2015 and 2020, by area, South West London.

Area Name	Actual/ projected nos.	Revascularisation Numbers				Increase over 2006			% Increase over 2006			Annual Change - Y/Y (%)		
		2006	2010	2015	2020	2010	2015	2020	2010	2015	2020	2006-2010	2006-2015	2006-2020
South West London	Actual	2,168												
	1900 pmp	1,311	1,472	1,659	1,735	-695	-509	-433	-32%	-23%	-20%	-9%	-1%	-1%
	2200 pmp		1,564	1,921	2,009	-604	-247	-159	-28%	-11%	-7%	-8%	0%	0%
	2500 pmp		1,675	2,183	2,282	-493	15	115	-23%	1%	5%	-6%	0%	0%
Croydon	Actual	715												
	1900 pmp	391	442	496	512	-273	-219	-203	-38%	-31%	-28%	-11%	-2%	-2%
	2200 pmp		471	574	593	-244	-140	-122	-34%	-20%	-17%	-10%	-1%	-1%
	2500 pmp		504	653	674	-211	-62	-41	-29%	-9%	-6%	-8%	0%	0%
Kingston upon Thames	Actual	257												
	1900 pmp	146	168	194	207	-89	-63	-50	-35%	-24%	-19%	-10%	-1%	-1%
	2200 pmp		179	225	240	-79	-32	-17	-31%	-13%	-7%	-9%	0%	0%
	2500 pmp		191	256	273	-66	-2	15	-26%	-1%	6%	-7%	1%	1%
Merton	Actual	298												
	1900 pmp	163	182	203	214	-116	-95	-84	-39%	-32%	-28%	-12%	-2%	-2%
	2200 pmp		193	235	248	-105	-63	-50	-35%	-21%	-17%	-10%	-1%	-1%
	2500 pmp		207	267	282	-91	-31	-16	-31%	-10%	-5%	-9%	0%	0%
Richmond upon Thames	Actual	279												
	1900 pmp	182	211	247	260	-68	-32	-19	-25%	-12%	-7%	-7%	0%	0%
	2200 pmp		224	285	301	-55	6	22	-20%	2%	8%	-5%	1%	1%
	2500 pmp		240	324	342	-39	45	63	-14%	16%	23%	-4%	2%	2%
Sutton	Actual	281												
	1900 pmp	179	201	229	240	-80	-52	-41	-28%	-19%	-15%	-8%	-1%	-1%
	2200 pmp		213	265	278	-68	-16	-3	-24%	-6%	-1%	-7%	0%	0%
	2500 pmp		229	301	316	-53	20	35	-19%	7%	12%	-5%	1%	1%
Wandsworth	Actual	338												
	1900 pmp	251	268	290	301	-70	-47	-36	-21%	-14%	-11%	-6%	-1%	-1%
	2200 pmp		284	336	349	-54	-1	11	-16%	0%	3%	-4%	0%	0%
	2500 pmp		304	382	396	-34	44	59	-10%	13%	17%	-3%	1%	1%

(Oxford Healthcare Associates)

Table 4 Hospital episodes and rates for angiogram per person (2006-2007)

	Location	Episodes	Directly Standardised Rates Per 100.000	Lower	Upper	Significantly Higher Or Lower Than England
	England	143,986	233.61	232.37	234.85	Not Significant
	London	20,423	298.01	293.85	302.18	Higher
South East London	Bexley	742	275.55	255.26	295.85	Higher
	Bromley	726	190.20	175.95	204.46	Lower
	Greenwich	707	334.18	309.17	359.18	Higher
	Lambeth	536	246.63	225.18	268.08	Not Significant
	Lewisham	630	274.07	252.21	295.93	Higher
	Southwark	515	231.50	211.00	252.01	Not Significant
	South West London	Croydon	1,154	312.18	293.89	330.47
Kingston upon Thames		458	282.54	256.18	308.90	Higher
Merton		502	254.61	231.89	277.34	Not Significant
Richmond upon Thames		368	188.16	168.61	207.71	Lower
Sutton		427	205.70	185.79	225.62	Lower
Wandsworth		601	270.33	248.13	292.54	Higher

(Hospital Episode Statistics)

Table 5 Hospital episodes and rates for angioplasty per person (2006-2007)

	Location	Episodes	Directly Standardised Rates Per 100,000	Lower	Upper	Significantly Higher Or Lower Than England
	England	58,086	94.00	93.22	94.78	Not Significant
	London	9,369	135.85	133.04	138.66	Higher
South East London	Bexley	307	114.98	101.83	128.13	Higher
	Bromley	356	92.58	82.60	102.55	Not Significant
	Greenwich	243	115.56	100.81	130.31	Higher
	Lambeth	206	97.47	83.88	111.06	Not Significant
	Lewisham	257	113.91	99.70	128.11	Higher
	Southwark	264	118.74	104.07	133.41	Higher
South West London	Croydon	562	149.64	137.04	162.23	Higher
	Kingston upon Thames	194	115.96	99.27	132.64	Higher
	Merton	220	111.45	96.44	126.46	Higher
	Richmond upon Thames	204	102.12	87.85	116.38	Not Significant
	Sutton	198	95.68	82.12	109.24	Not Significant
	Wandsworth	258	111.40	97.34	125.47	Higher

(Hospital Episode Statistics)

Table 6 Hospital episodes and rates for coronary artery bypass graft per person (2006-2007)

	Location	Episodes	Directly Standardised Rates Per 100,000	Lower	Upper	Significantly Higher Or Lower Than England
	England	21,054	32.26	31.81	32.71	Not Significant
	London	2,418	34.85	33.44	36.27	Higher
South East London	Bexley	95	32.84	26.03	39.65	Not Significant
	Bromley	79	19.31	14.93	23.68	Lower
	Greenwich	70	32.65	24.87	40.44	Not Significant
	Lambeth	49	23.08	16.47	29.69	Lower
	Lewisham	46	20.96	14.79	27.12	Lower
	Southwark	68	30.88	23.38	38.37	Not Significant
	South West London	Croydon	115	31.59	25.75	37.42
Kingston upon Thames		49	29.70	21.19	38.21	Not Significant
Merton		62	31.61	23.61	39.60	Not Significant
Richmond upon Thames		59	29.56	21.90	37.22	Not Significant
Sutton		65	29.47	22.12	36.82	Not Significant
Wandsworth		62	27.53	20.52	34.53	Not Significant

(Hospital Episode Statistics)

Chapter 3 Rapid Access Chest Pain Clinic (RACPC)

Rapid Access Chest pain Clinics (RACPC) are provided at 6 centres in South East London, and at 4 centres in South West London.

Table 7 RACPC activity in South East London: number of patients seen in RACPC where referral was received within 24 hours

		Q1 08/09	Q2 08/09	Q3 08/09	Q4 08/09	Total 08/09	Q1 09/10
GSTT	Number of patients seen	96	102	144	96	438	114
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	96	102	141	96	435	114
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	0	0	3	0	3	0
KCH	Number of patients seen	184	173	160	166	683	175
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	119	105	111	125	460	118
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	0	1	0	0	1	0
QEH	Number of patients seen	170	141	170	141	622	141
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	170	141	170	141	622	141
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	0	0	0	0	0	0
QMH	Number of patients seen	111	104	121	128	464	110
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	109	104	121	128	462	110
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	2	0	0	0	2	0
PRUH	Number of patients seen	488	452	468	520	1928	474
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	479	451	462	508	1900	474
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	0	0	0	12	12	0
UHL	Number of patients seen	148	114	111	114	487	105
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	85	75	77	81	318	76
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	0	0	0	0	0	0

Table 8 RACPC activity in South West London: number of patients seen in RACPC where referral was received within 24 hours.

		Q1 08/09	Q2 08/09	Q3 08/09	Q4 08/09	Total 08/09	Q1 09/10
ESH	Number of patients seen	209	209	251	218	887	246
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	209	209	251	182	851	246
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	0	0	0	3	3	0
KHT	Number of patients seen	267	278	310	259	1114	234
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	267	278	310	259	1114	234
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	0	0	0	0	0	0
MH	Number of patients seen	309	240	294	283	1126	306
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	306	240	294	283	1123	306
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	3	0	0	0	3	0
SGH	Number of patients seen	158	149	127	129	563	154
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 14 days	114	113	98	95	420	106
	Number of patients seen in RACPC after decision to refer (where referral was received within 24hrs) - within 15+ days	0	0	0	0	0	0

Table 9 RACPC activity in South East London: number of patients seen in RACPC where referral was not received within 24 hours

		Q1 08/09	Q2 08/09	Q3 08/09	Q4 08/09	Total 08/09	Q1 09/10
GSTT	Number of patients seen	96	102	144	96	438	114
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	0	0	0	0	0	0
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	0	0	0	0	0	0
KCH	Number of patients seen	184	173	160	166	683	175
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	27	37	22	17	103	26
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	38	30	27	24	119	31
QEH	Number of patients seen	170	141	140	168	619	162
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	0	0	0	0	0	0
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	0	0	0	0	0	0
QMH	Number of patients seen	111	104	121	128	464	110
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	0	0	0	0	0	0
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	0	0	0	0	0	0
PRUH	Number of patients seen	488	452	468	520	1928	474
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	9	1	6	0	16	0
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	0	0	0	0	0	0
UHL	Number of patients seen	148	114	111	114	487	105
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	63	39	34	33	169	29
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	0	0	0	0	0	0

Table 10 RACPC activity in South West London: number of patients seen in RACPC where referral was not received within 24 hours.

