

SHROPSHIRE COUNTY PCT BOARD

Date: July 2009

Subject:	Proposal for change in service provision/development of Primary Angioplasty (PPCI)
Presented by:	Paul Tulley
Responsible Director:	Paul Tulley

PURPOSE OF THE REPORT

Add text sentence here plus tick appropriate box below

- For information
- For decision X
- For performance monitoring

WHAT OTHER SUB COMMITTEES HAVE CONSIDERED THIS REPORT; THEIR KEY POINTS OR RECOMMENDATIONS.

The attached Cardiac network report was presented to the PEC and the PEC commissioning sub group, GP and public comments were received in the PEC commissioning sub group. Both forums accepted the proposal. In addition the PCT has presented the paper to the local CiNCH group, where again the proposals were accepted in full.

A joint workshop has been held at which the proposals were presented to representatives from the Health Overview and Scrutiny Committees from Shropshire, Telford & Wrekin and Staffordshire. The joint workshop supported the proposals and agreed that the proposed changes would not require public consultation.

KEY POINTS IN REPORT

The attached paper explains the clinical rationale and benefits for patients in developing primary angioplasty services in Shropshire and Staffordshire and provides specific details relating to the proposed implementation.

Evidence is available supporting early intervention for patients presenting with certain types of Myocardial Infarction (STEMI). Currently the majority of patients will receive thrombolytic therapy initially and if this is unsuccessful patients will proceed to a Percutaneous Coronary Intervention (PCI). The growing evidence suggests a Primary PCI is a preferred model of care, in response to this the WM specialised commissioning team and the Shropshire and Staffordshire Heart and Stroke network established a working group to discuss and develop proposals for establishing a comprehensive PPCI service for all patients across the two counties. The attached paper outlines the Network's proposed model of care.

The Network paper demonstrates the significant advantages of PPCI ie being successful in over 95% of cases compared to up to 50% if patients receive only thrombolytic

reintervention rate.

The paper recommends patients in Staffordshire and Shropshire receive a PPCI within 60 minutes, however it recognizes this will not always be possible in some areas of Shropshire and suggests a dual model of reperfusion, which allows those patients affected to receive pre-hospital thrombolysis on route to the tertiary centre . Additional training will be required for Ambulance staff relating to the recognition of the need for PCI and then transporting specific patients past current receiving hospitals for PPCI in tertiary centers.

The predicated levels of activity suggest in Shropshire approx 155 patients will present with a STEMI and would therefore benefit from PPCI. The new model of care has been compared to the current process and comparative costs suggest the new model as well as providing an enhanced service with better mortality outcomes would costs approx £126,000 less. This is due to the current service model where Telford and Wrekin, and Shropshire County PCTs have the highest level of second admissions (20% and 18% respectively). 1 in 5 patients will have at least two hospital admissions as a result of their heart attack, along with the commensurate delay in the required treatment.

This paper was discussed at the PEC CSG on 29th April 2009 and PEC on 9th June and was approved.

Summary clinical benefits and disadvantages of the proposal:

BENEFITS OF PRIMARY ANGIOPLASTY	DISADVANTAGES
<ul style="list-style-type: none"> ➤ Immediate access to the optimum treatment ➤ Treatment delivered by expertly qualified and trained paramedic and medical staff ➤ Twice as effective at opening blocked arteries ➤ Reduces the chance of death following a heart attack ➤ Reduces the damage to heart muscle ➤ Reduces the need for future hospitalisation ➤ Quicker recovery times ➤ Shorter length of hospital stay ➤ Earlier access to rehabilitation ➤ Improved quality of life following heart attack ➤ All patients guaranteed opportunity to undergo the optimum treatment 	<ul style="list-style-type: none"> ○ Patients outside the normal catchment of a Heart Attack Centre will bypass their local hospitals and travel further than usual <p><i>Mitigation</i> Over 60% of patients already travel beyond their local hospitals for treatment.</p> <p><i>Patients will receive expert paramedic support during their journeys and spend on average between only 3 to 4 days in hospital before returning to local rehabilitation services and follow up care</i></p> <ul style="list-style-type: none"> ○ Relatives and Carers will have further to travel <p><i>Mitigation</i> <i>The initial inconvenience of further travel will be offset by reducing the need for both the patient and relatives and carers to travel for longer and subsequent hospital admissions</i></p> <ul style="list-style-type: none"> ○ Local district hospitals will lose expertise in managing emergency cardiac care <p><i>Mitigation</i> <i>These proposals have been developed and are supported by cardiologists from all hospitals across Shropshire and Staffordshire, the ambulance services, and specialised commissioners. District hospital cardiologists have confirmed they do not foresee a potential negative impact on their local service; not least because this new service model will enhance the relationship between the main cardiac centres and the local services, and reinforce the roll of those local services, not underm</i></p>

	<i>them</i>
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RECOMMENDATION TO BOARD
The Trust Board is asked to approve the proposals.

