

**AGENDA MANAGEMENT SHEET**

**Name of Committee** Nuneaton & Bedworth Area Committee

**Date of Committee** 25<sup>th</sup> January 2006

**Report Title** **Consultation & Appraisal of Proposed Reconfiguration of Coventry and Warwickshire Ambulance NHS Trust**

**Summary** Malcolm Hazel, Chief Executive of Coventry & Warwickshire Ambulance NHS Trust has produced an appraisal on the proposed reconfiguration of the Ambulance Trust's in the West Midlands, which is going through public consultation.

**For further information please contact:**

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**Would the recommended decision be contrary to the Budget and Policy Framework?**

No.

**Background papers**

Dept. of Health – Configuration of NHS Ambulance Trusts in England – Consultation Document and contact: DH Publications Orderline quote 272302

**CONSULTATION ALREADY UNDERTAKEN:-**

Details to be specified

- Other Committees
- Local Member(s)
- Other Elected Members  Jerry Roodhouse
- Cabinet Member  Bob Stevens
- Chief Executive
- Legal  Victoria Gould
- Finance
- Strategic Directors  David Carter

- District Councils
- Health Authority
- Police
- Other Bodies/Individuals

**FINAL DECISION NO**

**SUGGESTED NEXT STEPS:** Details to be specified

- Further consideration by this Committee  .....
- To Council  .....
- To Cabinet  .....
- To an O & S Committee  .....
- To an Area Committee  North Warwickshire, Rugby, Stratford & Warwick
- Further Consultation  .....

## Agenda No

### Nuneaton & Bedworth Area Committee – 25<sup>th</sup> January 2006.

#### Consultation & Appraisal of Proposed Reconfiguration of Coventry and Warwickshire Ambulance NHS Trust

#### Report of the Strategic Director of Performance & Development

##### Recommendation

1. The Committee to consider the benefits and drawbacks outlined in the appraisal document provided by Malcolm Hazel (Chief Executive, Coventry and Warwickshire Ambulance NHS Trust)
2. To make any comments which it wishes to feed into the formal consultation process

### 1. Background

- 1.1 The proposal to merge Coventry and Warwickshire Ambulance NHS Trust was brought to Health Overview and Scrutiny Committee on the 27<sup>th</sup> July 2005. It was resolved that a letter to be sent to West Midlands Strategic Health Authority from the Leaders. Warwickshire County Council expressed concerns about the proposal to replace the current 4 Ambulance Trusts with one covering the West Midlands, because of the potential diminishing of the quality of local services provided by the 3 star Coventry and Warwickshire Ambulance Trust. The Council would want to pose a number of questions during the formal consultation period and to urge the consideration of more than one option.
- 1.2 Malcolm Hazel has put together an appraisal of the proposals for one Ambulance Trust covering the whole of the West Midlands outlining the benefits and drawbacks for your consideration.
- 1.3 The formal consultation on the ambulance proposals started on the 14<sup>th</sup> December 2005 and finishes on the 22<sup>nd</sup> March 2006. Postal address for feedback should be sent to the Strategic Health Authority to the contact details below:

David Nicholson CBE  
Commissioning a Patient - Led NHS  
West Midlands Consultation Office  
PO Box 2675

Stafford ST16 9BW

or

[wmconsultation@sasha.nhs.uk](mailto:wmconsultation@sasha.nhs.uk)

## 2. Recommendations

- 2.1 The Committee to consider the benefits and drawbacks outlined in the appraisal document provided by Malcolm Hazel (Chief Executive, Coventry and Warwickshire Ambulance NHS Trust)
- 2.2 To make any comments, which it wishes to feed into the formal consultation process

DAVID CARTER  
Strategic Director of  
Performance and  
Development

Shire Hall  
Warwick

21 December 2005

# **An Appraisal of the Proposal to Merge Four Ambulance Trusts in the West Midlands, to form a Single Regional Trust – Malcolm Hazel, Chief Executive Coventry & Warwickshire Ambulance NHS Trust**

## **Introduction**

The Consultation Document on Configuration of Ambulance Trusts in England has at its heart a statement that “ambulance trusts should be larger, and there should be significantly fewer of them so that ambulance trusts would have the infrastructure, capacity and capability to deliver and sustain the changes needed”.