		Q1 08/09	Q2 08/09	Q3 08/09	Q4 08/09	Total 08/09	Q1 09/10
ESH	Number of patients seen	209	209	251	218	887	246
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	0	0	0	0	0	22
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	0	0	0	0	0	6
KHT	Number of patients seen	267	278	310	259	1114	234
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	0	0	0	0	0	0
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	0	0	0	0	0	0
MH	Number of patients seen	309	240	294	283	1126	306
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	0	0	0	0	0	0
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	0	0	0	0	0	0
SGH	Number of patients seen	158	149	127	129	563	154
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 14 days	25	29	24	17	95	19
	Number of patients seen in RACPC after decision to refer (where referral was not received within 24hrs) - within 15+ days	19	7	25	17	68	29

Table 11 RACPC activity: Percentage of patients attending RACPC where pain was non-cardiac in origin

	Q1 08/09	Q2 08/09	Q3 08/09	Q4 08/09	Q1 09/10
GSTT	78%	88%	69%	72%	76%
KCH	60%	68%	64%	59%	55%
QEH	data not available				
QMH	data not available				
PRUH	40%	35%	48%	42%	45%
UHL	39%	45%	48%	54%	46%
ESH	20%	59%	75%	65%	72%
KHT	data not available				
MH	48%	45%	57%	47%	46%
SGH	64%	62%	72%	59%	55%

Chapter 4 Angiography

Angiography is provided in 8 centres in South London, 5 in South East and 3 in South West.

Table 12 shows the total angiography activity per quarter for each provider.

The table shows data for the 2008/09 financial year, and for the first quarter of 2009/10. The table also shows the activity at each site as a percentage of the total activity in South London providers.

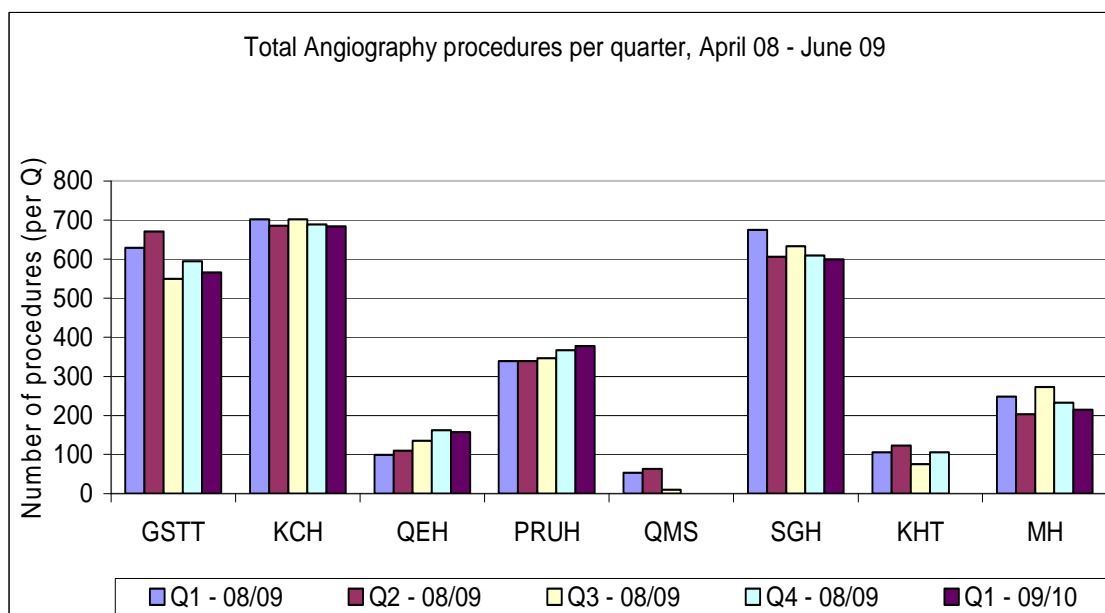
(NB where data has not yet been submitted by all providers, these are calculations based on the percentage of the data submitted, and so are therefore over-estimates)

Table 12 Total angiography activity per quarter

	Q1 - 08/09		Q2 - 08/09		Q3 - 08/09		Q4 - 08/09		Total - 08/09		Q1 - 09/10	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Guy's & St Thomas' NHS Trust	629	22%	671	24%	549	20%	594	22%	2,443	22%	566	22%
Kings College Hospital	702	25%	685	24%	701	26%	688	25%	2,776	25%	683	26%
Queen Elizabeth Hospital	99	3%	109	4%	135	5%	162	6%	505	5%	157	6%
Princess Royal University Hospital	339	12%	339	12%	346	13%	367	13%	1,391	13%	377	15%
Queen Mary Sidcup	53	2%	63	2%	10	0%	data not available					
St George's NHS Trust	675	24%	606	22%	633	23%	609	22%	2,523	23%	599	23%
Kingston NHS Trust	106	4%	123	4%	75	3%	106	4%	410	4%	data not available	
Mayday Hospital	248	9%	203	7%	272	10%	232	8%	955	9%	214	8%
Total	2,851	100%	2,799	100%	2,721	100%	2,758	100%	11,003	100%	2,596	100%

Figure 1 shows the activity in a bar chart. The activity does not include angiography procedures that immediately preceded an angioplasty; these are recorded in the angioplasty tables.

Figure 1 Total angiography activity per quarter



Angiography data was collected by day case (D/C), elective (E), inpatient (In/P) and non-elective (N/E). This was done to separate the elective procedures where patients needed a hospital stay or not (E and D/C), and for some centres, where non-elective patients were inpatients or emergency cases.

Some providers were not able to provide the data in this split. This should be taken into consideration when considering future reporting.

- For Guy's and St Thomas', in-patient and non-elective are grouped together
- For Kings College Hospital, day case and elective are grouped together, and inpatient and non-elective are grouped together
- For Queen Elizabeth Hospital, inpatient and non-elective are grouped together
- For PRUH, in-patient and non-elective are grouped together.

Table 13 and Table 14 below show the total activity split by type. This data is also presented in bar charts in Figure 2 and Figure 3.

Table 13 Day case, elective, inpatients and non-elective angiograph activity per quarter – South East London

		Q1 - 08/09	Q2 - 08/09	Q3 - 08/09	Q4 - 08/09	Q1 - 09/10	
		No.	No.	No.	No.	No.	
Guy's & St Thomas' NHS Trust	D/C	320	327	305	309	263	
	E	125	111	88	147	131	
	In/P	0	0	0	0	0	
	N/E	185	233	156	138	172	
Kings College Hospital	D/C	573	560	588	591	581	
	E	0	0	0	0	0	
	In/P	0	0	0	0	0	
	N/E	137	128	116	102	104	
Queen Elizabeth Hospital	D/C	66	81	90	99	115	
	E	8	10	15	15	5	
	In/P	0	0	0	0	0	
	N/E	25	18	30	48	37	
Princess Royal University Hospital	D/C	136	174	188	167	195	
	E	29	14	24	24	15	
	In/P	0	0	0	0	0	
	N/E	174	151	134	176	167	
Queen Mary Sidcup	D/C	40	53	9	data not available		
	E	0	0	0			
	In/P	0	0	0			
	N/E	13	10	1			

Figure 2 Day case, elective, inpatients and non-elective angiograph activity per quarter – South East London

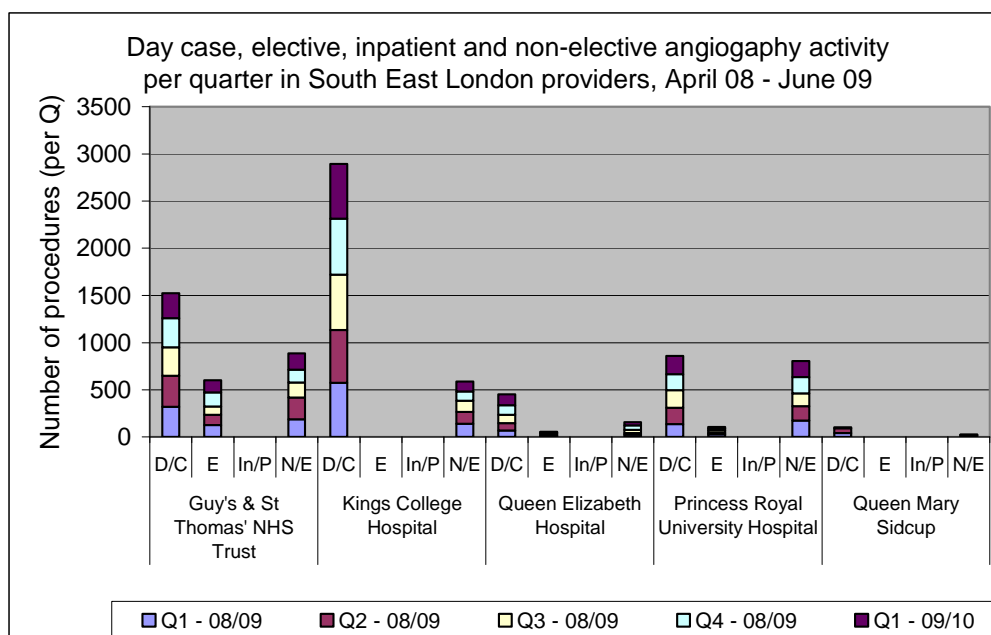
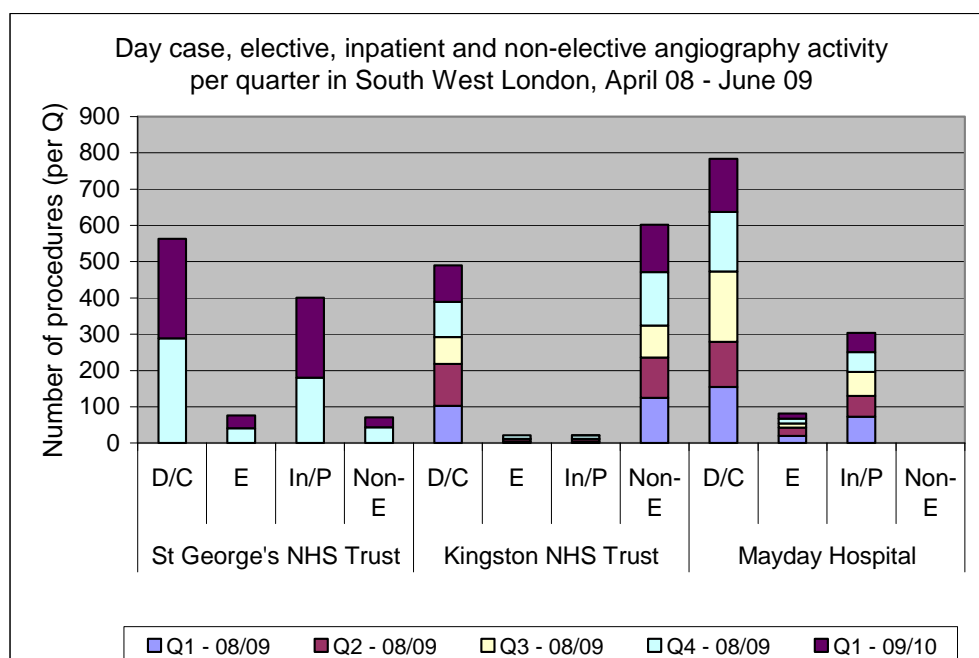