CONTEXT AND IMPLICATIONS	
Financial implications	The new model of care has been compared to the current process and comparative costs suggest the new model as well as providing an enhanced service with better outcomes would costs approx £126,000 less . This is outlined in more detail in Appendix 1 of the paper.
OD/HR implications	None
Promoting equality and diversity - implications	The paper identifies a clinical improvement in care for those patients exhibiting a specific type of heart attack, in line with best clinical evidence
What patient and public involvement has there been in this issue, or what impact could it have on patient/public experience?	Patients representatives support the cardiac network and participated in the development of the original proposals. SCPCT has used patients and GP representatives to assess the proposal at the PEC commissioning sub group stage. In addition the proposal has been presented to CiNCH. Proposals were discussed and supported at a joint HOSC workshop held on 21 st July.

SHROPSHIRE COUNTY PRIMARY CARE TRUST

REPORT TO THE TRUST BOARD: JULY 2009

PROPOSAL FOR THE DEVELOPMENT OF PRIMARY ANGIOPLASTY (PPCI)

1. Introduction

This paper explains the clinical rationale and benefits for patients in developing primary angioplasty services in Shropshire and Staffordshire, and provides specific details relating to the proposed implementation of the service.

2. Background

The evidence base supporting early intervention in patients presenting with ST segment elevation Myocardial Infarction (STEMI) has grown in recent years. This has led to international guidelines supporting the role of Primary Angioplasty or Primary Percutaneous Coronary Intervention (PPCI) (Silber 2005 [ESC], Antman 2004 [AHA/ACC]). The traditional model of reperfusion using thrombolytic drugs often requires patients to proceed to PPCI due to failure to lyse, adverse response to thrombolysis, and in some cases, patients will have specific contraindications to drug therapy.

In response to the evidence to support PPCI as the preferred model, the Heart & Lung Centre in Wolverhampton started to deliver PPCI to its resident population in November 2005 and subsequently to the Black Country and local surrounding catchment within parts of South Staffordshire and South East Shropshire in April 2007.

In November 2007, the Shropshire and Staffordshire Cardiac Network set up a Primary Angioplasty working group, to discuss and develop proposals for establishing comprehensive PPCI services for all patients across the two counties.

These proposals have been developed in association with cardiac providers, district and specialised cardiac clinicians, ambulance services, and specialised commissioners. This document will underpin the process for consultation with PCTs.

3. Existing service model

The residents of Shropshire and Staffordshire are served by several acute (DGH) cardiac services, and receive tertiary cardiac care from major cardiac centres in Stoke, Wolverhampton, Birmingham and Leicester.

Up to November 2007, with the exception of those patients within the New Cross Hospital, Wolverhampton catchment, Shropshire and Staffordshire patients presenting to emergency services with suspected acute cardiac chest pain and subsequently confirmed as STEMI received pre-hospital thrombolysis according to local policy and were then taken to their local acute hospital.

In December 2007, the University Hospitals of North Staffordshire (UHNS) initiated an in-house, 9 AM - 5 PM PPCI service for patients presenting to the Heart Attack Centre. This moved to a 24 hours a day 7 days a week service in January 2009.

At present any patient presenting to a regional hospital (Stafford General, Princes Royal Telford, and The Royal Shrewsbury) with a myocardial infarction, but where thrombolysis has

failed to resolve ECG changes and/or pain, is immediately transferred to UHNS for emergency PCI. This is termed “rescue PCI”.

In addition those presenting with unstable angina or non ST Elevation Myocardial Infarction to these same regional hospitals, undergo angiography on-site, and where appropriate are referred to UHNS for urgent revascularisation on the same admission. This constitutes part of the agreed Shropshire/Staffordshire network revascularisation programme.

