



Cardiac Care Pack

May 2018



Monthly Cardiac Arrest & ST-Elevation Myocardial Infarction Reports

Produced by the Clinical Audit & Research Unit

For further information, please contact Yvette Thomas (STEMI Report) or Scott Picton (Cardiac Arrest Report) on 02077832504

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Out of hospital cardiac arrest

May 2018



3% decrease in cardiac arrest patients since last month.



59% of all cardiac arrest patients received an average response of 7 minutes.



73% of cardiac arrest patients* were assigned a CAT1, with 65% receiving a response within 7 minutes.

10 min



Response

Average overall 999 call to on scene time was **10 minutes***.

40%



Resuscitation

Attempted on **40%** of cardiac arrests attended by LAS crews.

89%



Airways

Advanced airways successfully placed in **89%** of patients. Of these **100%** had EtCO₂ measured.

39%



ROSC

39% of cardiac arrest patients treated by LAS gained and sustained ROSC to hospital.

15%



Data

15% of cases had defibrillator downloads submitted, all were by APPs.

Category	%	Response time (mins)	
		Average	90 th centile
C1	64%	6	10
C2	12%	15	29
C3	18%	13	22
C4	5%	16	21

Actions

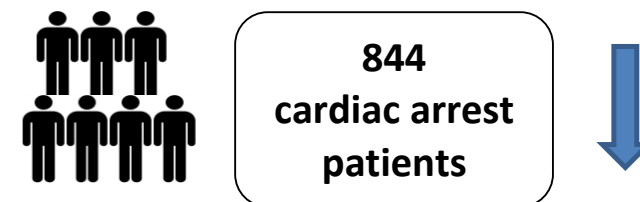


- ✓ Document **ALL** delays to CPR.
- ✓ Continue to record EtCO₂ levels and submit your printout for ET and SGA placements.
- ✓ Download LifePack data for **ALL** cardiac arrests.

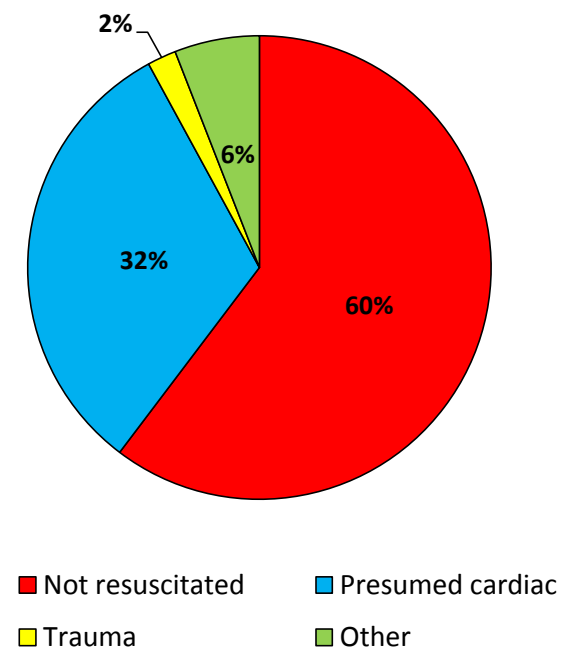
* Includes only patients on whom resuscitation was attempted.

1. Cause of Cardiac Arrest

Group Station	Total number of patients	Resuscitation attempted								Considered beyond resuscitation	
		Presumed cardiac		Trauma		Other		Total		n	%
		n	%	n	%	n	%	n	%		
Homerton	41	17	41%	2	5%	0	0%	19	46%	22	54%
Newham	68	31	46%	1	1%	3	4%	35	51%	33	49%
Romford #	77	25	32%	1	1%	6	8%	32	42%	45	58%
North East	186	73	39%	4	2%	9	5%	86	46%	100	54%
Camden	27	9	33%	0	0%	1	4%	10	37%	17	63%
Edmonton	54	22	41%	1	2%	4	7%	27	50%	27	50%
Friern Barnet	38	9	24%	1	3%	2	5%	12	32%	26	68%
North Central #	119	40	34%	2	2%	7	6%	49	41%	70	59%
Brent	55	20	36%	2	4%	3	5%	25	45%	30	55%
Fulham	28	5	18%	2	7%	1	4%	8	29%	20	71%
Hanwell	42	13	31%	0	0%	6	14%	19	45%	23	55%
Hillingdon #	30	7	23%	1	3%	1	3%	9	30%	21	70%
Westminster	25	7	28%	1	4%	1	4%	9	36%	16	64%
North West	180	52	29%	6	3%	12	7%	70	39%	110	61%
Bromley #	64	12	19%	0	0%	3	5%	15	23%	49	77%
Deptford	62	25	40%	2	3%	3	5%	30	48%	32	52%
Greenwich #	58	14	24%	1	2%	5	9%	20	34%	38	66%
South East #	184	51	28%	3	2%	11	6%	65	35%	119	65%
Croydon	35	11	31%	0	0%	1	3%	12	34%	23	66%
New Malden #	29	6	21%	0	0%	6	21%	12	41%	17	59%
St Helier †	32	12	38%	0	0%	0	0%	12	38%	20	63%
Wimbledon	21	7	33%	0	0%	1	5%	8	38%	13	62%
South West	117	36	31%	0	0%	8	7%	44	38%	73	62%
PAS and VAS	6	2	33%	0	0%	1	17%	3	50%	3	50%
Other LAS \$	52	14	27%	2	4%	2	4%	18	35%	34	65%
LAS-Wide	844	268	32%	17	2%	50	6%	335	40%	509	60%



Total patients attended



Key:

† Percentages for resuscitation attempted and considered beyond resuscitation do not equal 100% due to rounding.