Table 14 Day case, elective, inpatients and non-elective angiograph activity per quarter – South West London

		Q1 - 08/09	Q2 - 08/09	Q3 - 08/09	Q4 - 08/09	Q1 - 09/10
		No.	No.	No.	No.	No.
St George's NHS Trust	D/C	data not available		0	289	274
	E	data not available		0	41	35
	In/P	data not available		0	180	221
	Non-E	data not available		0	44	27
Kingston NHS Trust	D/C	102	116	74	97	101
	E	4	7	1	9	0
	In/P	4	7	1	9	1
	Non-E	125	111	88	147	131
Mayday Hospital	D/C	155	124	194	164	146
	E	20	22	12	13	15
	In/P	73	57	66	55	53
	Non-E	0	0	0	0	0

In South West London, St George's Hospital could provide only recent data split by procedure type. Therefore in Figure 3 the chart shows activity at St George's Hospital for just 2 quarters, whereas for Kingston and Mayday Hospitals 5 quarters of activity are shown.

Figure 3 Day case, elective, inpatients and non-elective angiograph activity per quarter – South West London



Waiting times data is routinely collected by providers, submitted to DH, and distributed by Dr Stephen Green. The data is shown in Figure 4, Figure 5 and Figure 6.

As the waiting times data is collected on a monthly basis, the waiting times data shows the number of patients waiting at the end of each month, and shows how long they have been waiting.

It is important not to confuse these figures with the total number of patients waiting throughout the year, and therefore total activity; as patients waiting for more than 4 weeks will be counted in more than one month. The data should not be seen as a true reflection of activity.

Figure 4 Angiography waiting times – South East London (1 of 2)

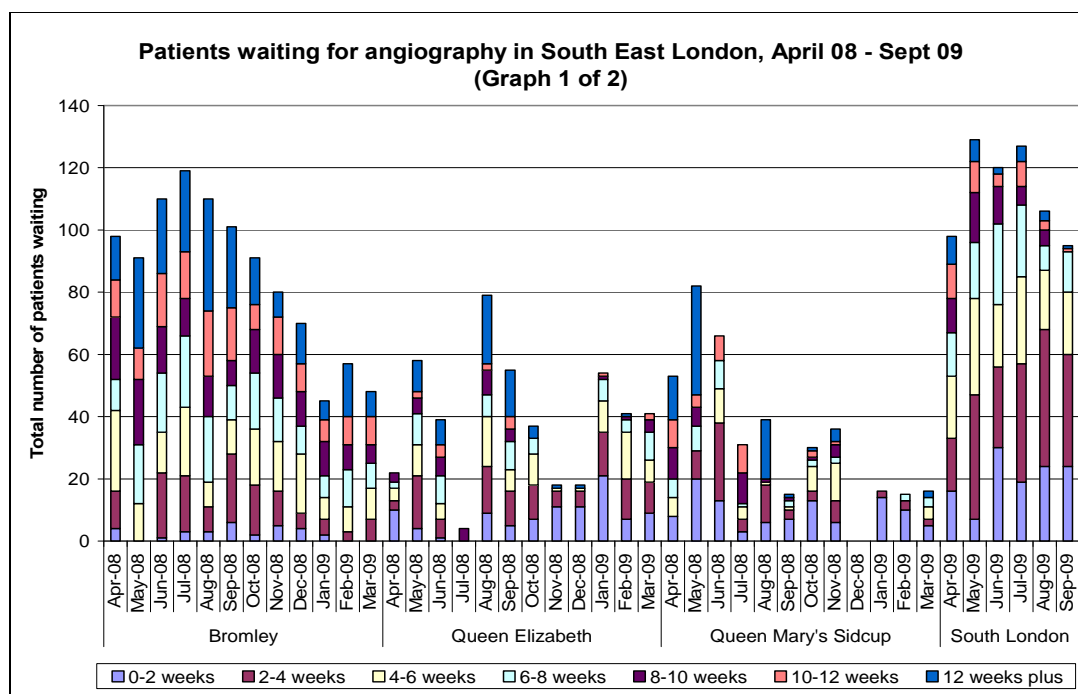


Figure 4 shows that a significant proportion of the patients waiting at Bromley, Queen Elizabeth and Queen Mary's Sidcup have had long waits for their angiography procedure.

These long waiting times are still found in the first quarter of 2009/10 at the South London Health Care Trust, although an improvement has been seen in the second quarter.

Figure 5 Angiography waiting times – South East London (2 of 2)

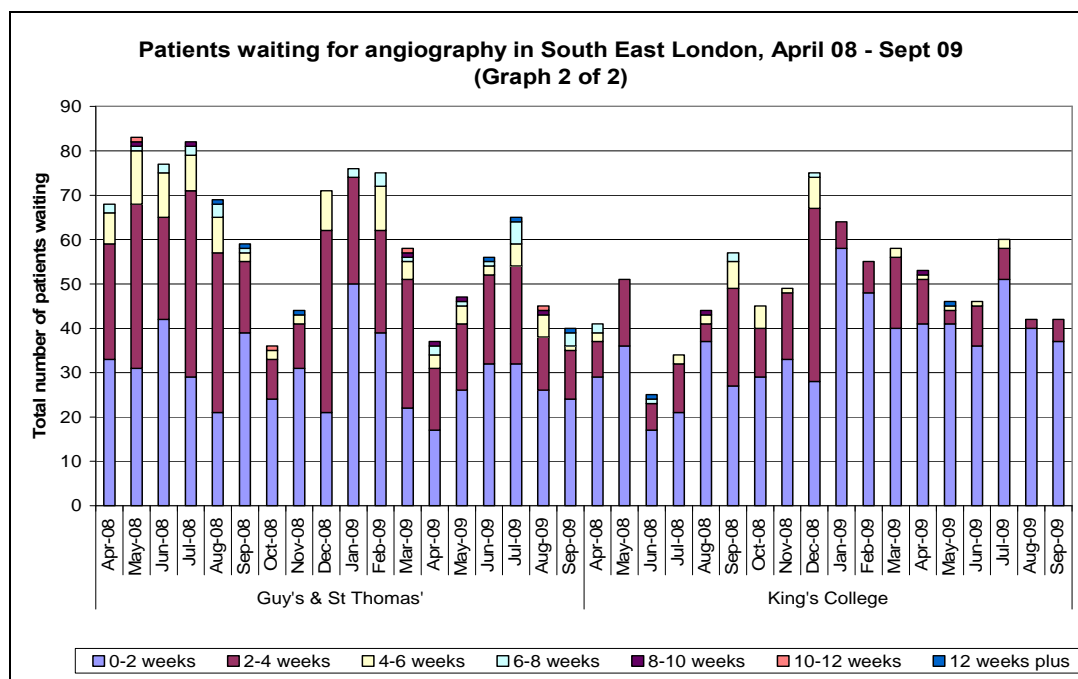
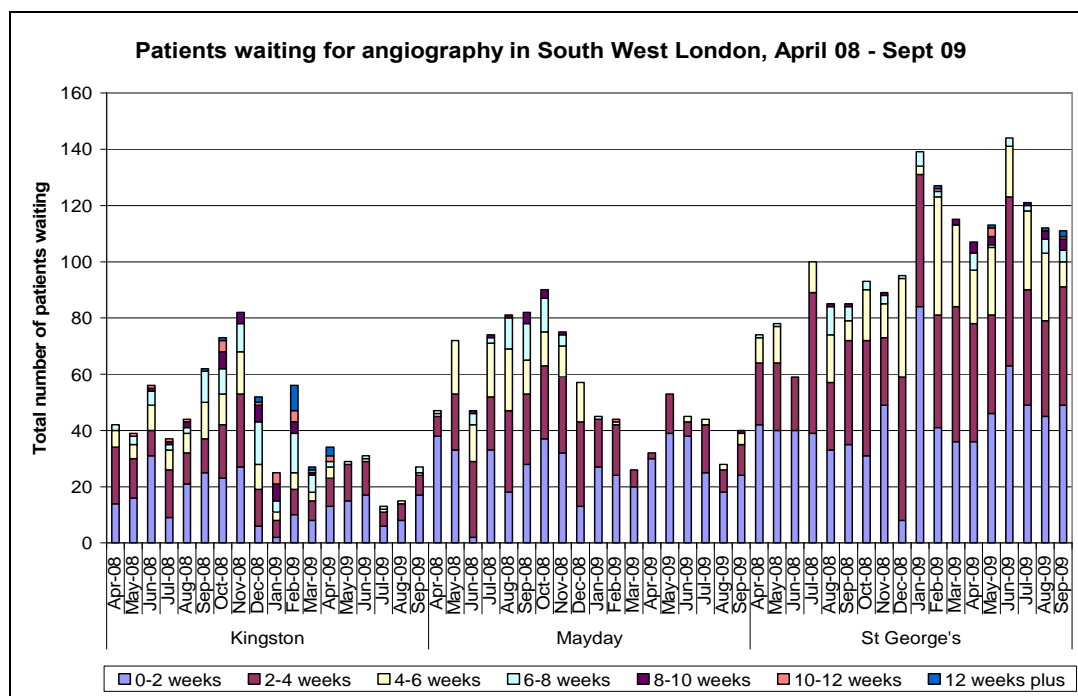