4. Evidence base to support delivery of PPCI in Shropshire and Staffordshire

4.1 Models of Reperfusion

Generally there are 3 models of reperfusion therapy available to patients presenting with confirmed STEMI

- Pre-hospital thrombolysis (PHT)
- In-hospital thrombolysis
- Primary PCI

Acute myocardial infarction is caused by occlusion of a coronary artery by a blood clot (thrombus) leading to death of heart muscle. Treatment strategies in developed health care systems have centred on reopening the occluded artery to arrest this process (reperfusion). The two accepted treatment options are thrombolysis (the current, most common UK treatment) and mechanical reopening of the artery with angioplasty and stent insertion (PPCI)

Whilst thrombolysis has been shown in large trials to reduce mortality, it is only effective at opening the occluded artery in up to 50% of cases. PPCI however, is successful in over 95% of cases.

A powerful meta-analysis of 23 clinical trials comparing PPCI to thrombolysis has shown PPCI to be significantly superior in terms of mortality, morbidity and the need for future hospitalisation and revascularisation (Keeley, 2003).

A recent “real world” study registry of 26,000 patients suffering AMI in Sweden between 1999 and 2004 has shown PPCI to be greatly superior to both in-hospital or pre-hospital thrombolysis (Stendstrand 2006), see Table 1 below.

End Point	In-hospital Thrombolysis n=16,043	Pre-hospital Thrombolysis n=3,078	Primary PCI n=7,084
Mortality at 7 days (%)	8.8	5.9	3.5
Mortality at 1 year (%)	15.9	10.3	7.6
Readmission for MI 1 st year (%)	9.6	9.0	4.8
Hospital stay (days)	6	5	4

Table 1: Clinical Results. Swedish Registry of 26,000 patients

Once again the above registry showed a significantly lower re-intervention rate for patients treated with PPCI.

The recent European Society of Cardiology (ESC) guideline for the treatment of myocardial infarction recommends PPCI where available, and where thrombolysis is given, all patients should have mandated rescue angioplasty if thrombolysis fails to work at 90 minutes. This occurs in approximately 50% of patients. It also recommends that all patients treated with thrombolysis should have angiography and PCI as necessary within 24 hours of admission.

This needs to be performed in a high volume tertiary PCI centre. PPCI provision is increasing in the UK with 14 of 83 PCI centres offering a comprehensive 24 hour service already.

Emergency access times from all parts of the Network should not exceed 60 minutes. Given the remoteness of certain population groups to potential PPCI centres, especially within Shropshire, it is anticipated that this target will not always be attainable, and therefore a dual model of reperfusion is required, which allows for those patients to receive pre-hospital thrombolysis as is already in operation in Staffordshire and then transfer for PCI.

4.2 The role of Pre-hospital Thrombolysis (PHT)

Additional training will be required for Ambulance staff relating to the recognition of the need for PCI and the issues surrounding the transport of STEMI patients past local receiving hospitals.

The training of Ambulance Paramedics in the West Midlands Ambulance Service is currently in line with all U.K Ambulance Services who follow the Joint Royal Colleges Ambulance Liaison Committee guidelines (jrcalc). These guidelines cover all aspects of Acute Coronary Syndrome including Pre Hospital Thrombolysis.

Ambulance staff will require training, guidance and support in clarifying their working practices to ensure that appropriate patients are transported from Shrewsbury, Telford, Stafford and Burton to the tertiary cardiac centre for PCI as appropriate.

WMAS service has recently commenced a dual system of reperfusion across Birmingham, Sandwell and Solihull, which includes Pre-hospital thrombolysis (PHT) for patients presenting with onset of cardiac chest pain within 3 hours.

5. Proposed patient pathway

All patients presenting to WMAS with symptoms of cardiac chest pain will be assessed at the scene and receive a 12 lead ECG to confirm or refute a diagnosis of STEMI. All patients diagnosed as a STEMI, will be transferred as an emergency to the closest available tertiary cardiac centre. Depending on estimated time of arrival at the PCI Centre the patient may receive thrombolysis en route.

Patients will be received as a direct admission to the tertiary cardiac centre and assessed to confirm suitability for PPCI. Suitable patients will be transferred to the emergency PCI lab. and undergo emergency angiography and PCI as required.

A small number of patients, in which there is doubt about diagnosis or need to proceed to PPCI, will be admitted for standard care and monitoring.

PPCI is associated with shorter length of stay, and many patients will be suitable for discharge within 3 days of the procedure. It is likely that uncomplicated patients requiring a maximum of 4 days in hospital will be discharged home from the tertiary cardiac centre. Patients will be followed-up by their respective cardiologist and rehabilitation teams locally. There is a clear and agreed policy within the network to ensure that patient care is repatriated locally.