Percentages for aetiologies do not equal the 'Total' value due to rounding.

\$ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS"⁴

2. Ambulance response intervals

Group Station	Number of patients*	999 Call - arrive scene (mins)			999 Call - arrive hospital (mins)		Job cycle (mins)	
		Average	Range	90th centile	Average	Range	Average	Range
Homerton	19	9	4-31 #◀	21	91	61-145	175	119-283
Newham	35	9	2-30 #	17	77	46-140	174	119-286
Romford	32	9	3-19	16	85	43-131	151	78-295
North East	86	9	2-31	17	83	43-145	166	78-295
Camden	10	12	1-40 #	21	97	71-116	177	80-218
Edmonton	27	7	3-12	9	84	55-128	180	123-305
Friern Barnet	12	14	5-26	25	82	62-101	168	116-243
North Central	49	10	1-40	21	88	55-128	177	80-305
Brent	25	9	0-41 #	18	78	38-107	168	87-242
Fulham	8	8	5-13	13	80	76-88	157	99-221
Hanwell	19	9	2-30	21	80	53-107	173	111-231
Hillingdon	9	10	2-23	23	64	41-92	158	107-234
Westminster	9	17	2-93	93	91	62-153	189	60-289
North West	70	10	0-93	18	79	38-153	169	60-289
Bromley	15	12	3-35	35	96	44-193	173	101-231
Deptford	30	8	2-35 #	12	73	50-121	158	70-269
Greenwich	20	12	4-76 #◀	14	94	52-186	170	86-302
South East	65	10	2-76	19	86	44-193	165	70-302
Croydon	12	7	5-11	10	76	43-94	136	66-197
New Malden	12	9	4-21	14	70	51-111	155	115-214
St Helier	12	11	1-25	22	76	35-98	157	108-208
Wimbledon	8	13	4-69	69	86	51-139	135	87-238
South West	44	10	1-69	19	76	35-139	147	66-238
PAS and VAS	3	27	4-70 #	-	0	-	189	140-272
Other LAS §	18	9	0-44 ▶	14	60	44-74	173	103-321
LAS-Wide	335	10	0-93	19	82	35-193	166	60-321



There was documentation on the PRF/Call Log explaining extended time ranges for 999 call to scene times or job cycle times for the following:

Incidents in which the complaint given in the call was not cardiac arrest or could not be interpreted as such, which resulted in a lower response category being assigned.

◀ Incidents in which an operational issue such as delayed activation, distance of dispatched resources or MDT problems caused a delay to the arrival of a crew on scene.

PAS and VAS do not have a 999 Call - arrive hospital time as all 3 patients were conveyed by other resources.

No other explanations justifying extended time ranges were provided.

Explanations are not provided for 999 call - arrive hospital times as these are largely reliant on the length of the resuscitation attempt or of the duration of post-resuscitation care on scene.

The majority of response times were obtained from vehicle MDTs.

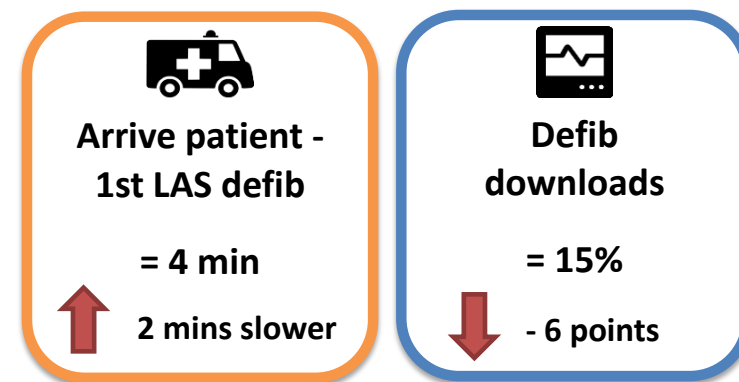
Key:

*Includes only patients on whom resuscitation was attempted.

§ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".

3. Use of public access defibrillators, download rate and defibrillation times

Group Station	Public access defib %	Defib download available* %	Number of VF/VT patients**	Missing or incorrect times	999 call - 1st LAS defib (mins)		Arrive scene - 1st LAS defib (mins)		Arrive patient - 1st LAS defib (mins)	
					Average	Range	Average	Range	Average	Range
Homerton	11%	11%	5	0	16	8-23 >>	8	4-15 >	7	1-15 ~
Newham	11%	14%	6	0	10	5-14 <-	4	2-6 ~	4	2-5 ~
Romford	6%	13%	9	0	12	7-19 #▲■	4	2-6 ▲	3	1-5 ■
North East	9%	13%	20	0	12	5-23	5	2-15	4	1-15
Camden	10%	20%	3	0	13	6-25 #▲	2	1-4 ▲	1	0-3 ▲
Edmonton	0%	7%	6	0	12	8-17 >	5	3-8 >	3	0-5 >
Friern Barnet	8%	8%	1	0	21 #>	-	5 >	-	5 >	-
North Central	4%	10%	10	0	13	6-25	4	1-8	3	0-5
Brent	0%	12%	5	0	15	6-44 #	4	3-6	3	2-6
Fulham	0%	13%	1	0	13	-	6	-	5	-
Hanwell	5%	21%	5	1	10	5-16 ~	4	2-8 ~	4	2-8 ~
Hillingdon	11%	0%	1	0	12 ~	-	7 ~	-	5 ~	-
Westminster	11%	33%	4	0	9	5-11 ~	4	3-5 ~	2	1-3 ~
North West	4%	16%	16	1	12	5-44	4	2-8	3	1-8
Bromley	0%	20%	6	1	11	5-15	4	1-7	4	1-6
Deptford	3%	30%	4	0	9	8-10	3	3-5	2	0-3
Greenwich	5%	15%	4	0	15	11-23 =	7	4-14 =	5	2-12 =
South East	3%	23%	14	1	11	5-23	5	1-14	4	0-12
Croydon	8%	8%	1	0	11 ~	-	5 ~	-	2 ~	-
New Malden	8%	0%	1	0	8	-	3	-	3	-
St Helier	0%	25%	1	0	7	-	3	-	1	-
Wimbledon	25%	0%	1	0	20 ▲	-	14 ▲	-	13 ▲	-
South West	9%	9%	4	0	12	7-20	6	3-14	5	1-13
PAS and VAS	0%	0%	1	0	9	-	5	-	2	-
Other LAS \$	11%	17%	5	0	8	1-12	3	1-7	3	0-6
LAS-Wide	6%	15%	70	2	12	1-44	5	1-15	4	0-15



