

## **Kent Cardiovascular Network**

### **Update on Primary Angioplasty Across Kent**

**To**

### **Kent Health Overview And Scrutiny Committee Meeting**

**26 November 2010**

#### **Attendees:**

Geoffrey Wheat, Director Kent Cardiovascular Network  
Dr. Bet Mishra, Consultant Cardiologist and Clinical Lead for the Kent Cardiovascular  
Network  
Clare Boggia, Cardiology Matron, East Kent Hospitals University NHS Foundation  
Trust  
Corrine Stewart, Senior Service Improvement Project Manager, Kent Cardiovascular  
Network (Presenting)

## Introduction

Approximately 275,000 people in the United Kingdom suffer a heart attack each year of which around 2,500 occur in Kent. A person has a heart attack (or acute myocardial infarction) when the flow of blood through the arteries, which supply blood to their heart muscle, is reduced to such an extent that part of the heart muscle dies. Between a third and two thirds of heart attack deaths take place outside hospital, many within the first few minutes of the onset of symptoms. Helping people avoid a heart attack altogether is the prime aim. But for those who do have a heart attack, prompt access to the right treatment can mean the difference between living and dying.

The Department of Health and the British Cardiovascular Society<sup>1</sup> undertook a 2 year study looking into the feasibility of providing a 24/7 Primary Angioplasty service as a first line of treatment for patients suffering a heart attack across England. It published its final report in October 2008, and concluded that primary angioplasty should be implemented.

Since 2007, the Kent Cardiovascular Network has worked with the three Primary Care Trusts, four Acute Trusts and the South East Coast Ambulance service, across Kent, to work up plans for the implementation of a 24/7 primary angioplasty service.

The Network presented to the Kent Health Overview and Scrutiny Committee on 5 February 2010, and highlighted the reasons why we were implementing this service and outlined all of the work that had been undertaken to get to the decision that a one centre site at the William Harvey Hospital was the best option. The Kent HOSC gave its overwhelming support to the project.

Since then, work has continued to ensure that the pathways that have been developed are robust and embedded into each of the organisations. It has also ensured that the additional trained staff required to run the service have been put in place. The new telemetry system which has been procured by the ambulance trust has been installed on all ambulances. This system allows the ambulance crews to send the patient's ECG to the Coronary Care Unit (CCU) at the William Harvey Hospital for immediate interpretation. All ambulance crews have been issued with mobile phones, and they now have direct access to nurses within the CCU to discuss the patient, prior to and during transfer.

This has been a significant and challenging piece of work to ensure that the whole population of Kent and Medway has equitable access to a timely, high quality service, reliant on several organisations working collaboratively together.

### **On 12 April 2010, the service was successfully implemented.**

We have 100% coverage of primary angioplasty across Kent and Medway. Whilst the service has been working well, there are several areas that we are working on to improve:

## Contingency plans and resilience lab

We have had to invoke our contingency plan on several occasions, which has meant that patients were diverted to Medway Maritime Hospital for treatment. As a consequence of this, East Kent Hospitals University Foundation Trust is in the process of considering a 2<sup>nd</sup> resilience laboratory to reduce the need to invoke the contingency plan and to reduce the impact on patients.

A business case has been submitted through the Trust's internal processes and is supported by the Chief Executive of the Trust. If the plans go ahead, it is anticipated that the 2<sup>nd</sup> laboratory should be up and running towards the end of 2011

## Pathway work

The Department of Health issued some performance data in relation to primary angioplasty. It stated that 75% of patients should receive treatment within 150 minutes from the time they call for help to the time the first balloon is inflated in the artery [call to balloon]. Quarter 1 figures shows compliance against the target of 58%, and for Quarter 2 it improved to 69%

We are continually analysing the data that is collected for this service and in particular for those patients that have breached the target. In some instances, the breach is entirely appropriate due to the patient being too poorly or unstable, or for those who have had a full cardiac arrest, but we recognise that there are some instances where elements of the pathway could have been delivered more promptly.

As a consequence of this we are working with the East Kent Hospitals University NHS Foundation Trust and South Coast Ambulance Service to try look at each of the individual breaches and undertake a root cause analysis. When this has been completed we will be looking for key themes where improvements can be made and develop action plans to be implemented.

We have already identified two areas where improvements need to be made:

1. Self presenters who need to be transferred to the WHH
2. Prisoners

For those patients who chose to attend their local A&E rather than 999 we need to make the process more refined. The main delays are occurring when the ECG needs to be sent to the WHH. This needs to be faxed, and then scanned at the WHH for onward sending to the consultant for a decision. In light of this, we are now exploring the option of installing the telemetry equipment into the A&E departments.