Figure 6 Angiography waiting times – South West London



Chapter 5 Angioplasty

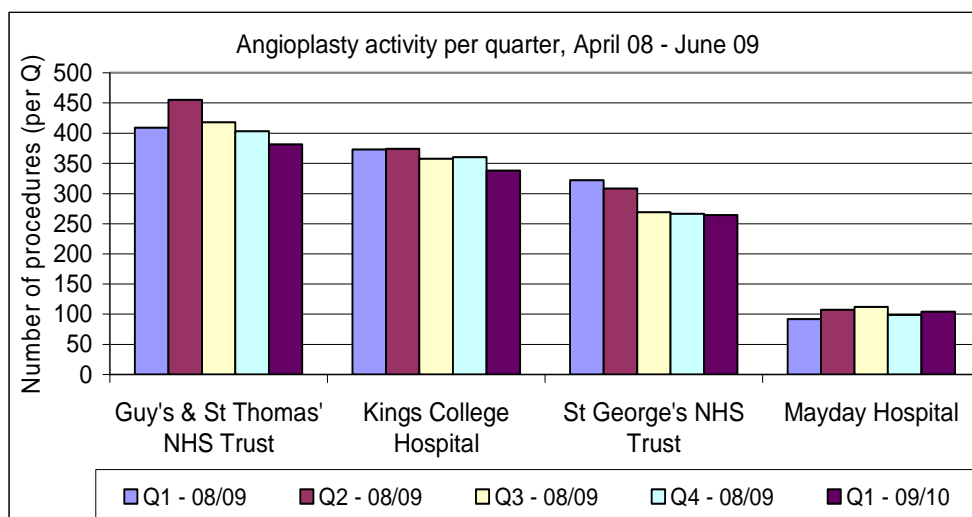
Angioplasty (also known as PTCA - Percutaneous Transluminal Coronary Angioplasty, or PCI - Percutaneous Coronary Intervention) is now provided in 5 centres in South London; 3 in South East and 2 in South West.

Since June 2009, angioplasty has been provided by the South London Healthcare Trust, at the Queen Elizabeth Site. The activity has not yet been recorded in this report, although an indication of the activity can be seen from the waiting time chart, Figure 8.

Table 15 shows the total angioplasty activity in each provider per quarter. The table also shows the percentage activity each provider carried out. Figure 7 shows the activity in a bar chart.

Table 15 Angioplasty activity per quarter

	Q1 - 08/09		Q2 - 08/09		Q3 - 08/09		Q4 - 08/09		Total - 08/09		Q1 - 09/10	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Guy's & St Thomas' NHS Trust	409	34%	455	37%	418	36%	403	36%	1,685	36%	381	35%
Kings College Hospital	373	31%	374	30%	357	31%	360	32%	1,464	31%	338	31%
St George's NHS Trust	322	27%	308	25%	269	23%	266	24%	1,165	25%	264	24%
Mayday Hospital	92	8%	107	9%	112	10%	99	9%	410	9%	104	10%
South London Healthcare Trust	no data collected											
Total	1,196	100%	1,244	100%	1,156	100%	1,128	100%	4,724	100%	1,087	100%

Figure 7 Angioplasty activity per quarter


The waiting times data for angioplasty in South London is shown below.

It is important not to confuse this with the total numbers of patients waiting throughout the year, and therefore total activity, as patients waiting for more than 4 weeks will be counted in more than one month. The data should not be seen as a true reflection of activity.

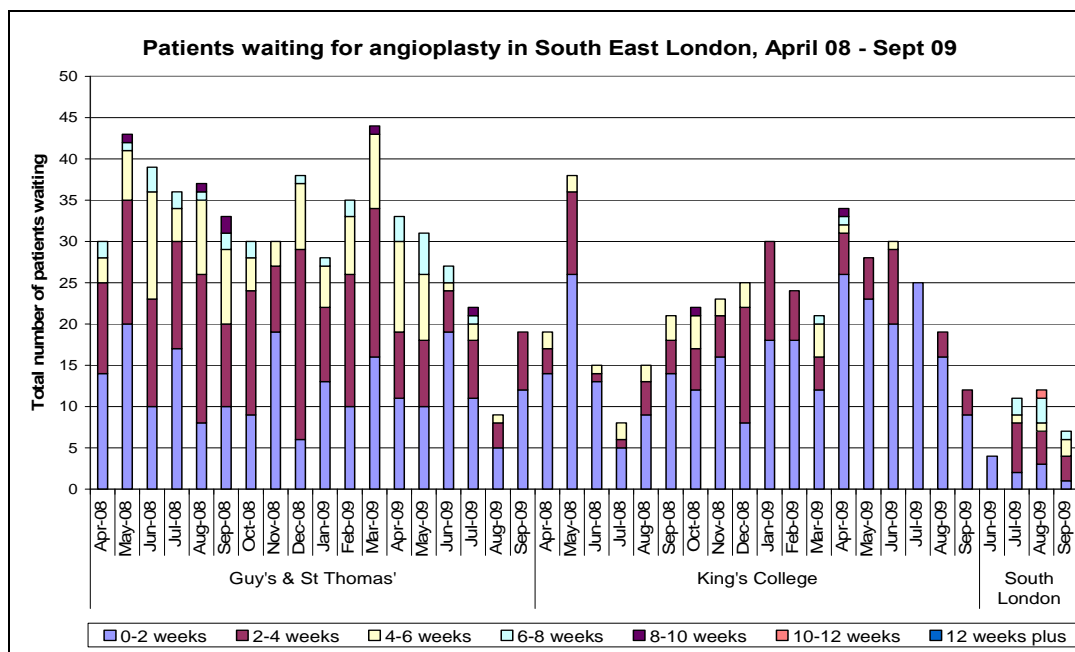
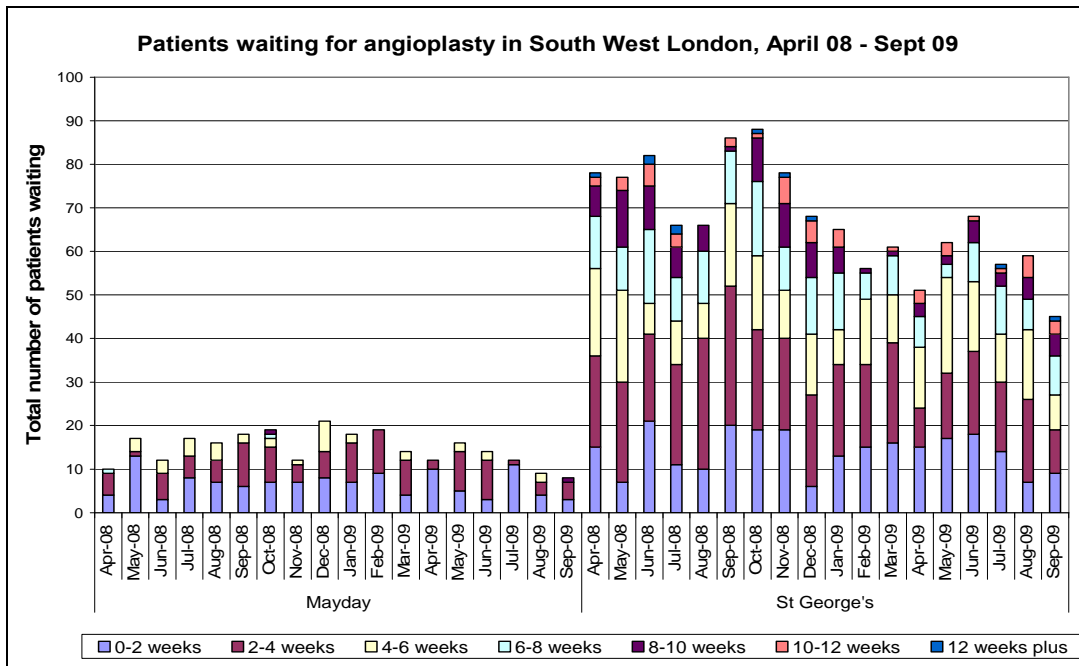
Figure 8 Angioplasty waiting times – South East London


Figure 9 Angioplasty waiting times – South West London



Chapter 6 Primary Angioplasty

Primary angioplasty is provided in 3 centres in South London, at the 2 tertiary centres in South East, and at the 1 tertiary centre in South West.