6. Clinical Criteria and Service Standards

It is important that effective standards are in place and those teams and organisations deliver quality care within an agreed framework. Clinical protocols need to be in place for receiving and treating patients within the tertiary cardiac centres.

WMAS has experience of using diagnostic protocols at the scene. These protocols will be revised in view of the change in the patient journey (bypassing local DGHs in Shrewsbury,

Telford, Stafford and Burton) and with due regard to the recently revised joint royal colleges ambulance liaison committee (JRCALC) guidelines.

WMAS will review their requirements for staff training, so that all paramedics will have the required skills to assess patients at the scene and diagnose those with STEMI (including other acute ECG changes) so that the most appropriate patients are transferred to the tertiary cardiac centres.

7. PPCI Centre catchment

WMAS will operate a protocol for delivering patients to the closest available PPCI centre. Anticipated catchment areas have been identified for each of the existing/proposed PPCI centres. Commissioners will inform WMAS of the boundaries for each centres catchment. Commissioners will work with clinicians to agree optimal referral routes for primary PCI. The objectives will be expedient emergency care, maintenance of established referral pathways where possible, and balance of primary PCI workload between tertiary centres.

7.1 University Hospitals of North Staffordshire NHST (UHNST)

UHNST will become the largest provider of PPCI services to the Shropshire and Staffordshire PCTs as a result of these proposals.

UHNST initiated a limited service in December 2007, and expanded the service from a local 9-5 service to a comprehensive 24/7 service in January 2009.

7.2 Royal Wolverhampton Hospitals NHST (RWHT)

RWHT already operate a comprehensive PPCI service to its catchment inclusive of parts of South Staffordshire and South East Shropshire. The travel isochronal analysis indicates that a larger section of this population would find the quickest access through to this centre, and it is therefore assumed that additional volumes of patients will be directed to this centre as a result of full implementation of these PPCI proposals.

7.3 Heart of England and University Hospital Birmingham NHSFTs

The isochronal analysis would indicate that a very small number of South Staffordshire and South East Shropshire residents may most quickly access services within Birmingham as a result of fully implementing these proposals. Heart of England Hospitals NHSFT now operate comprehensive PPCI services to facilitate this.

7.4 University Hospitals of Leicester NHST (UHL)

UHL has for some time provided cardiac services to parts of East Staffordshire, Burton in particular. Given the isochronal study, it is anticipated that UHL would provide the best access for these residents.

It should be noted that consideration will need to be given to opportunities afforded by any proposals by Derby Hospitals NHSFT and Burtons Hospitals NHST to develop interventional cardiology services in the future.

7.5 DGH Acute Cardiac Providers receiving patients receiving pre-hospital thrombolysis

All patients irrespective of whether they receive PHT will be directed to PPCI centres. This includes those presenting to DGH Emergency Departments. The commensurate loss in

activity and income in detailed in appendix 1, as are the additional costs associated with increased revascularisation activity at the tertiary centres.

8. Proposed levels of activity

A number of data sources have been analysed to improve the accuracy of the numbers used to support the business case, including the Myocardial Infarction National Audit Project (MINAP) figures for the 5 A&E Departments within the Network Initial figures revealed a significantly lower number of patients and also some discrepancies between areas that were inconsistent with previous reports of total MIs. Across the Network, the total number of patients logged through MINAP as eligible for thrombolysis was 641. Other PPCI projects have identified a significant deficiency in the MINAP counts and although it is acknowledged that the percentage of all MI patients presenting as STEMI had fallen in recent years, it was also acknowledged that relying on MINAP eligible patients would under-estimate the number of patients who may require PPCI. (MINAP data excludes late presenters and those with contraindications. Variation across Trusts also indicates differences in interpretation of eligibility for inclusion in the audit).

The British Cardiac Intervention Society (BCIS) estimates approximately 500 STEMIs per million population.

An analysis of the MINAP data was undertaken for patients presenting to the Heart & Lung Centre at Wolverhampton. The MINAP returns for 1 year were cross checked with the hospital’s clinical audit data of all patients diagnosed as STEMI. This showed that 102 patients had been documented via MINAP and 185 STEMIs recorded through local audit. Subsequent review of the initial calculations across the Black Country demonstrated the modelling predictions were highly accurate.

The following table summarises the projected numbers of STEMIs by PCT using the different methodologies.