For the following instances, there was documentation on the PRF/Call Log explaining extended time ranges as follows:

> Incidents in which crews could not reach the patient immediately or had difficulty in finding the location.

~ Incidents in which the patient had to be moved to a more suitable location to commence defibrillation.

◀ Incidents in which an operational issue such as delayed activation, distance of dispatched resources or MDT problems caused a delay to the arrival of a crew on scene.

Incidents in which the complaint given in the call was not cardiac arrest or could not be interpreted as such, which resulted in a lower response category being assigned.

▲ Incidents where a defibrillator was already in use on LAS arrival and continued to be used whilst crew prepared for ALS.

■ Incident where there was a delay in ascertaining the patients resuscitation status.

= Incident where the initial rhythm was determined to be fine VF but on putting the defibrillator into auto mode, no shock was advised.

No other explanations justifying extended time ranges were provided.

Key:

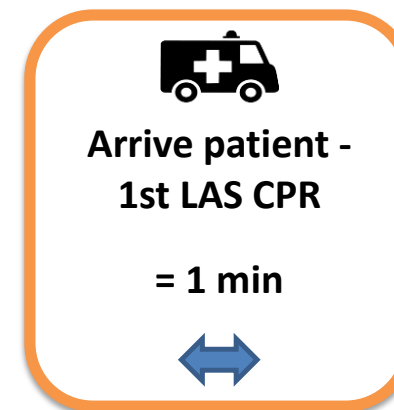
* Based on total number of arrests where resuscitation was attempted.

** LAS defibrillated patients whose initial presenting rhythm was VF/VT and whose arrest was either not witnessed or witnessed by a bystander. Patients whose arrest was crew witnessed have been excluded due to the negative impact that this would have on call-defibrillation intervals.

\$ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".

4. CPR times

Group Station	Number of patients*	Missing or incorrect times	999 call - 1st LAS CPR (mins)		Arrive scene - 1st LAS CPR (mins)		Arrive patient - 1st LAS CPR (mins)	
			Average	Range	Average	Range	Average	Range
Homerton	18	0	13	5-24 #^	3	0-10 ^	1	0-10 ^
Newham	27	3	9	0-16 @^	2	0-9 ^	1	0-4 ^
Romford	25	1	11	5-24 #~	2	0-7	1	0-4 ~
North East	70	4	11	0-24	2	0-10	1	0-10
Camden	7	1	13	4-42 #	2	0-3	1	0-2
Edmonton	24	1	10	6-25 ^	3	0-18 ^	2	0-18 ^
Friern Barnet	9	0	14	7-20 <>	2	0-9 >	4	0-10 >
North Central	40	2	11	4-42	3	0-18	2	0-18
Brent	21	0	11	1-42 #>	2	0-23 >	2	0-23 >
Fulham	4	0	9	6-11 #◀	2	1-2	1	0-2
Hanwell	14	1	10	3-16 >~	3	0-10 >	1	0-6 ~
Hillingdon	6	1	11	3-15 #^	3	0-5 ^	2	0-5 ^
Westminster	9	0	19	3-94 #	2	1-4	1	0-4
North West	54	2	12	1-94	3	0-23	1	0-23
Bromley	13	0	10	4-37 #>	2	0-5 >	1	0-2
Deptford	25	0	8	4-22 #~	2	0-7 ~	1	0-5 ~
Greenwich	14	1	11	5-20 #^	3	0-6 ^	1	0-5 ^
South East	52	1	10	4-37	2	0-7	1	0-5
Croydon	11	0	11	7-20 #>	4	0-14 >	1	0-3
New Malden	8	0	10	5-16 >^	4	0-8 >	1	0-6 ^
St Helier	10	0	13	5-26 #>	3	0-6 >	1	0-5
Wimbledon	6	0	8	4-11	3	0-7	1	0-2
South West	35	0	11	4-26	3	0-14	1	0-6
PAS and VAS	2	0	8	8-9	3	1-5	1	0-2
Other LAS \$	14	1	12	0-46 #^	2	0-7 ^	1	0-7 ^
LAS-Wide	267	10	11	0-94	3	0-23	1	0-23



For the following instances, there was documentation on the PRF/Call Log explaining extended time ranges as follows:

Incidents in which the complaint given in the call was not cardiac arrest, or could be interpreted as such, which resulted in a lower response category being assigned.