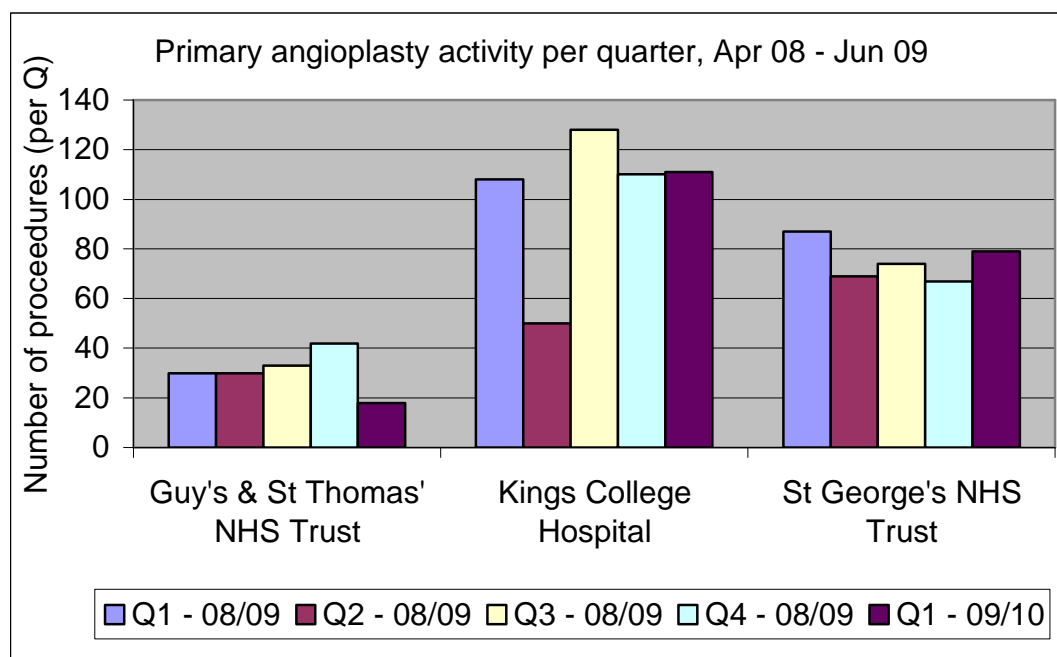
As of 10th September 2009, data has been received from all sites. Table 16 gives the total number of procedures performed at each site, per quarter, and the percentage of activity each provider has undertaken.

Figure 10 shows this data in the form of a bar chart.

Table 16 Primary Angioplasty activity in South London

	Q1 - 08/09		Q2 - 08/09		Q3 - 08/09		Q4 - 08/09		Q1 - 09/10	
	No.	%	No.	%	No.	%	No.	%	No.	%
Guy's & St Thomas' NHS Trust	30	13%	30	20%	33	14%	42	19%	18	9%
Kings College Hospital	108	48%	50	34%	128	54%	110	50%	111	53%
St George's NHS Trust	87	39%	69	46%	74	31%	67	31%	79	38%

Figure 10 Primary Angioplasty activity in South London



The NIAP report concluded that primary angioplasty will be most effective (and cost-effective) if delivered within 120 to 150 minutes of the patient's call for help. Figure 11 and Figure 12 show the monthly average for door to balloon times and call to balloon times of primary angioplasties performed at each site.

Figure 11 Average Call to Balloon times in South London

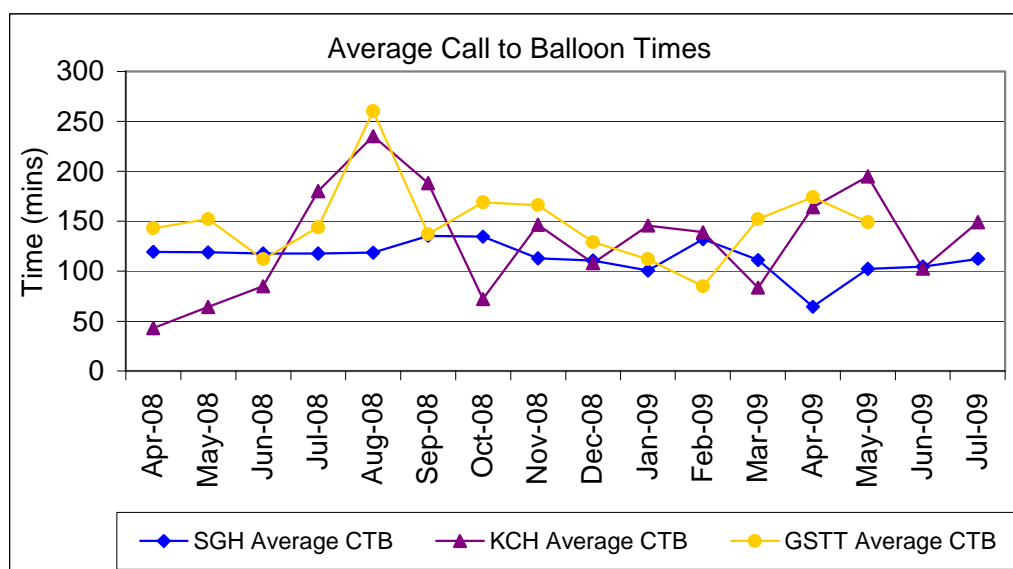
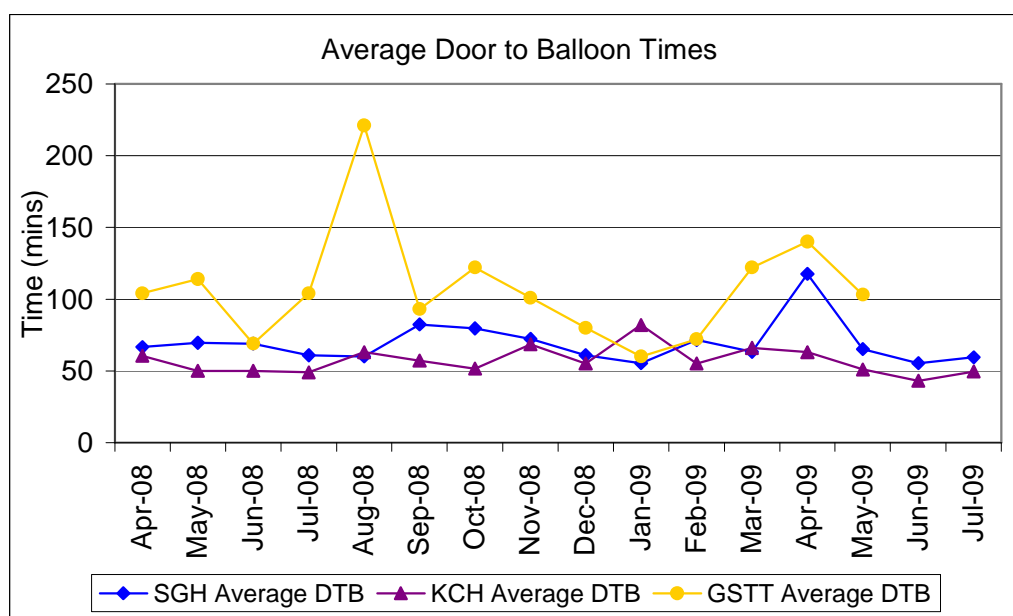


Figure 12 Average Door to Balloon times in South London



More details on the use of primary angioplasty are given in Chapter 7.

Chapter 7 MINAP

All hospitals in England that treat heart attacks patients submit data to MINAP.

Analyses are not meaningful if a hospital has less than 20 cases for analysis for the year and no percentages are shown in the results table. The number of records is shown in the tables as n. There are several reasons why hospitals may have less than 20 patients in the analyses.

- In hospitals providing a primary angioplasty services, most patients receive primary angioplasty rather than thrombolysis. The delay before primary angioplasty is not directly comparable with that before thrombolytic treatment, and the delays before the two treatments cannot be combined for these analyses.
- Hospitals that do not provide primary angioplasty may send their patients to a primary angioplasty centre. Few if any will receive thrombolytic treatment.
- About 18% now make their own way to hospital without involving either the ambulance service or their GP. These patients are excluded from analyses of call to needle time and may account for small numbers in some hospitals.
- Smaller hospitals report low numbers of heart attack patients.
- The number of patients having ST Segment elevation heart attacks is falling.
- Hospitals may have only recently started a primary angioplasty service in 2008/09 or have performed primary angioplasty on an opportunistic basis when a catheter laboratory was available.

Hospitals using thrombolytic treatment

The standard for thrombolytic treatment to be given within 60 minutes of calling for professional help (call to needle time) is a joint responsibility of hospitals and ambulance services. The target of 68% treated within 60 minutes in England has not altered from 2007/8. Table 17 shows hospital thrombolytic treatment data for April 2007 to March 2008, and April 2008 to March 2009. Ambulance service data for 2007/8 and 2008/9 are shown in Table 19. Data for Cardiac Networks are shown in Table 21.

Hospital performance in relation to the national standard for thrombolytic treatment given within 60 minutes of calling for help

At Epsom Hospital, which though outside of South West London and the London SHA makes up one half of the Epsom and St Helier Trust, thrombolysis is routinely used as the treatment for myocardial infarctions. Table 17 shows that Epsom hospital was above the national target of 68% for England in both 2007/08 and 2008/09 (although this accounted for less than 20 cases in 2007/08). A small number of patients in South London providers received thrombolysis.

Hospital performance in relation to the national standard for thrombolytic treatment given within 30 minutes of hospital arrival

In Table 17, Epsom hospital met the target of 75% of patients receiving thrombolytic treatment within 30 minutes of hospital arrival. A small number of patients in South London providers received thrombolysis.

Table 17 Thrombolytic treatment in hospitals in London (MINAP)

Year	Thrombolytic treatment within 30 minutes of hospital arrival				Thrombolytic treatment within 60 minutes of calling for help			
	2007/08		2008/09		2007/08		2008/09	
Target	75%				75%			
	%	n	%	n	%	n	%	n
England National Average	84%	5824	83%	4391	71%	7303	72%	5470
Epsom Hospital		18	87%	23		18	75%	20
Kings College Hospital		0		3		0		3
Queen Elizabeth Hospital		1		0		1		0
Queen Mary Hospital		11		2		7		1
St George's Hospital		1		1		1		1
St Helier Hospital		0		1		0		1
St Thomas Hospital		1		0		1		0

Hospitals that perform primary angioplasty.

The use of primary angioplasty continues to increase rapidly as more hospitals are able to provide this procedure.

The hospitals in South London performing primary angioplasty provide this not only for their local patients but for a small group of hospitals, and take patients outside of the London Strategic Health Authority. The ambulance service will take suitable patients directly to angioplasty centres, bypassing the local hospital completely. Patients who are taken to a local hospital and then transferred for angioplasty at another hospital contributed to less than 15% of all primary angioplasties in 2008/09.