There can be no doubt that ambulance trust performance is uneven (but so is that of all other trusts) although it is noteworthy that the Coventry & Warwickshire Ambulance NHS Trust is one of the best performers in the country. Unfortunately evidence is lacking that larger trusts perform better, and to some extent the reverse is true. It is also unfortunate that the table in the Consultation Document at page 13 setting out base population areas and incident numbers in the proposed new trusts have completely miscalculated the incident numbers per square mile. Thus the correct figure based on their data for West Central, which includes us, should be some 80 incidents for every square mile – not one every square mile each year.

## **Background Information**

The proposed merger of the four Ambulance Trusts in the West Midlands region will create an organisation that covers a resident population of about 5.5 million people. It would stretch from the M1 motorway to the East of Rugby, to the Welsh borders, and from just 3 miles North of Monmouth in the South, almost to Greater Manchester in the North, covering some 5,766 square miles. No English Ambulance Trust is currently this size. In 2004/5 the combined number of patients conveyed to hospital by these four trusts, including emergency, urgent, and routine patients, was 1,846,500. No single Ambulance Trust has matched this activity, and comparatively, London Ambulance Service (LAS), which is presently the largest in the World, conveyed just 1,155,200 patients during the same period. This is a reflection of LAS's relatively small Patient Transport portfolio, which at 486,500 patients conveyed during 2004/5, was only marginally larger than Coventry & Warwickshire's activity, which was 447,100. Overall routine patient transport amounted to 1,311,800 patient transfers in the West Midlands Region in 2004/5, 156,600 more routine patients than the entire activity of the LAS.

In 2004/5 the LAS budget was £192.6m. The combined budget for the four ambulance trusts in the West Midlands Region was £124.7m, albeit conveying 691,300 more patients (60%) than LAS. Combining this activity will be creating an ambulance trust with a patient activity portfolio that is 60% greater than LAS, but in 2004/5 received £67.9m less funding, i.e. LAS received 54.5% more funding for 60% less activity.

Various papers have sought to set out that the merger of the four West Midlands' ambulance trusts would free up between £3m and £4.5m, and the consultation document refers to generating better use of resources to support high performance in all trusts. The track record of large ambulance trust mergers thus far suggests that any reduction in local management will denude, not reinforce, local responsiveness to patients, and weaken, not enhance, the ability to respond to major incidents.

## **Purported Benefits:**

The consultation document claims that it will enable the new trust to gain:

- *'More investment in front-line services'. 'Better equipped and trained workforce and the ability to adopt best practice quickly and consistently'. 'Better use of resources to support high performance in all trusts'.*

These are laudable aspirations, but it is difficult to envisage how a remote Trust HQ will be better placed to improve standards. The danger is that the Trust Board will be overwhelmed with the enormity of the task, and the current local focus lost. Thus far, the largest Ambulance Trust mergers have involved just three County configurations, including East Midlands Ambulance Trust (Leicester, Derbyshire, and Nottinghamshire), which has a resident population of 2,664,000 and covers 2,800 square miles. The proposed West Midlands regional service is over twice this geographical area and double the population, but of grave concern is the difficulty with which the East Midlands Ambulance Trust had in servicing its area, so creating a substantial need for support from Warwickshire and Northamptonshire for patients in Leicestershire, and it is understood that similar support was necessary from Staffordshire in Derbyshire. This support was required for several years, and is still not wholly resolved. Few of the stated benefits, now being espoused for this regional merger, came to fruition.

East Midlands is not an isolated example. The East Anglian Ambulance Trust has a resident population of just 2,100,000, fewer than half that proposed for this new regional trust, and covers 4,923 square miles, 17% smaller than the proposed West Midlands Regional Trust, but its implementation was an unmitigated disaster, resulting in a public enquiry.

- *'More opportunities for staff'. 'Improved human resource management, organisational and leadership development'.*

It is difficult to see how a remotely based executive will contribute to this. The absence of the Chief Executive and Executive officers will remove the necessary contact that aspiring managers need to develop their skills. One ought not be promoted to captain an Aircraft Carrier, unless one has been on the bridge alongside the Captain, and his Executive officers. This proposal severs that link and weakens the future leadership mentoring within ambulance trusts. Moreover, it does so by creating the largest Ambulance Trust the world has seen.