^ Incidents in which effective pre-LAS CPR was continued for a short period of time whilst crew prepared patient for ALS.

@ Incident involving the police, requiring the scene to be made safe before crews could approach. RVP

~ Incidents in which the patient had to be moved to a more suitable location to commence CPR.

◀ Incidents in which an operational issue such as delayed activation, distance of dispatched resources or MDT problems caused a delay to the arrival of a crew on scene.

> Incidents in which crews could not reach the patient immediately or had difficulty in finding the location.

No other explanations justifying extended time ranges were provided.

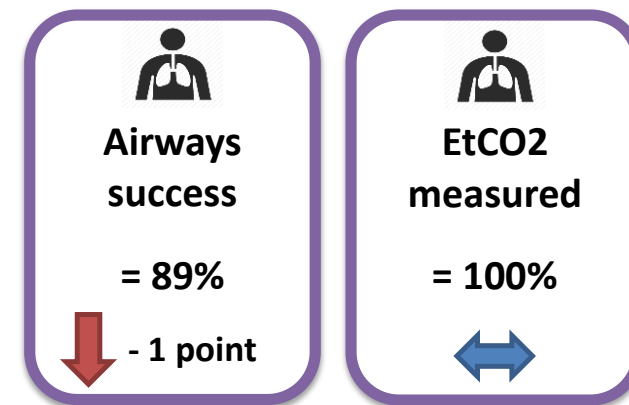
Key:

* Based on patients whose cardiac arrest was not witnessed by LAS staff, and who were documented as receiving LAS CPR.

\$ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".

5. Usage of advanced airway devices

Station Group	Number of patients*	Advanced airway device utilised successfully**		End-Tidal CO ₂ measured				EtCO ₂ not measured (no reading or trace)	
				Reading and/or EtCO ₂ trace		Reading with no EtCO ₂ trace			
				n	%	n	%		
Homerton	17	17	100%	14	82%	3	18%	0	0%
Newham	33	32	97%	25	78%	7	22%	0	0%
Romford †	32	24	75%	15	63%	9	38%	0	0%
North East	82	73	89%	54	74%	19	26%	0	0%
Camden	10	9	90%	7	78%	2	22%	0	0%
Edmonton	26	25	96%	21	84%	4	16%	0	0%
Friern Barnet	12	12	100%	9	75%	3	25%	0	0%
North Central	48	46	96%	37	80%	9	20%	0	0%
Brent	25	22	88%	19	86%	3	14%	0	0%
Fulham	6	6	100%	5	83%	1	17%	0	0%
Hanwell	19	18	95%	13	72%	5	28%	0	0%
Hillingdon	9	6	67%	4	67%	2	33%	0	0%
Westminster	9	9	100%	6	67%	3	33%	0	0%
North West	68	61	90%	47	77%	14	23%	0	0%
Bromley	15	14	93%	9	64%	5	36%	0	0%
Deptford	30	24	80%	17	71%	7	29%	0	0%
Greenwich	19	17	89%	15	88%	2	12%	0	0%
South East	64	55	86%	41	75%	14	25%	0	0%
Croydon	12	8	67%	8	100%	0	0%	0	0%
New Malden	12	9	75%	9	100%	0	0%	0	0%
St Helier	12	11	92%	8	73%	3	27%	0	0%
Wimbledon	7	7	100%	7	100%	0	0%	0	0%
South West	43	35	81%	32	91%	3	9%	0	0%
PAS and VAS	3	3	100%	3	100%	0	0%	0	0%
Other LAS §	17	15	88%	11	73%	4	27%	0	0%
LAS-Wide	325	288	89%	225	78%	63	22%	0	0%



1 case each for Newham and Greenwich has been exempted due to the patient exsanguinating and have therefore been removed from the table.

Key:

* Patients who were attended by either a Paramedic, APP or Level 4 Emergency Medical Technician during cardiac arrest.

** Patients who had either or both airway management devices placed during the course of their treatment by LAS. Excludes cases where LAS clinicians were either unable to place an airway management device or where an attempt was not made.



Key:

† Percentages do not equal 100% due to rounding.

§ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".

6. Return of Spontaneous Circulation (ROSC) sustained to hospital by type of arrest

Station Groups	Number of Patients	ROSC sustained						Total ROSC sustained to Hospital %
		Presumed cardiac		Trauma		Other		
		n	%	n	%	n	%	
Homerton	19	9/17	53%	0/2	0%	No Patients		47%
Newham	35	14/31	45%	0/1	0%	1/3	33%	43%
Romford	32	9/25	36%	0/1	0%	3/6	50%	38%
North East	86	32/73	44%	0/4	0%	4/9	44%	42%
Camden	10	7/9	78%	No Patients		0/1	0%	70%
Edmonton	27	6/22	27%	0/1	0%	1/4	25%	26%
Friern Barnet	12	1/9	11%	0/1	0%	1/2	50%	17%
North Central	49	14/40	35%	0/2	0%	2/7	29%	33%
Brent	25	9/20	45%	0/2	0%	2/3	67%	44%
Fulham	8	2/5	40%	0/2	0%	1/1	100%	38%
Hanwell	19	6/13	46%	No Patients		3/6	50%	47%
Hillingdon	9	3/7	43%	1/1	100%	0/1	0%	44%
Westminster	9	5/7	71%	0/1	0%	0/1	0%	56%
North West	70	25/52	48%	1/6	17%	6/12	50%	46%
Bromley	15	8/12	67%	No Patients		1/3	33%	60%
Deptford	30	8/25	32%	1/2	50%	3/3	100%	40%
Greenwich	20	3/14	21%	0/1	0%	1/5	20%	20%
South East	65	19/51	37%	1/3	33%	5/11	45%	38%
Croydon	12	4/11	36%	No Patients		0/1	0%	33%
New Malden	12	1/6	17%	No Patients		3/6	50%	33%
St Helier	12	3/12	25%	No Patients		No Patients		25%
Wimbledon	8	0/7	0%	No Patients		1/1	100%	13%
South West	44	8/36	22%	No Patients		4/8	50%	27%
PAS and VAS	3	0/2	0%	No Patients		0/1	0%	0%
Other LAS §	18	5/14	36%	1/2	50%	2/2	100%	44%
LAS-Wide	335	103/268	38%	3/17	18%	23/50	46%	39%