In England in 2008/09, 7351 patients were treated with primary angioplasty, compared with 4035 in 2007/08, an increase of 82%. These figures relate to patients that had unequivocal symptoms and ECG changes for heart attack on admission to hospitals and do not include patients whose symptoms and ECG changes developed subsequently.

Table 18 Primary angioplasty in England (MINAP)

Year	Patients receiving primary angioplasty*				Primary angioplasty within 90 mins of arrival at intervention centre				Primary angioplasty within 150 mins of calling for help	
	2007/08		2008/09		2007/08		2008/09		2008/09	
Target									75%	
	%	n	%	n	%	n	%	n	%	n
England national average	27%	4035	47%	7351	79%	3907	84%	7144	79%	5994
Kings College Hospital	100%	175	98%	135	86%	159	69%	124	64%	87
St George's Hospital	99%	131	99%	275	83%	127	79%	274	84%	255
St Thomas' Hospital	98%	80	99%	111	53%	79	61%	110	69%	98
* The percentage of patients having any reperusing treatment that had primary angioplasty										

Ambulance service provision in relation to the national standard for thrombolytic treatment given within 60 minutes of calling for help:

This is a shared standard between hospitals and ambulance services and so the ambulance service performance includes the performance of their associated hospitals. In Table 19, the number of eligible patients that received pre-hospital thrombolysis and primary angioplasty are also shown.

- 11 of the 12 ambulance services in England give thrombolytic treatment to patients before they reach hospital (pre-hospital thrombolysis).
- The London Ambulance Service is the exception and takes all eligible patients directly to primary angioplasty hospitals rather than give pre-hospital thrombolytic treatment.

Table 19 Ambulance Services in England (MINAP)

Year	Patients having thrombolytic treatment within 60 mins of calling for help				Patients having pre-hospital thrombolysis	Patients having primary angioplasty
	2007-8		2008-9			
Target	68%					
	%	n	%	n	n	n
England National average	70%	6960	72%	n	2516	5743
London Ambulance Service		17		9	1	1358

Use of secondary prevention medication on discharge

The proportion of heart attack patients in London prescribed secondary prevention medication on discharge from hospital continues to exceed the standards for aspirin, beta blockers and statins, (Table 20).

All patients having heart attacks who survive to leave hospital are included here, but patients transferred to another hospital are excluded.

- In South London all providers exceeded the target of 80% for prescription of aspirin following heart attack, except Princess Royal University Hospital, which was just below at 78%
- All providers exceeded the target for Beta blockers except Epsom Hospital and Princess Royal University Hospital, which were both at 74%
- The use of statins also exceeded the target, except in PRUH, where again it was just under at 77%
- ACE inhibitors were prescribed in all centres above target of eligible patients in England except at PRUH, where only 58% was achieved
- Clopidogrel was prescribed on discharge at a level above the target, except at PRUH where only 75% of eligible patients were prescribed it

The results presented in the report are for patients discharged following both ST elevation and non-ST elevation myocardial infarction because these drugs are effective in both types of heart attack.

Table 20 Secondary Prevention medication in hospitals (MINAP)

Year 2008-9	Aspirin		Beta Blocker		Statins		ACE inhibitor		Clopidogrel	
	%	n	%	n	%	n	%	n	%	n
2008/09										
Target	80%									
England National average	98%	45314	93%	40036	97%	46089	92%	42641	94%	42086
Epsom Hospital	94%	36	74%	27	87%	38	81%	32	91%	32
Kings College Hospital	100%	262	97%	246	100%	244	80%	247	99%	269
Mayday University Hospital	99%	137	96%	114	99%	137	92%	118	97%	116
Princess Royal University Hospital	78%	144	74%	143	77%	144	58%	143	75%	142
Queen Elizabeth Hospital	97%	150	92%	127	93%	146	88%	142	96%	134
Queen Mary's Hospital	99%	75	91%	65	95%	83	92%	79	99%	80
St George's Hospital	99%	392	92%	391	97%	392	96%	392	98%	392
St Helier Hospital		8		8		7		6		7
Guy's & St Thomas'	100%	230	95%	210	99%	229	96%	224	98%	216

Results by Cardiac Network

Analyses for South East and South West London Cardiac Networks are shown in Table 21.

- The 68% target for the 60 minute thrombolytic treatment standard was met in South West London, as was the 75% target for the 150 minute angioplasty standard.
- However, the 75% angioplasty target was not met in South East London.

Table 21 Cardiac Networks (MINAP)

	Patients having thrombolytic treatment		Patients having primary angioplasty		Patients with a discharge diagnosis of STEMI that received...							
	Thrombolytic treatment within 60 mins of calling for help		Primary angioplasty within 150 minutes of calling for help		Pre-hospital lysis		In-hospital lysis		Primary angioplasty		No reperfusion treatment	
Year	2008/9											
Target	68%		75%									
	n	%	%	n	n	%	n	%	n	%	n	%
England national average	5387	72%	6044	78%	2515	10%	7533	31%	7919	33%	6126	25%
South East London	5		206	67%	0	0%	11	3%	326	74%	102	23%
South West London	22	68%	257	84%	9	2%	39	10%	280	71%	69	17%

Care for patients with non-ST segment elevation infarction

For some years the focus of heart attack management has been upon the early provision of reperfusion treatment to those patients presenting with ST elevation on their ECG (ST elevation infarction).

However, non-ST segment elevation infarctions represent the majority of heart attacks, and outnumber ST segment elevation infarctions by about three to one. They are less severe in the sense that the early death rate – the first few days – is certainly lower for non-ST elevation infarction, but taken over a longer time span (2-3 months) the risk of death is equal or higher. Because non-ST elevation infarctions have a lower early risk of death, and perhaps because they do not require very rapid emergency treatment (reperfusion therapy), they are not always admitted to cardiac care units, and are not always cared for by cardiologists.

However, specialist involvement is important, and it is recognised that performance of angiography and coronary intervention within the first 2-3 days is an important facet of treatment for the majority of patients. In previous years access to angiography and coronary intervention was limited by capacity constraints. The development of 72 new catheter laboratories in hospitals in England and Wales since 2001 has had a major impact on access to this important routine procedure.

Care for non-ST elevation infarction has become more complex, and the treatment options greater. This is a condition that requires access to specialist involvement, so that even if a patient with a non-ST elevation infarction is admitted under a physician who is not primarily a cardiologist, he or she should have access to cardiological advice.

Ideally admission should be to a cardiac facility where nursing staff have a cardiac nursing background, and there is easy access to cardiological expertise. In England only 46% patients with non-ST infarction were admitted to a cardiac ward in 2008/9.

Princess Royal University Hospital, Queen Elizabeth Hospital and St Thomas Hospital in South East London were all below the England national average for this measure.

However, regardless of where a patient was admitted, cardiological involvement in care during the admission was high; 80% of patients in England saw a member of a cardiology team during the admission, and each provider in South London exceeded this average.

In future MINAP intends to provide information on the use of angiography and coronary interventions for this large group of patients and will encourage all hospitals to confirm the importance placed on the care of these patients by collecting appropriate data.

Table 22 Care of patients with non-ST segment elevation infarction (NSTEMI) (MINAP)

	NSTEMI patients admitted to a cardiac unit or ward		NSTEMI patients seen by a cardiologist or member of team	
	2008/09			
	n	%	n	%
England national average	19392	46%	33867	80%
Epsom Hospital	38	78%	49	100%
Kings College Hospital	14		69	82%
Kingston Hospital	5		56	98%
Mayday University Hospital	123	88%	135	96%
Princess Royal University Hospital	48	36%	117	87%
Queen Elizabeth Hospital	85	45%	161	85%
St George's Hospital	58	65%	84	94%
St Helier Hospital	35	65%	53	98%
St Thomas Hospital	36	37%	92	94%

Chapter 8 STEMI and N-STEMI

The number of patients, and length of stay for STEMI and NSTEMI patients proved very difficult to measure across the majority of providers in South London. This reflects the concerns raised by MINAP.

Some of data for STEMI and NSTEMI patients is collected for MINAP, and this has been shown in Chapter 7 above.

Chapter 9 Cardiac Surgery

Cardiac surgery is provided in 3 centres in South London, at the 2 tertiary centres in South East, and at the 1 tertiary centre in South West.

Table 23 gives the total number of procedures performed in South London for the 5 quarters measured. Figure 13 shows the number of procedures in a bar chart.

The table shows the percentage contribution of each provider, for each cardiac surgery speciality type. For example, the table shows that of the 1,625 1st CABG only procedures performed in 08/09, 39% were performed at GSTT, 28% at KCH, and 33% at SGH.