Coventry & Warwickshire Ambulance Trust is at the forefront of ensuring the best possible education and training opportunities for its staff. There is no evidence whatsoever that larger trusts afford better opportunities. The range of education and training afforded to staff in Coventry & Warwickshire is already excellent, and far superior to that being offered by most, if not all, UK and international ambulance services. The provision of such opportunities has no correlation whatsoever to the size of the organisation.

If local managers are retained it is likely these will be operationally focused, and the central trust will be considerably stretched to try to implement greater integration with the wider NHS than at present. The integration achieved by Coventry & Warwickshire Ambulance Trust, through its involvement with the Emergency Care Network, is second to none, with more Emergency Care Practitioners carrying out duties in primary and secondary care, than any other NHS trust.

- *'Improved planning for, and ability to handle, chemical, biological, radiological or nuclear incidents, terrorist attacks or natural disasters'.*

Reducing the Ambulance Trust Executive staff from four to one group will deplete and denude, not reinforce the current capability to sustain an operation response to a major incident. The reciprocal support arrangements that were afforded to LAS on 7 July 2005 were impeccable, with all neighbouring services supporting LAS, and ripple support to those

Services from their neighbours, as required. This aspect was arguably the most effective part of the Ambulance Service operation. A major incident will require strong local focus, and the remote position of the executive team will hamper, not assist this.

Local Resilience Forums (LRF's) are based on County and Metropolitan Councils. This proposal will effectively mean that meaningful executive involvement in such forums will cease. This will weaken strategic ambulance input and involvement, not strengthen it.

The Consultation document states that 'larger trusts...would not need to rely on other emergency services and ambulance services from outside their area to support them if there was a major incident'. This statement is unsound. London clearly depended on reciprocal support of all its neighbouring ambulance services, and it is reckless folly to suggest that a regional ambulance trust would not require the support of neighbouring services in the event of an incident. Merging services does not create substantial additional capacity, nor prevent other 999 incidents, such as heart attacks, from continuing to arise.

The paper argues that police forces have recognised the benefits of larger organisations and speculates that this will emulate the recommendations for ambulance reconfiguration. The case for police reconfiguration is entirely different. Police forces have to investigate serious incident that last many, many months, and can involve significant numbers of staff. Smaller police forces may lack capacity for such investigations. In contrast, ambulance services dispatch vehicles to emergency, urgent, and routine patients, and each episode is completed within about an hour. Little additional capacity is created by this proposal. The declared £3m management savings could well be absorbed by inefficiencies arising from the newly created monolithic structure that is precisely what the Prime Minister recently declared he was intent on dismantling within the public sector.

- *'Improved contingency planning to make sure that the control room...will stay fully operational regardless of any information technology or service disruption'.*

The larger the operational centres, the greater the number of calls being handled, and the greater the risk of a system failure, as demonstrated by the LAS which suffered the most catastrophic, high profile failure of its centre in 1992. Contingency plans for reciprocal support from neighbouring services do not necessitate trust merges. The effectiveness of reciprocal support to LAS for the London Bombings on 7 July 2005 was beyond reproach.

- *"Greater financial flexibility and resilience, ability to plan and make longer term investment decisions'. 'Financial savings achieved through greater purchasing power and economies of scale'. 'Increased investment in new technologies'*

The number of Boards will be reduced by 75%. This will denude the management capability of the proposed reconfigured Trust considerably, and weaken, not strengthen resilience. Support services comprise mainly Human Resource/Personnel; Finance; and Corporate Services. There are five or less staff in each function in Coventry & Warwickshire, and it is misleading to suggest that significant reductions in local presence could be achieved without weakening local commissioning and local NHS integration strategies. The benefits of putting a few more staff on the road could be substantially outweighed by a reduction in morale, as a result of remote senior leadership, creating higher absenteeism rates and a reduction in staff commitment. The local co-ordination of resources is dependent on good morale, and high commitment from staff. The proposed scale of this merger puts at risk the high standards currently achieved and which seem to be taken for granted.