ROSC
= 39%
 **+ 4 points**

Key:

§ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".

Out of hospital STEMI

May 2018



2% increase in STEMI patients since last month.



65% of STEMI patients classed as Category 1 received a response in 7 minutes or less.



77% of STEMI patients were classed as Category 2, with an average response time of 17 minutes.

21 min



Response

Average '999' call to on scene time overall increased by 4 minutes to 21 minutes in May.

78%



Care Bundle

78% of STEMI patients received a complete care bundle, a 2% increase from last month.

96%



ECGs

96% of ECGs were submitted for STEMI patients and matched to the corresponding PRF.

39 min



On scene

Average overall on scene time has increased by 1 minute to 39 minutes, with '999' call to hospital reaching 77 minutes.

> 99%



Conveyance

Over 99% of cases were conveyed to an appropriate destination.

Category	%	Response time (mins)	
		Average	90th centile
C1	13%	6	10
C2	77%	17	32
C3	8%	68	158
C4	3%	68	104

Actions



- ✓ Consider analgesia for all patients.
- ✓ Clearly document any reasons for non-administration on the PRF.
- ✓ Where possible, try to reduce on scene time as early reperfusion treatment at hospital is beneficial for this group of patients.

Full Care Bundle

- ✓ Aspirin
- ✓ GTN
- ✓ Two pain assessments
- ✓ Analgesia

1. Ambulance response intervals

Group Station	999 call-arrive scene (mins)			Leave scene-arrive hospital (mins)		999 call-arrive hospital (mins)	
	Average	Range	90th centile	Average	Range	Average	Range
Homerton	13	5-31	31	14	4-27	60	41-78
Newham	15	2-70 #	17	24	6-40	76	38-129
Romford	18	4-54 #	29	32	16-52 \$	91	65-121
North East	15	2-70	29	25	4-52	78	38-129
Camden	18	1-47 ◀	41	14	6-27	78	48-116
Edmonton	19	6-104 #	26	26	15-33	81	41-191
Friern Barnet	18	5-45 ◀	30	22	11-32	76	49-107
North Central	19	1-104	41	21	6-33	79	41-191
Brent	19	2-89 #	47	18	7-47 \$	71	34-129
Fulham	40	7-332 #	68	8	1-21	82	38-383
Hanwell	34	4-172 #	98	18	10-30	88	36-266
Hillingdon	36	7-83 #	80	20	11-34	86	47-134
Westminster	18	6-32	32	11	4-18	72	53-93
North West	28	2-332	68	16	1-47	79	34-383
Bromley	21	6-61 ◀	57	21	11-40	82	42-149
Deptford	13	5-30	29	9	3-17	65	32-106
Greenwich	36	5-158 #	76	19	11-29	98	46-201
South East	22	5-158	57	16	3-40	80	32-201
Croydon	23	5-93 #	47	19	11-33	71	38-167
New Malden	24	11-55 #	55	20	8-26	72	61-84
St Helier	10	4-21	18	12	6-18	57	42-91
Wimbledon	17	4-69 #	69	12	4-18	65	37-139
South West	18	4-93	47	15	4-33	65	37-167
PAS & VAS	15	3-22	22	17	3-33	73	57-92
Other LAS \$	16	3-46 ◀	45	16	6-39	71	44-116
LAS-Wide	21	1-332	47	18	1-52	77	32-383

Key:

\$ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".



In the following instances, documentation on the PRF or EOC Call Log explained extended time ranges as:

The information given in the call led to it being assigned as a Category 3 or 4 incident.

◀ Extended call to scene times were caused by a lack of available vehicles to dispatch to the scene.

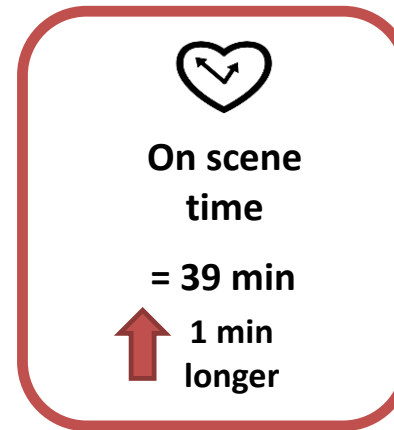
\$ ST elevation developed while en route to hospital, causing a delay as the crew diverted to a HAC.

No other reasons were provided for extended time ranges.

The majority of response times were obtained from vehicle MDTs.