Table 23 Total Cardiac surgery activity in South London, per quarter

		Q1 - 08/09		Q2 - 08/09		Q3 - 08/09		Q4 - 08/09		Total 08/09		Q1 - 09/10	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Guy's & St Thomas' NHS Trust	1st CABG only	174	43%	176	40%	138	37%	144	35%	632	39%	162	38%
	1st AVR only	55	56%	61	55%	36	49%	39	48%	191	52%	41	55%
	1st MVR only	16	48%	16	36%	15	54%	12	32%	59	41%	19	48%
	CABG + Valve	44	40%	53	50%	29	36%	57	54%	183	46%	47	48%
	Valves	17	35%	11	19%	21	28%	14	19%	63	25%	22	31%
	Others	12	29%	18	33%	12	20%	19	25%	61	26%	18	39%
Kings College Hospital	1st CABG only	104	26%	117	27%	107	29%	124	30%	452	28%	111	26%
	1st AVR only	22	22%	33	30%	19	26%	26	32%	100	27%	20	27%
	1st MVR only	12	36%	20	44%	10	36%	14	38%	56	39%	12	30%
	CABG + Valve	36	33%	20	19%	25	31%	27	25%	108	27%	24	24%
	Valves	10	21%	20	34%	24	32%	25	35%	79	31%	19	26%
	Others	15	37%	18	33%	25	41%	27	36%	85	36%	7	15%
St George's NHS Trust	1st CABG only	125	31%	142	33%	128	34%	146	35%	541	33%	154	36%
	1st AVR only	21	21%	17	15%	19	26%	17	21%	74	20%	14	19%
	1st MVR only	5	15%	9	20%	3	11%	11	30%	28	20%	9	23%
	CABG + Valve	29	27%	33	31%	27	33%	22	21%	111	28%	27	28%
	Valves	21	44%	28	47%	31	41%	33	46%	113	44%	31	43%
	Others	14	34%	19	35%	24	39%	30	39%	87	37%	21	46%

Figure 13 Total Cardiac Surgery Activity in South London per quarter

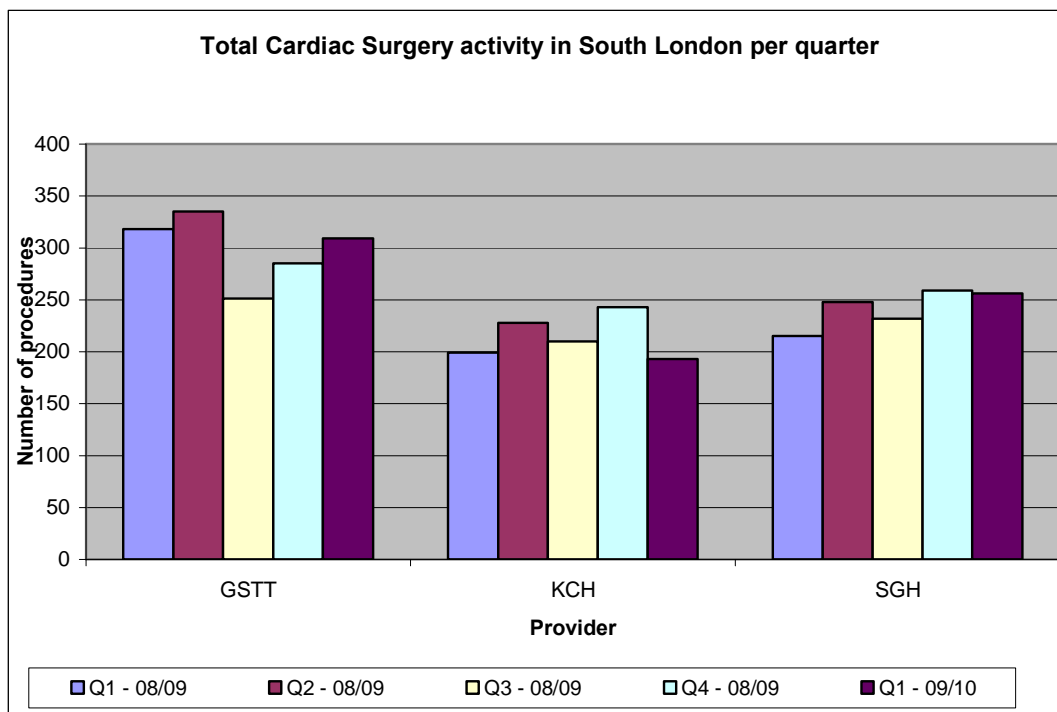


Figure 14 and Figure 15 show the waiting times data for CABG and Valves in South London.

Figure 14 Coronary Artery Bypass Graft waiting times in South London

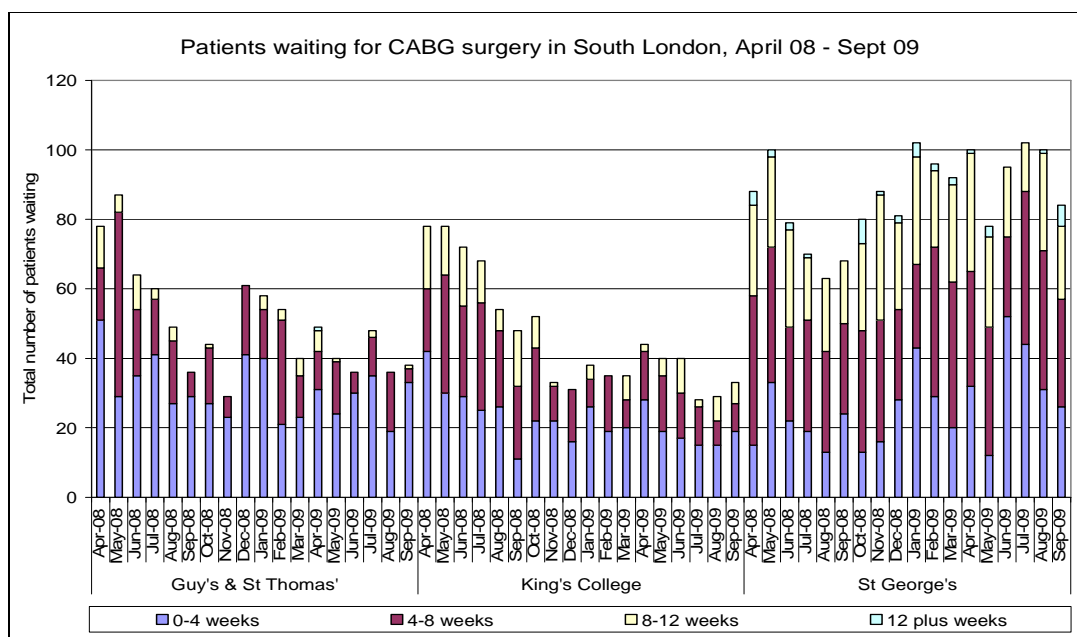
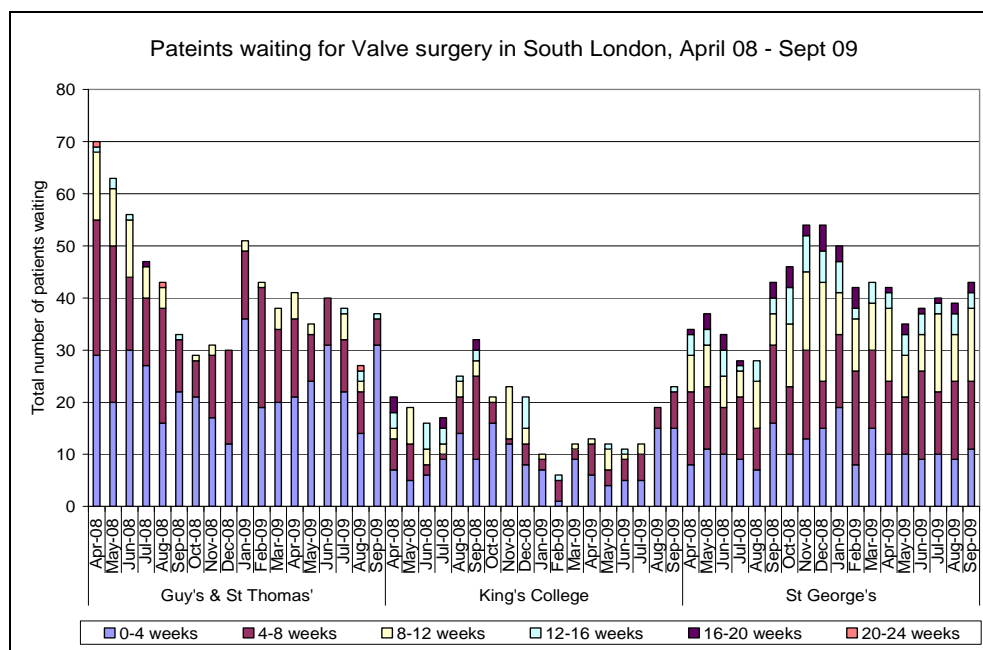


Figure 15 Valves waiting times in South London


As the waiting times data is collected on a monthly basis, the waiting times data shows the number of patients waiting at the end of each month, and shows how long they have been waiting.

It is important not to confuse these figures with the total number of patients waiting throughout the year, and therefore total activity; as patients waiting for more than 4 weeks will be counted in more than one month. The data should not be seen as a true reflection of activity. This is confirmed when looking at the activity table, and comparing it with the number of patients in the waiting times table.

Table 24 below shows the total number of non-elective procedures performed in South London for the 5 quarters measured.

Table 24 Total non-elective cardiac surgery activity in South London, per quarter

		Q1 - 08/09		Q2 - 08/09		Q3 - 08/09		Q4 - 08/09		Total 08/09		Q1 - 09/10	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Guy's & St Thomas' NHS Trust	1st CABG only	44	33%	45	36%	56	36%	50	35%	195	35%	62	39%
	1st AVR only	13	54%	15	58%	12	60%	11	79%	51	61%	9	64%
	1st MVR only	4	80%	2	33%	4	67%	4	50%	14	56%	5	50%
	CABG + Valve	21	54%	8	47%	11	39%	14	54%	54	49%	7	33%
	Valves	2	29%	2	13%	9	35%	6	50%	19	32%	3	19%
	Others	8	40%	5	22%	9	28%	6	16%	28	25%	8	40%
Kings College Hospital	1st CABG only	49	37%	43	34%	47	30%	53	37%	192	34%	64	41%
	1st AVR only	8	33%	10	38%	5	25%	1	7%	24	29%	3	21%
	1st MVR only	1	20%	2	33%	0	0%	4	50%	7	28%	2	20%
	CABG + Valve	10	26%	4	24%	9	32%	7	27%	30	27%	9	43%
	Valves	2	29%	6	40%	10	38%	4	33%	22	37%	9	56%
	Others	7	35%	11	48%	14	44%	17	45%	49	43%	4	20%
St George's NHS Trust	1st CABG only	39	30%	38	30%	54	34%	40	28%	171	31%	32	20%
	1st AVR only	3	13%	1	4%	3	15%	2	14%	9	11%	2	14%
	1st MVR only	0	0%	2	33%	2	33%	0	0%	4	16%	3	30%
	CABG + Valve	8	21%	5	29%	8	29%	5	19%	26	24%	5	24%
	Valves	3	43%	7	47%	7	27%	2	17%	19	32%	4	25%
	Others	5	25%	7	30%	9	28%	15	39%	36	32%	8	40%

Chapter 10 Inter-Hospital Transfers

The transfer of inpatients from one hospital to another for specialist procedures is one that the Network has sought to improve for several years.