The consultation document seeks to secure savings of £3m for re-investment. The current total management costs across the Region are £7m, so this will not be a straightforward achievement. The existing Trusts already benefit from NHS negotiated purchase prices, so

procurement savings are likely to be very modest indeed. £3m could provide for an additional 10 ambulances to cover the new 5,766 square miles, but such an investment would leave nothing else for IT, education, training, and such like, as purported.

The consultation document indicates that emergency ambulance services have received 15% more staff since 1997. This is correct, but they have also experienced a 50% increase in activity and the proposal to re-invest £3m of savings will not reverse the imbalance of investment and activity. A small reduction in efficiency, or staff attendance, could erode this sum considerably, and send operational performance into an irreversible slide.

- *'Greater capacity to carry out research and check that patient care is of the highest order'*.

This Trust adheres to and meets the guidelines recommended by the Joint Royal Colleges Ambulance Liaison Committee, and as advocated by the National Institute for Clinical Excellence. It does not advocate operating outside these parameters, except as agreed by the Emergency Care Network across Coventry & Warwickshire, and endorsed by the Trust Clinical Committee, as for example is the case for Emergency Care Practitioners. Clinical audit is already rigorously conducted, and merger does not create capacity in this respect. If research is to be conducted, is this to be added to the growing list of benefits that the £3m is supposed to fund?

- *'Greater influence in planning and developing better patient services, both regionally and nationally'*

Ambulance Services will need to continue to influence their local Emergency Care Networks. This proposal serves to weaken that requirement, as the executive team will have to delegate attendance across the Networks covering the Region. It is difficult to envisage how fewer Chief Executives will strengthen the influence of Ambulance Services.

The consultation states 'At present, ambulance trusts in England are working very hard to care for their patients and to continually improve the services they deliver. But we know that there is more that they could do, if they had greater capacity to plan for tomorrow as well as dealing with today and if artificial barriers to integrated planning and service delivery such as lack of coterminosity with other service providers and planners were removed'.

There are very few examples across the Country where ambulance services are not coterminous with their SHA's, and none with other NHS providers, Coventry and Warwickshire Ambulance Trust is already providing an integrated service with its NHS partner organisations, and it is erroneous to suggest that an ambulance trust has to cover thousands of square miles to be efficient or effective. Evidence suggests that services that cover significantly more than a two million resident population are less effective than smaller services.

The consultation suggests that the proposal is about saving money from bureaucracy and saving money to reinvest in the ambulance service. The document suggests the merger will allow significant savings to be made. This sounds good in theory, but has not materialised significantly elsewhere. Indeed, in East Anglia, substantial additional cash had to be pumped in, and the Service is still failing to achieve Government targets. Within East Midlands the organisation has not enjoyed the same degree of financial support and its operational performance reflects this. For the week ending 4 December 2005 East Midlands 19 minute response to serious 999 calls was 71%; London's was 70%; whilst Coventry & Warwickshire's was 95%. Thus far this year, no large Trust, covering more than two counties, is achieving this standard. London, East Midlands, and Mersey Regional Services, are the worst in the UK.



## 1. Conclusion

Coventry & Warwickshire Ambulance Trust has invested in all areas of performance, including staff education and training, technology, and vehicles. This is reflected in its economic, efficient, and effective service profile, as demonstrated in the enclosures.