1a. On Scene Times

Group Station	Time spent on scene (minutes)			
	Overall (from arrival of first attending resource)		From arrival of first ambulance crew	
	Average	Range	Average	Range
Homerton	32	21-52 =	31	21-44
Newham	38	18-89 =	36	18-83
Romford	41	27-61 =	40	27-61
North East	38	18-89	37	18-83
Camden	47	22-109 =	45	22-104
Edmonton	37	10-75 =	36	10-75
Friern Barnet	39	20-60 ♦	37	12-60
North Central	40	10-109	39	10-104
Brent	36	16-77 =	34	15-77
Fulham	34	6-50	34	6-50
Hanwell	42	14-93 ◀	36	9-76
Hillingdon	38	12-82 ◀	30	11-62
Westminster	43	26-77 &	43	26-77
North West	38	6-93	35	6-77
Bromley	43	21-118 =	38	21-112
Deptford	49	19-106 &	47	16-106
Greenwich	44	19-90 =	44	19-90
South East	46	19-118	43	16-112
Croydon	29	18-51 ■	29	18-51
New Malden	36	24-51 ◀	29	19-41
St Helier	36	16-70 =	35	16-70
Wimbledon	36	20-63 =	36	20-59
South West	34	16-70	32	16-70
PAS & VAS	41	25-53 =	37	25-46
Other LAS \$	42	18-68	39	18-58
LAS-Wide	39	6-118	37	6-112



In the following instances, documentation on the PRF or EOC Call Log explained extended time ranges as:

- ◀ On scene times were extended due to a lack of available ambulances to dispatch to the scene.
- = Patients suffered a cardiac arrest and required resuscitation. The patients were subsequently transported to hospital with cardiac output.
- & Crews were delayed on scene due to patients refusing to travel to hospital.
- ♦ The crew were delayed on scene as the patient wished to organise personal effects prior to travelling to hospital.

No other reasons were provided for extended time ranges.

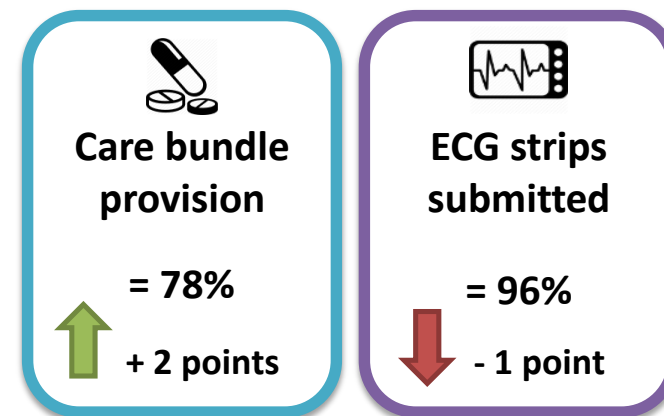
The majority of response times were obtained from vehicle MDTs.

Key:

\$ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".

2. Care Bundle provision and ECG strips submission

Group Station	Number of patients	Full Care Bundle (or exceptions*)		Aspirin & GTN given		Analgesia given		Two pain assessments made		ECG strips submitted	
		n	%	n	%	n	%	n	%	n	%
Homerton	8	5	63%	7	88%	6	75%	7	88%	8	100%
Newham	32	27	84%	31	97%	28	88%	32	100%	31	97%
Romford	14	9	64%	13	93%	9	64%	14	100%	14	100%
North East	54	41	76%	51	94%	43	80%	53	98%	53	98%
Camden	13	13	100%	13	100%	13	100%	13	100%	12	92%
Edmonton	20	16	80%	18	90%	18	90%	20	100%	20	100%
Friern Barnet	15	6	40%	14	93%	7	47%	15	100%	14	93%
North Central	48	35	73%	45	94%	38	79%	48	100%	46	96%
Brent	38	34	89%	38	100%	34	89%	38	100%	36	95%
Fulham	14	8	57%	13	93%	9	64%	13	93%	14	100%
Hanwell	23	19	83%	21	91%	21	91%	23	100%	21	91%
Hillingdon	11	9	82%	11	100%	9	82%	10	91%	8	73%
Westminster	7	5	71%	7	100%	5	71%	7	100%	7	100%
North West	93	75	81%	90	97%	78	84%	91	98%	86	92%
Bromley	14	12	86%	14	100%	12	86%	14	100%	13	93%
Deptford	17	16	94%	16	94%	16	94%	17	100%	16	94%
Greenwich	12	8	67%	11	92%	10	83%	10	83%	12	100%
South East	43	36	84%	41	95%	38	88%	41	95%	41	95%
Croydon	11	8	73%	11	100%	8	73%	11	100%	11	100%
New Malden	4	2	50%	4	100%	2	50%	4	100%	4	100%
St Helier	11	9	82%	11	100%	9	82%	11	100%	11	100%
Wimbledon	9	7	78%	8	89%	8	89%	9	100%	9	100%
South West	35	26	74%	34	97%	27	77%	35	100%	35	100%
PAS & VAS	5	5	100%	5	100%	5	100%	5	100%	5	100%
Other LAS \$	13	10	77%	13	100%	10	77%	13	100%	13	100%
LAS-Wide	291	228	78%	279	96%	239	82%	286	98%	279	96%



The concept of a care bundle relates to the patient receiving all the essential elements of pre-hospital care for their condition.

The care bundle, which should be provided to STEMI patients, is comprised of the administration of aspirin, GTN and analgesia, plus receiving both a pre- and post-treatment pain assessment.