In terms of the prisons, due to the security measures that are in place, it is sometimes taking considerable time to get the patient diagnosed and out of the hospital. Again, we are exploring whether telemetry can be installed and arrangements to transfer prisons out of the prison.

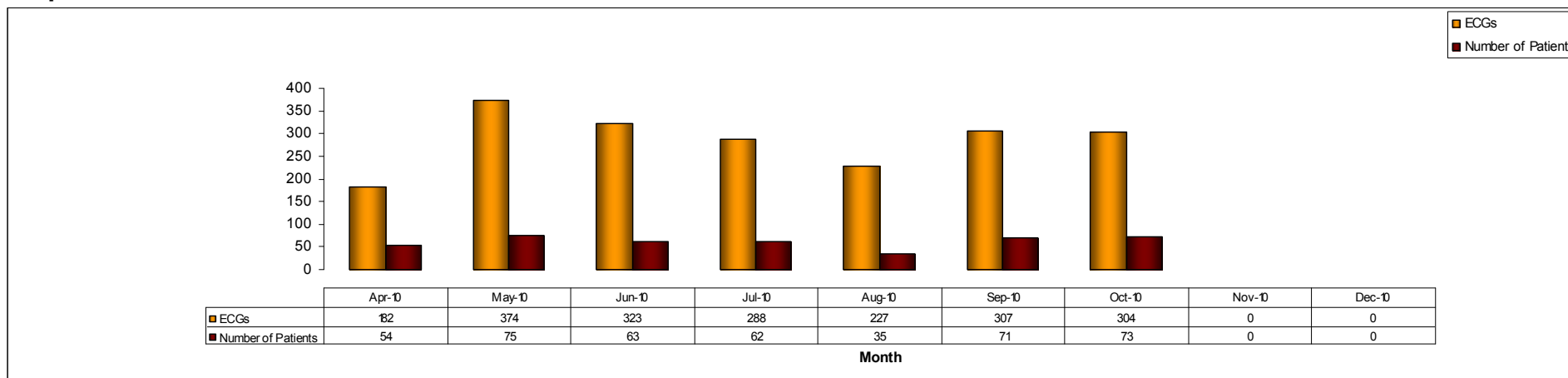
It is clear that if we can't reduce some of this time, then we will need to review how the service is delivered in the future.

## **Performance data**

Below is a set of data showing a high level snapshot of how the service has been performing over the last 6 months. Please note that the April and October data is not showing a full month's data.

**Number of ECGs & Patients**

**Graph 1**



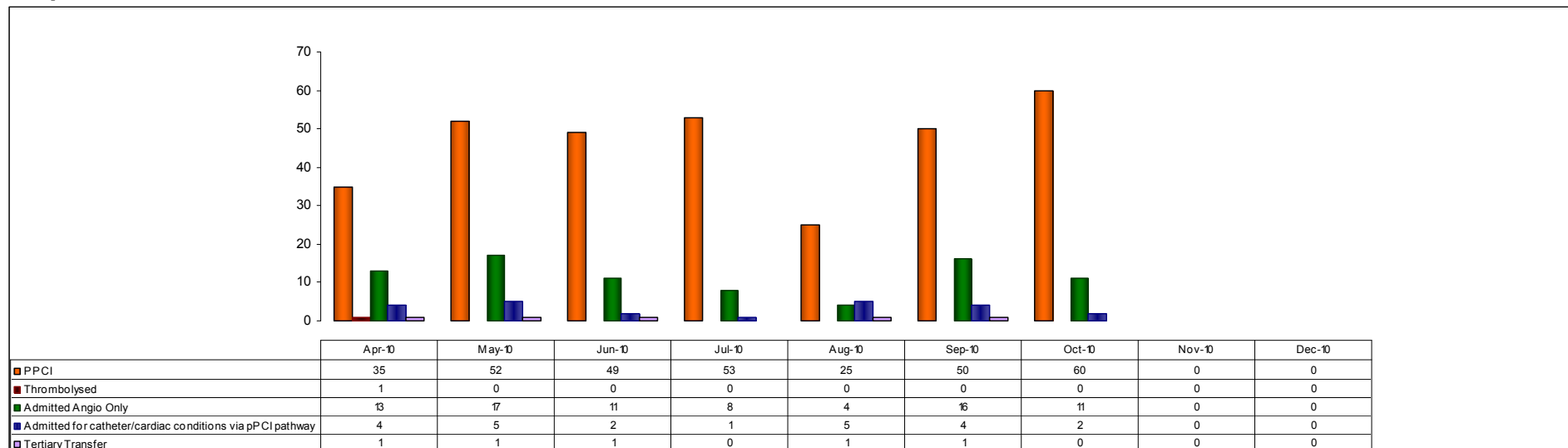
From 12 April 2010 to the end of October a total of 2,005 ECGs have been received by the William Harvey Hospital for interpretation and a decision to transfer, which is an average of 69 ECGs each week.