SSLCCB	Population	Total	BCIS	BC model
Shropshire County PCT	283,173	97	142	155
Telford & Wrekin PCT	158,325	48	79	77
North Staffordshire PCT	216,519	82	108	131
South Staffordshire PCT	590,225	291	295	466
Stoke on Trent PCT	240,636	123	120	197
TOTAL	1,488,878	641	744	1,026

For the purposes of this report and planning, the estimates generated by the Black Country model have been used.

9 Costs

9.1 Economic analysis of PPCI (General)

The cost of providing a 24/7 PPCI service in the UK relates broadly to 3 processes

- The provision of a fully equipped interventional centre with a robust 24/7 on call system
- The transportation costs
- The cost of the procedure

Many of the perceived problems associated with setting up of PPCI in the UK are less relevant to the Shropshire & Staffordshire, as the Cardiac Units at UHNST, RWHT and in Birmingham already offer 24hour, 7 day angioplasty for patients with acute coronary syndromes and therefore this complex service does not need to be set up “from scratch”.

9.2 European and US cost analyses of PPCI

The available evidence shows that in the medium to long term (12-24 months), the health care costs of PPCI are at best, better than thrombolysis, and at worst cost neutral (Melikian, 2005). This is driven by lower admission rates for revascularisation and heart failure in patients treated with PPCI following index event. An early study from Zwolle (De Boer, 1995) showed the cost effectiveness ratio (average cost per event free survivor) was significantly less for PPCI when compared to thrombolysis. A health economic model of the cost PPCI vs. thrombolysis developed by Lieu et al (1997) after the analysis of 10,000 patients showed the cost per life saved PPCI was \$11,000 whereas for thrombolysis \$14,000.

The NHS R&D Health Technology Assessment: “Clinical effectiveness and cost effectiveness of immediate angioplasty for acute myocardial infarction: systematic review and economic evaluation” (Hartwell, 2005) states that “if both interventions were routinely available, the economic analysis favours PCI”.

9.3 Specific costs for Shropshire & Staffordshire

The existing mixed models of care delivered across Shropshire & Staffordshire have been costed and comparative costs produced for moving to a system of PPCI for the resident population. These figures are presented in Appendix 1. The table below summarises the changes in spells and related contract income and expenditure:

SSLCCB	Population	STEMIs	Baseline Spells	Baseline Spend £'000	Revised Spells	Revised Spend £'000	Projected savings £'000
Shropshire County PCT	283,173	155	262	863	164	737	126
Telford & Wrekin PCT	158,325	77	130	429	82	366	63
North Staffordshire PCT	216,519	131	147	656	139	623	33 ¹
South Staffordshire PCT	590,225	466	788	2,597	494	2217	380 ²
Stoke on Trent PCT	240,636	197	222	986	209	937	49 ¹
TOTAL	1,488,878	1,026	1549	5,531	1088	4,880	651

¹ North Staffs & Stoke PCT have already achieved an additional 85% savings as a result of UHNST commencing 24/7 from January 2009

² SSPCT have already achieved 20% of these savings (£77k) as a result of PPCI flows into RWHT (Further savings of £305 to be achieved)

The comprehensive implementation of PPCI across the Shropshire and Staffordshire PCTs will reduce the number of spells across acute providers by 304, and provide cost savings of on top of those already achieved in part by 3 PCTs.

The SCT(WM) will be required to call in subscriptions of £442k from PCTs to commission the additional PCIs at RWHT and UHNST. PCTs will be able to fund this from their savings from reducing their general cardiology admissions at their local DGHs, to the value of £1,018k.

9.4 Ambulance Service Costs

The training and resource implications to deliver these proposals over the Shropshire and Staffordshire PCTs have not been fully calculated yet, however, preliminary indications would suggest the following additional costs may be required from PCTs, in particular those who do not host a PPCI. It is anticipated that the additional costs will be marginal and generated by the additional patients who will receive PPCI, who would otherwise not have benefitted from the procedure. There is already an existing flow of patients from DGHs to PCI centres

through Inter Hospital Transfer arrangements which will already be accounted for within the cost analysis presented by WMAS.