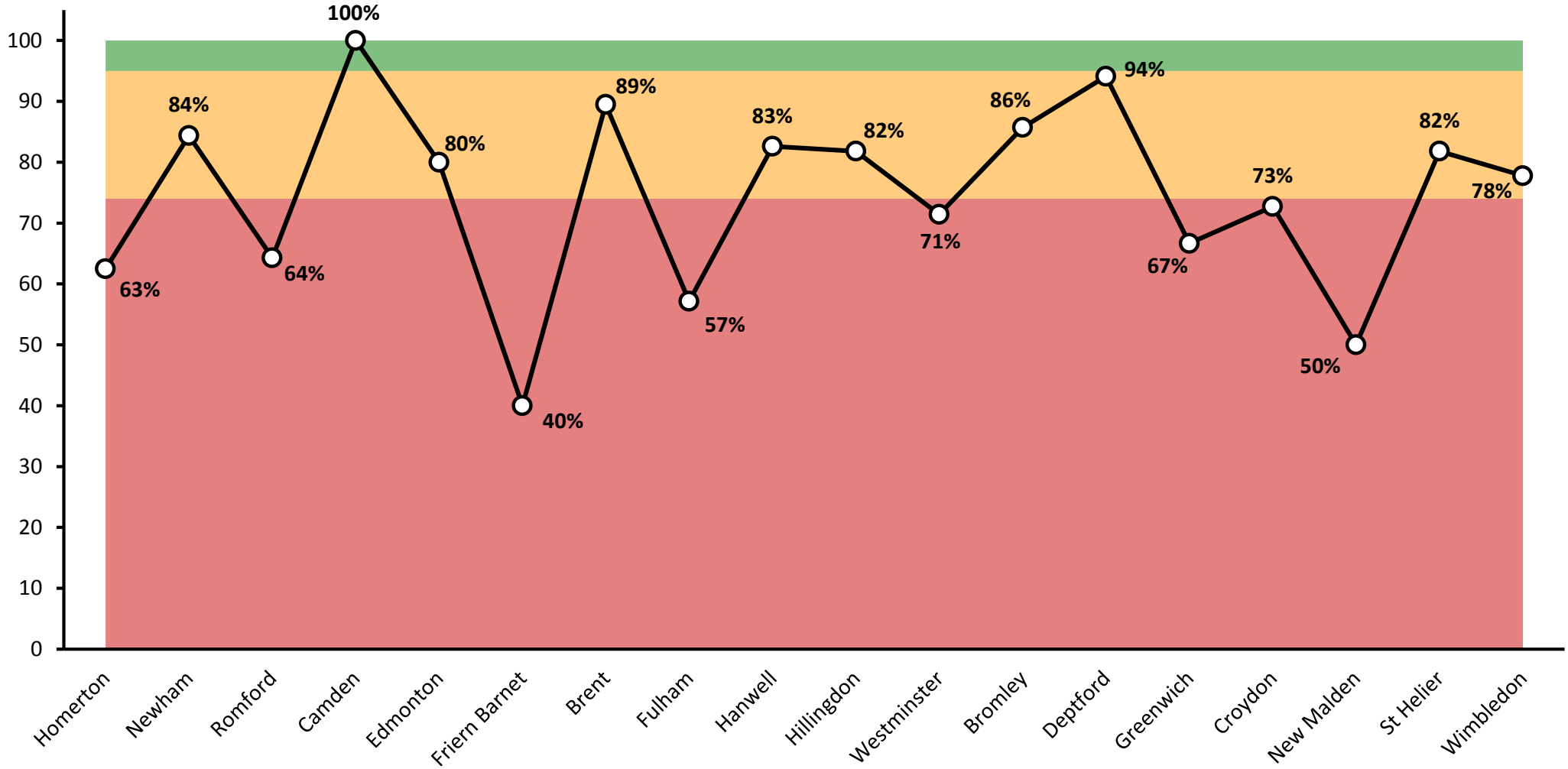
When all four elements have been appropriately undertaken, the care bundle can be said to be complete. Should pre-determined valid clinical exceptions exist for one or more element, but the patient receives all other elements as appropriate, a valid exception to provision of the care bundle can be assigned. However, where one or more element has not been delivered (with no valid reasons provided) the care bundle will be classed as being incomplete.

Key:

* Valid exceptions are taken from UK Ambulance Services Clinical Practice Guidelines and LAS policy. Certain exceptions used by the LAS differ from those used nationally, therefore there may be a difference between locally and nationally reported figures.

\$ Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".

2a. Care Bundle provision



Group Stations are shown by Sector.