Of these approximately 15 patients a week are being transferred to the William Harvey Hospital.

The Network is working with the ambulance trust to try and improve the ratio of ECGs sent to patients transferred. It is envisaged that further communications and education will be provided to help the ambulance crews to recognise when an ECG shows no signs of ST-elevation at all.

pPCI, Thrombolysed, Angio and Other patients

Graph 2



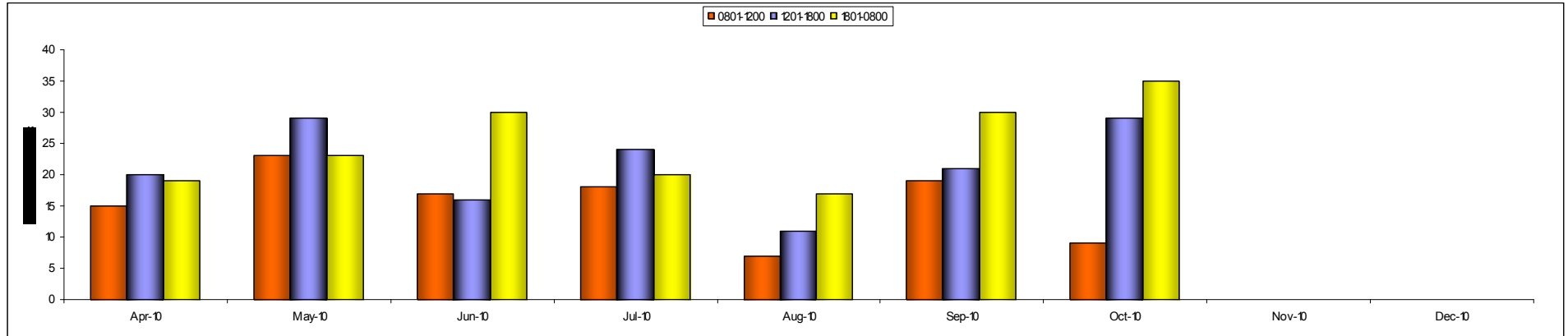
Of the patients who are being transferred to the William Harvey Hospital, approximately 75% have received angioplasty and 25% had an angiogram, but did not proceed to angioplasty.

1 patient has needed to be thrombolysed for clinical reasons and 5 patients have been transferred to a tertiary centre for surgery.

As the service is new, the consultants have taken a cautious view on transferring patients to the WHH for treatment. The figures show that about a quarter of patients do not have the full treatment and therefore, could have been treated at their local hospital. Now that the service is better established and the communication and relationships between the ambulance trust and the WHH is working well, it is hoped that we should start seeing a reduction in the number of patients who only have an angiogram.