In 2005, the North West London Cardiac Network commissioned Teleologic to develop a web-based inter-hospital transfer system for use across all NW London centres and for DGH's external to London who refer patients into the Network for in-patient procedures. The NW London system is now used by 15 hospital sites providing both regular clinical and waiting times data across the whole of the Network and beyond.

The improvements made in the complex area of inter-hospital transfers highlighted NW London, in a national IHT audit of waiting times, as one of the top performing Networks nationally.

Following on from the success of the NW London system, a further system was commissioned for the SE London Cardiac Network area, and this system has been hosted at King's since 2003.

The system was also adopted by the SW London Network in 2006, but poor uptake meant the system has remained largely dormant for three years. By working together to fully implement the electronic IHT system across all SW centres and for DGH's external to South London who refer patients into the two Networks, improvements can be made for patients and hospitals.

St George's cardiothoracic department have recently announced that from January 2010, the electronic referral system will be mandatory for all inpatient cardiac surgery referrals.

The electronic system provides a built in audit to allow evaluation of the IHT services. If used regularly for all referrals, and system could produce reports giving details on:

(For local hospitals)

- The time from when patients were admitted by a cardiologist, to the time they were referred to a surgeon
- Time from referral to transfer to the tertiary centre
- If the patient was returned after the procedure, time from transfer to discharge

(For the tertiary hospitals)

- The time from when patients were transferred to the tertiary centre to the time they received their procedure
- Time from procedure to discharge, or to transfer back.
- 'In-house referrals'
 - Patients admitted by a tertiary centre cardiologist to referral
 - Referral to procedure
 - Procedure to discharge

Chapter 11 Cardiac Rehabilitation

The 2009 National Audit of Cardiac Rehabilitation (NACR) presents the results of some, but not all, cardiac rehabilitation programmes around the country. Staff who run rehab programmes collect data to be routinely submitted to the programme, which is funded by the British Heart Foundation (BHF) and coordinated by the BHF Care and Education Research Group at the University of York.

Cardiac rehab is defined by the World Health Organisation as:

“...the sum of activities required to influence favourably the underlying causes of the disease, as well as the best possible, physical, mental and social conditions, so that people may, by their own efforts preserve or resume when lost, as normal a place as possible in the community. Rehabilitation cannot be regarded as an isolated form or stage of therapy but must be integrated within secondary prevention services of which it forms only one facet”.

A recent Cochrane Review, found 48 randomised control trials confirming the benefits of exercise-based cardiac rehabilitation. Compared with usual care, cardiac rehabilitation was associated with reduced all-cause mortality and cardiac mortality.¹

Cardiac rehab is one of the most effective and cost effective treatments available for eligible patients. Cardiac rehab can improve peoples' well being through reducing symptoms and dependency on others and re-gaining the strength and self-confidence to return to their normal activities.

Consistent with the NACR's national data, patients in South London are waiting a long time for cardiac rehabilitation after suffering a cardiac event. The NACR's has thus recommended that rehabilitation should be an integral part of the patient pathway with robust referrals mechanisms both for patients admitted to hospital and ones identified in primary care as living with a cardiac condition.

In South London, cardiac rehab is provided both in the hospital setting and in the community by PCTs. Not all teams submit data to the NACR, and not all teams give permission to NACR to share the data with the Network.

The data shown in this report is only that that was able to be retrieved by the Network, and does not reflect all programmes in South London.

1. Taylor, R.S., Brown, A., Ebrahim, S., Jolliffe, J., Noorani, H., Rees, K., Skidmore, B., Stone, J.A., Thompson, D.R., and Oldridge, N. Exercise-based rehabilitation for patients with coronary heart disease: systematic review and meta-analysis of randomized controlled trials. *American Journal of Medicine* 2004, 116 (10), 682-92

Table 25 Ethnicity of patients referred to cardiac rehab in South East and South West London 2008/09, and nationally, 2007/08. (NACR)

Ethnic Group	South West London 2008/09		South East London 2008/09		National 2007/08	
	Number of patients	%	Number of patients	%	Number of patients	%
White (British)	873	56	457	70.2	47,541	74
White (Irish)	58	3.7	10	1.5	1,268	2
White (Other)	86	5.5	21	3.2	1,268	2
Mixed White/Black Caribbean	8	0.5	2	0.3	634	<1
Mixed White/Black African	1	0.1	2	0.3	634	<1
Mixed White/Asian	5	0.3	5	0.8	634	<1
Mixed Other	12	0.8	7	1.1	634	<1
Indian	142	9.1	29	4.5	1,268	2
Pakistani	78	5	3	0.5	2,536	4
Bangladeshi	11	0.7	3	0.5	634	<1
Other Asian	114	7.3	19	2.9	634	1
Black Caribbean	68	4.4	25	3.8	634	<1
Black African	28	1.8	13	2	634	<1
Black Other	8	0.5	1	0.2	634	<1
Chinese	1	0.1	1	0.2	634	<1
Other Ethnic Group	42	2.7	12	1.8	634	<1
Not stated	25	1.6	41	6.3	8,874	14
Total	1,560	100	651	100	63,388	100

Table 26 Age and gender of patients attending cardiac rehab in South East and South West London 2008/09, and nationally, 2007/08. (NACR)

	Treatment centre	Gender	Age			
			<70 years		70+ years	
			Count	%	Count	%
South West London 2008-09	Wandsworth PCT	Male	34	53%	30	47%
		Female	17	49%	18	51%
	Richmond & Twickenham	Male	15	68%	7	32%
		Female	6	75%	2	25%
	St George's Hospital	Male	352	64%	197	36%
		Female	93	42%	131	59%
Mayday Hospital	Male	357	61%	226	39%	
	Female	105	43%	137	57%	
South East London 2008-09	Bromley PCT	Male	79	68%	37	32%
		Female	19	45%	23	55%
	Greenwich PCT	Male	90	66%	46	34%
		Female	38	54%	32	46%
	Lewisham PCT	Male	149	72%	57	28%
		Female	56	62%	34	38%
	Queen Mary's Hospital	Male	24	50%	24	50%
		Female	9	39%	14	61%
Bexley PCT	Male	20	65%	11	36%	
	Female	5	46%	6	55%	
National 2007/08	Male	31,383	63%	18,544	37%	
	Female	9272	43%	12,125	57%	

Table 27 Reasons for patients not attending cardiac rehab in South East and South West London, 2008/09 and nationally, 2007/08 (NACR)

Reasons for patients not attending	South East London 2008/09			South West London 2008/09				National 2007/08
	Bromley PCT	Greenwich PCT	Lewisham PCT	Wandsworth PCT	Richmond & Twickenham PCT	St George's Hospital	Mayday Hospital	
	N	N	N	N	N	N	N	
Patient not interested /refused	21	6	18	5	4	123	65	6392
Died	9	1	0	0	0	2	8	969
No referral				0	0	1	0	
Too ill	0	0	3	0	0	3	7	969
Other	14	1	22	0	1	24	20	3874
Rehab not needed	0	0	1	0	0	1	0	
Ongoing investigation	3	1		0	0	2	4	1164
Too far to travel	1	0	0	0	1	0	7	582
Physical incapacity	3	7	10	0	1	26	5	582
Returned to work	1	3	4	0	1	3	9	582
Language barrier	0	0	1					194
Local exclusion criteria				0	0	9	7	
Holidaymaker				0	0	1	1	194
Mental incapacity	0	0	3	0	0	2	2	388
Unknown	0	5	9	1	0	3	10	
Total	52	24	71	6	8	198	145	19,369

Table 28 Reasons for referral to cardiac rehab in South East and South West London 2008/09, and nationally, 2007/08. (Number of patients) (NACR)

	South East London 2008-09					South West London 2008-09				National data 2007/08
	Bromley PCT	Greenwich PCT	Lewisham PCT	Queen Mary's Hospital	Bexley PCT	Wandsworth PCT	Richmond & Twickenham PCT	St George's Hospital	Mayday Hospital	
Acute Coronary Syndrome (ACS)	5	6	26	11	9	3	0	50	26	3266
Angina	11	8	18	22	1	2	0	32	30	2140
Angiogram	0	32	5	0	0	1	0	2	1	
Angioplasty	34	11	19	0	5	18	1	134	288	10699
Aortic Valve Disease	1	6	6	0	0	0	0	2	1	
Arrhythmia						0	0	1	0	
Bypass surgery	29	13	27	0	10	22	8	70	91	11412
Cardiac arrest	0	3	6	0	0	0	0	5	0	713
Cardiomyopathy						1	0	0	0	
Congenital Heart	1	1	0	0	0	0	0	1	1	713
Heart Failure	0	0	3	0	0	2	0	3	30	713
ICD	0	0	1	0	0	1	0	0	1	713
Mitral Valve Disease	1	3	0	0	0	0	0	2	1	
Myocardial infarction (unknown)	38	31	44	35	1	22	3	157	112	29243
Myocardial infarction (non ST Elevation)	12	39	8	2	0	2	2	22	25	
Myocardial infarction (ST Elevation)	4	23	3	1	0	2	0	18	10	
Other	2	6	9	0	1	4	0	9	21	2140
Other surgery	5	5	23	0	5	5	2	30	30	3566
Primary PCI	10	9	89	0	11	15	17	219	180	5706
Unknown	0	1	1	0	0	2	3	0	0	713
Unstable Angina	2	2	3	0	0					
Valve surgery	3	7	10	0	0	0	2	8	6	
Total	158	207	301	71	43	102	38	776	854	71024