3. Patient destination

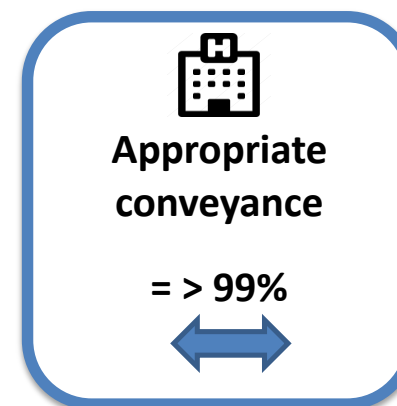
Group Station	Number of patients	Direct to Heart Attack Centre		A&E			
				With valid reason		Without valid reason	
		n	%	n	%	n	%
Homerton	8	7	88%	1	12%	0	0%
Newham	32	31	97%	0	0%	1	3%
Romford	14	14	100%	0	0%	0	0%
North East	54	52	96%	1	2%	1	2%
Camden	13	13	100%	0	0%	0	0%
Edmonton	20	20	100%	0	0%	0	0%
Friern Barnet	15	15	100%	0	0%	0	0%
North Central	48	48	100%	0	0%	0	0%
Brent	38	38	100%	0	0%	0	0%
Fulham	14	14	100%	0	0%	0	0%
Hanwell	23	23	100%	0	0%	0	0%
Hillingdon	11	11	100%	0	0%	0	0%
Westminster	7	7	100%	0	0%	0	0%
North West	93	93	100%	0	0%	0	0%
Bromley	14	14	100%	0	0%	0	0%
Deptford *	16	16	100%	0	0%	0	0%
Greenwich	12	10	83%	2	17%	0	0%
South East *	42	40	95%	2	5%	0	0%
Croydon	11	11	100%	0	0%	0	0%
New Malden	4	4	100%	0	0%	0	0%
St Helier	11	11	100%	0	0%	0	0%
Wimbledon	9	9	100%	0	0%	0	0%
South West	35	35	100%	0	0%	0	0%
PAS & VAS	5	4	80%	1	20%	0	0%
Other LAS [§]	13	13	100%	0	0%	0	0%
LAS-Wide [†] *	290	285	98%	4	1%	1	0%

Key:

[§] Training, Hazardous Area Response, Special Events and Tactical Response Units are reported as "Other LAS".

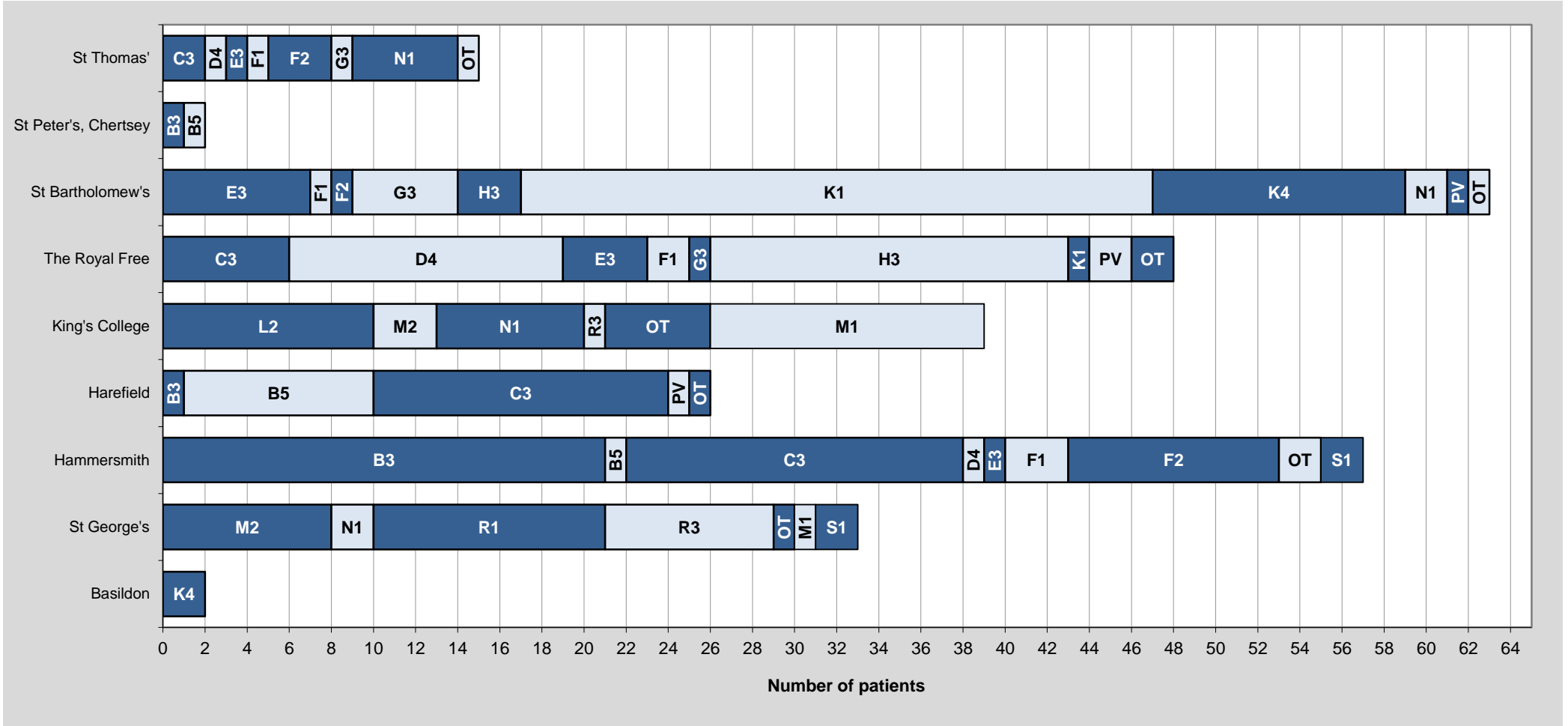
[†] Percentages do not equal 100% due to rounding.

* One patient refused to travel to hospital against the advice of the crew. This patient has been removed from this table.



4. Heart Attack Centre by Group Station

Figures from 'Direct to Heart Attack Centre' column on Table 3: Patient destination



17 patients were conveyed to a Heart Attack Centre by a vehicle that was not assigned to a station group. 4 patients were conveyed by PAS & VAS vehicles, marked on the graph as PV, with a further 13 conveyed by other LAS vehicles (marked as OT).