Number of patients per week split by time period

Graph 3

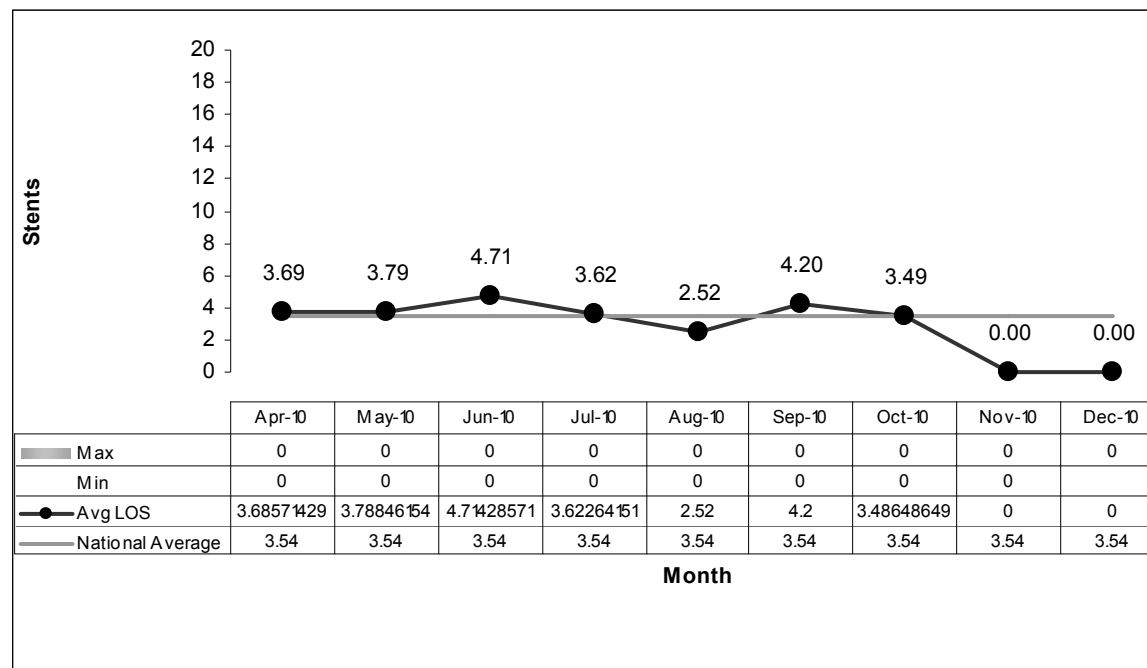


When trying to plan the capacity levels, it was expected that approximately 45% of patients would present during normal working hours, Monday to Friday 9 a.m. to 5 p.m. and 55% of patients would present outside of this time. The graph above has been broken into 3 time brackets:

- 08:01 to 12:00
- 12:01 to 18:00
- 18:01 to 08:00

When looking at the average, the data shows that in real terms, there are approximately 60% of patients presenting during working hours, and 40% out of hours. This hasn't currently had any major impact on the planned elective work that is being undertaken by the lab, due to the fact that they have already extended their working day to take into account that there will be primary angioplasty patients coming in throughout the day, therefore elective patients are not being cancelled as a result of this service.

### Average LoS for pPCI Patients (Days)

**Graph 4**


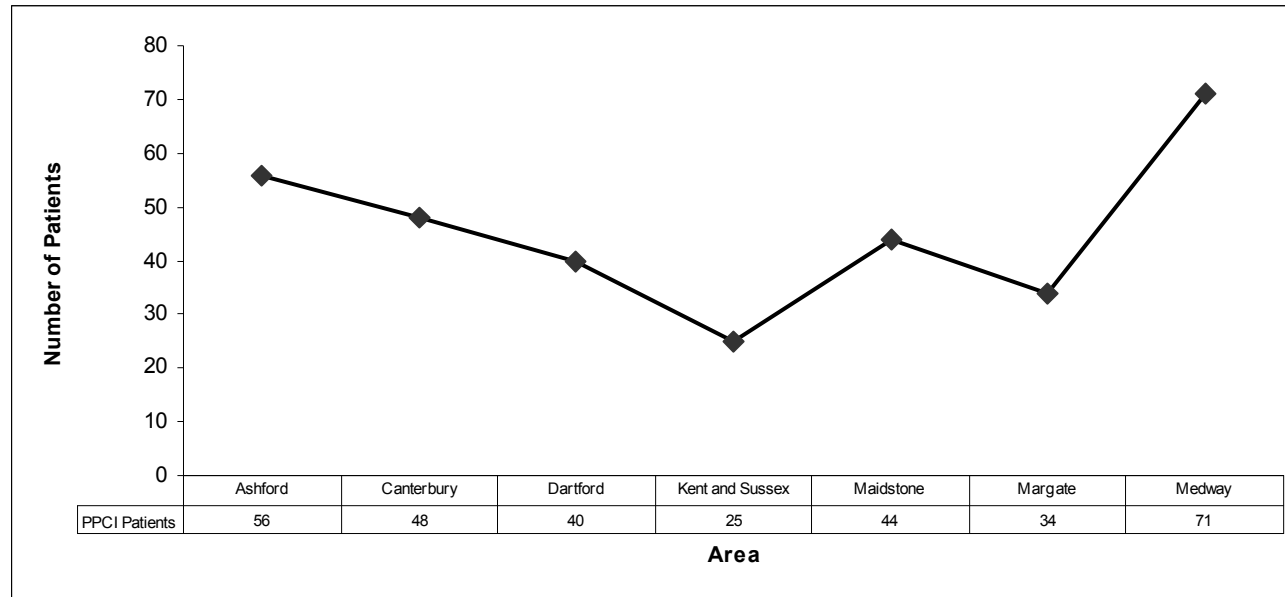
In the original planning, it was estimated that the average length of stay for patients would be 3.54 days. As can be seen above, there has been some variance for patients in terms of their average lengths of stay, which ranges between 2.5 and 4.7 days.