10. Timetable/Project Plan

10.1 Project Team/Network STEMI Group

A project group is proposed to oversee this service development. A number of key individuals have already been engaged in the development of this business case and it is expected that they will form the nucleus of the group. Proposed membership:

NAME	ROLE	ORGANISATION
Kate Burley	Network Director/Project Lead	Cardiac Network
Rob Lusuardi	SS Specialised Commissioner	SS LCCB
Jim Nolan/Mark Gunning	Interventional Cardiologist	UHNST
	Ambulance Lead	WMAS
	Management Lead	UHNST
Charles Spencer	Cardiologist	Stafford General Hospital
Peter Carey	Cardiologist	Queen's Hospital, Burton
Mary Heber	Cardiologist	Princess Royal, Telford
David Wallbridge	Cardiologist	Shrewsbury Royal Hospital
	Local Rehab Teams rep	PCT/DGHs
	Patient Rep	Network Patient Lead
		LA Oversight & Scrutiny Committees

10.2 Project Plan/Timescales

TASK	WHO	WHEN
Establish UHNST In-house 9-5 PPCI service	Jim Nolan	December 2007
Establish UHNST In-house 24/7 PPCI Service	Jim Nolan	January 2009
Develop Patient Pathways/Protocols for 24/7 service, including role of PHT, and follow-up and rehab	Project Group	March 2009
Develop Commissioning Case for LCCB	Rob Lusuardi	March 2009
Business case review and approval	Kate Burley	April – July 2009
<i>Ambulance Training</i>		<i>Aug 2009 onward</i>
<i>24/7 comprehensive start date & advertise start date with all stakeholders, including public</i>	<i>Kate Burley/Rob Lusuardi</i>	<i>Sept 2009</i>

10.3. SC PCT Response: process and timescales

The PCT have taken forward the Cardiac network proposals contained within the paper and assessed their value and merit clinically within the PEC commissioning sub group where the paper was discussed with GP collages as part of the PBC process. The paper was also presented with the PEC. The paper was approved on both occasions.

The proposals have also been presented and discussed with the local CiNCH group, where they received support.

A joint workshop was held on 21st July at which the proposals were presented to representatives from the Health Overview and Scrutiny Committees from Shropshire, Telford & Wrekin and Staffordshire. The joint workshop supported the proposals and agreed that the proposed changes would not require formal public consultation.

11. Risks

The service is now operational in UHNST and RWHT 24/7 for local catchment patients. The expansion of this service across the network will change patient flows for a modest number of individuals. This will have a limited impact on DGHs, patients and carers. It will also change the way ambulance crews manage the transfer of patients, delivering them promptly to the PCI centre. The table below highlights the risks associated with the project.

RISK	LIKELIHOOD	IMPACT	ACTION TO REDUCE RISK
Timescale for ambulance training	Low	Medium	Agree timescale & funding with WMAS
Funding extra ambulance journey times	Low	Medium	Agree timescale & funding with WMAS
Agreement on PHT protocol (if required)	Low	Low	Discussion with DGHs to switch to Tenecteplase, although patients should still go to tertiary centre
F/U & Rehab referrals not in place	Low	Low	Agree Rehab representation on project group and liaise with Network Rehab group

12. Conclusions

This paper outlines the Shropshire & Staffordshire Cardiac Network's support for the delivery of primary PCI for the resident populations of the entire network. It highlights the support amongst clinicians, based on evidence and high level recommendations in favour of PPCI as the preferred model of reperfusion for patients presenting with STEMI.

Increasing numbers of patients admitted to local DGHs are being transferred for intervention during their index admission, a further proportion of those discharged without intervention are readmitted routinely for angiography within subsequent months. Therefore, a change to PPCI will capture many of these patients, but essentially at an earlier stage. The benefits of early intervention (over and above the initial reperfusion benefits) will include shorter length of stay, earlier access to rehabilitation, improvements in quality of life and reduction in subsequent admissions and follow up procedures.

The ambulance service has shown that it can deliver patients to the Heart and Lung centre for timely primary PCI within Wolverhampton. Training and development is planned to support all staff to deliver this pathway for patients across the Network.

Finally, it can be seen that the Shropshire & Staffordshire Cardiac Network is well placed to deliver P PCI to its population. It has the benefits of the required infrastructure with a modern, well equipped tertiary centres. The ambulance service is well on the way to preparing its staff to deliver patients directly to the centre for timely intervention. The evidence base supports this model of care and both published data and local cost analysis show that it can be delivered, at worst cost neutral, and is most likely to show savings to both local and specialist commissioners.

The proposal has been approved by Local Collaborative Commissioning Board and by Shropshire County Professional Executive Committee.

13. Recommendation

The Board is asked to APPROVE the implementation of the revised patient pathway for patients presenting with ST segment elevation myocardial infarction proposed by the Shropshire & Staffordshire Cardiac Network and Local Collaborative Commissioning Board.

References

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