The Trust has been working with each of the other local acute trusts to ensure that when a patient requires ongoing care for other non-cardiac related conditions that they are repatriated back to their local hospital as soon as possible. East Kent Hospitals University NHS Foundation Trust is also continually looking at their discharge policy to ensure that patients are discharge home as soon as is appropriate.



**Patient's Postcode (pPCI patients)**

**Graph 5**



The graph above shows the geographic split of patients that have received primary angioplasty. 44% of the patients treated were from the East Kent area and 34% from the West Kent area. This data is in line with the original expectations.

As can be seen from the graphs, the service is working well. Patient satisfaction surveys are being undertaken, and there is an overwhelming positive message coming back.

Now that the service has settled in, work is underway to review all of the pathways to ensure that they are as effective as possible. We are continually striving to decrease the total call to balloon times of the patients, and all stakeholders are working closely together to push this work forward to ensure the best possible outcomes for the patients.

The Network is currently undertaking a full and in depth review of the service at 6 months and a further review will be undertaken at 12 months.

All in all, this has been a fantastic piece of work, and all those involved in the implementation and running of this service should be congratulated.

### **Media Campaign**

On 20 May a media campaign took place. Radio and press were invited to the William Harvey Hospital to undertake interviews with some consultant cardiologists and staff, and the first patient who was admitted to the service. Items were reported on the BBC and Meridian news.

A campaign similar to the stroke FAST campaign was developed by NHS Eastern and Coastal Kent called ACT – **A**wareness, **C**all, **T**reat. Posters were created (see last page of report), and have been sent out to all GP surgeries in Kent and Medway as well as all hospitals across the area.

A radio campaign, highlighting the symptoms of a heart attack and the action that should be taken was also developed by NHS Eastern and Coastal Kent and had a 4 week run on Heart FM radio. Various news articles have been written as a result of press releases that have been sent out, and good news articles continue to be published.

### **Awards**

Last month, this new primary angioplasty service won an award for 'Outstanding Contribution to Healthier People, Excellent Care' at the Health and Social Care Regional Awards 2010.

The service has also received a nomination for the Health Service Journal (HSJ) awards taking place at the end of November.

### **NB.**

The next page shows the ACT campaign poster that the Network developed to coincide with the launch of the new primary angioplasty service.

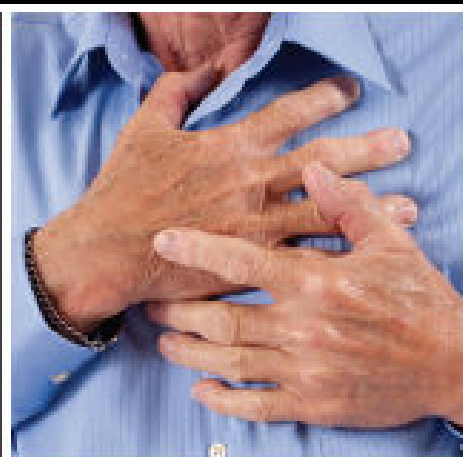


# ACT

# on heart attacks

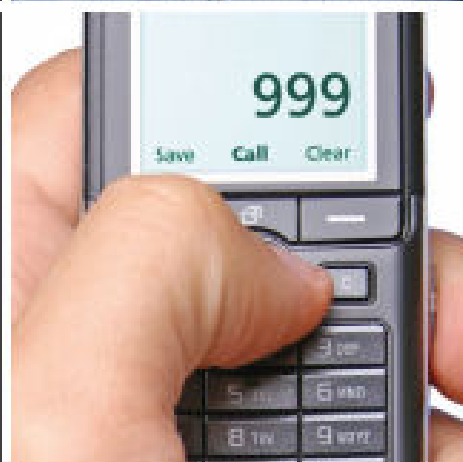
## Awareness

- Crushing central chest pain
- Shortness of breath
- Clammy, sweaty, and grey complexion
- Dizziness, nausea and vomiting



## Call

- Ring 999 if you spot the signs
- Every minute matters
- Fast action can save lives



## Treat

- You will be assessed by paramedics and taken to an appropriate hospital



---

<sup>i</sup> Treatment of Heart Attack National Guidance. Final report of the National Infarct Angioplasty Project (NIAP) October 2008, Department of Health and British Cardiovascular Society.