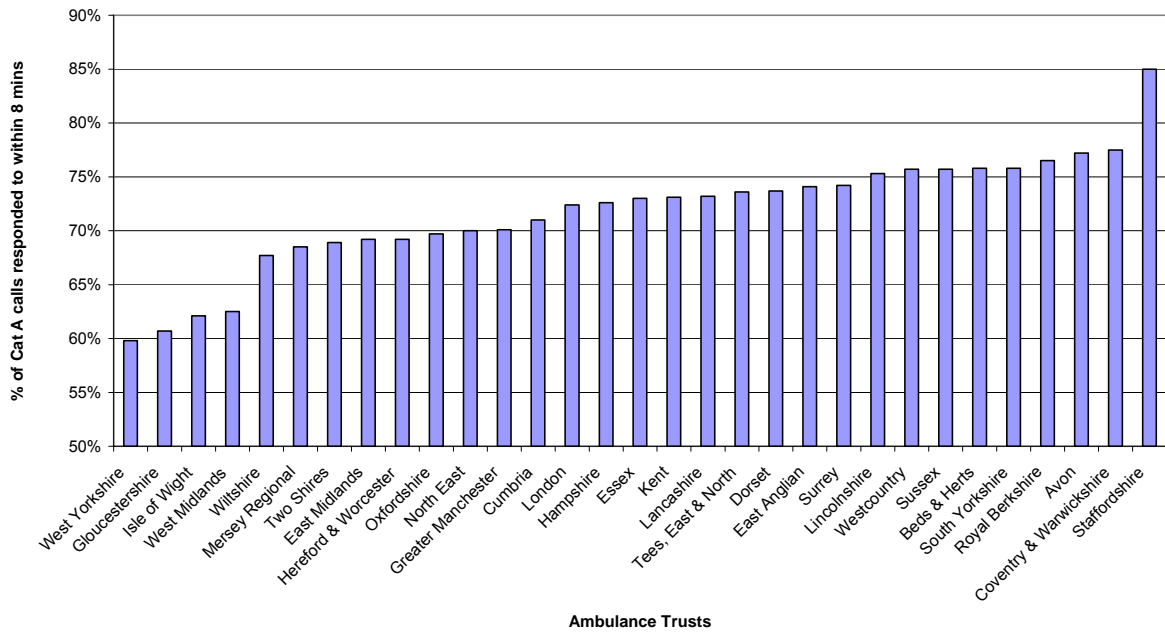
The top performing ambulance trusts at present are single county services. No trust greater than two counties, is presently achieving the National operational standards. The proposed merger therefore seems to be built on false premises and may therefore unravel, probably progressively with time, to the detriment of patient care.

Malcolm Hazell  
Chief Executive  
Coventry & Warwickshire Ambulance NHS Trust  
15 December 2005

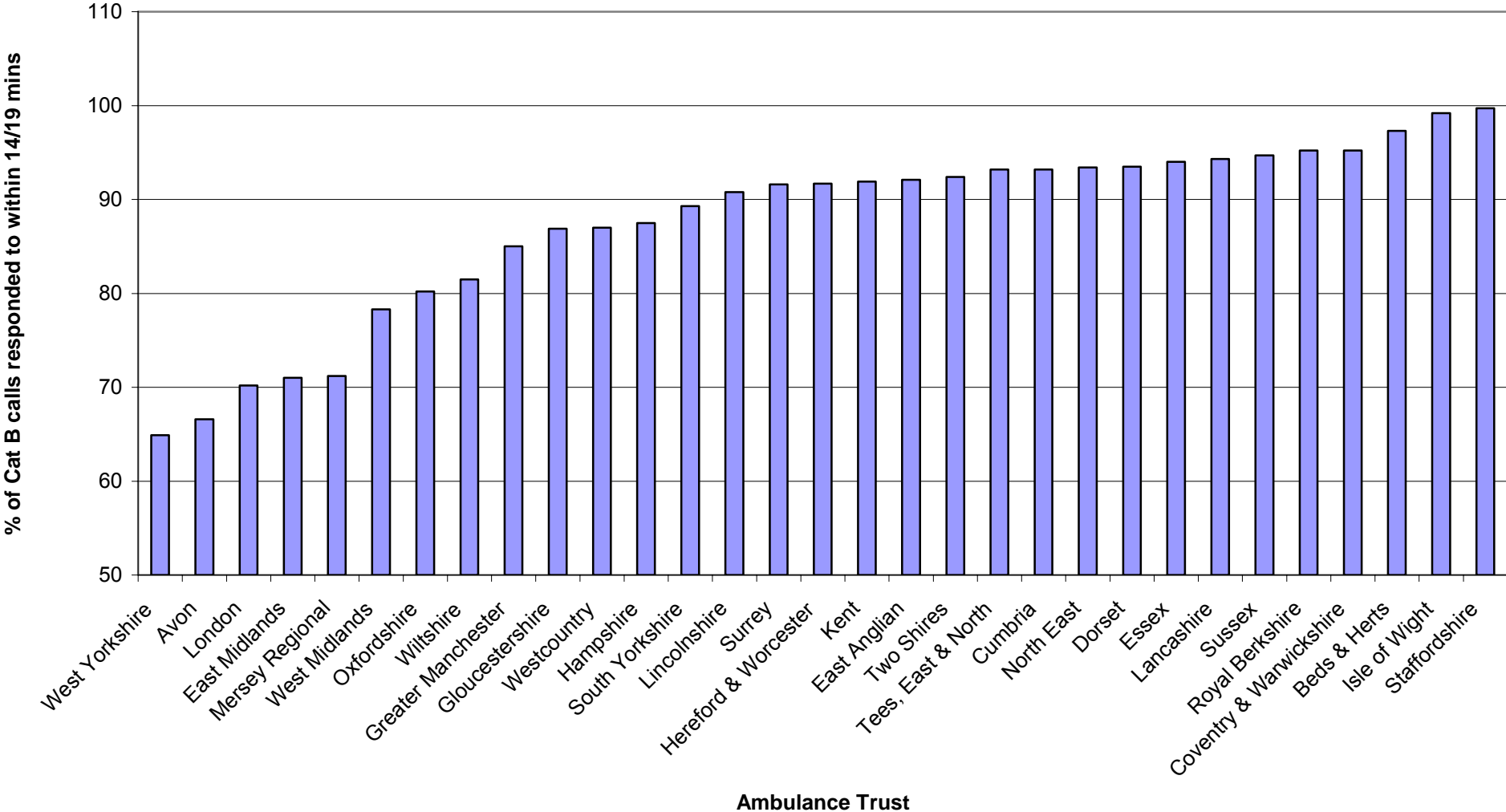
### Enclosures:

1. National Statistics Ambulance Services 2004/5 Table 2 Activity Data
2. DoH Ambulance Operational Performance to week ending 4 Dec 05
3. CWA Cardiac Thrombolysis Audit 2005
4. CWA Asthmatic Audit 2005
5. CWA Financial profile v Staffordshire (which claims to be more economic etc.)

Ambulance performance by Trust, w/e 4 December 2005 - Category A



Ambulance performance by Trust, w/e 4 December 2005 - Category B



# Meeting the NHS Commitment in delivering Pre-Hospital Thrombolysis – A Progress Report

## Background

Coronary heart disease (CHD) kills more than 110,000 people a year in England of whom more than 41,000 are under the age of 75. Approximately 1.4 million people in the United Kingdom (UK) suffer from angina and about 240,000 people suffer an Acute Myocardial Infarction (AMI) caused by a blockage of a coronary artery by a thrombus or clot (DOH, 2000b). Thrombolytic drugs break down the thrombus so that the blood flow to the heart muscle can be restored to prevent further damage and assist healing. The sooner the blood flow can be restored, the better the chances of avoiding the death of the heart muscle. The National Institute for Clinical Excellence (NICE, 2002) highlights a wealth of established evidence that supports the safety and efficacy of thrombolysis treatment, produced over the past 20 years involving more than 150,000 patients, with mortality benefit maintained for approximately ten years.

Administration of thrombolytic therapy is a time dependant intervention, evidence demonstrates that 65 lives per 1000 are saved if treated within the first hour and 37 lives per 1000 if treated in the first two hours. A recent re appraisal of this work suggests that the impact of early thrombolysis in terms of lives saved may have been significantly underestimated. Our Trusts experience further strengthens the evidence in favour of rapid pre hospital thrombolysis. Data from the Myocardial Infarction National Audit Project (MINAP) shows that call to hospital times have remained largely unchanged since 2000, with less than 1 in 4 patients arriving in hospital within 30 minutes of calling for professional help. Also, while 75% of eligible heart attack patients are now receiving thrombolysis within thirty minutes of hospital arrival, and over 40% are being treated within 60 minutes of calling for help, there is substantial scope for improvement in pre hospital management.

The support for administering thrombolysis early gained momentum with the publication of the National Service Framework (NSF) for CHD (DOH, 2000b) policy document which sets out national standards and service models aimed at reducing the incidence and death rate from AMI. The targets cited include:

- **By April 2001 reduce call to needle times for thrombolysis by increasing to 75% the Proportion of Accident and Emergency department able to provide thrombolysis.**
- **By April 2002, 75% of eligible patients will receive thrombolysis within 30 minutes of hospital arrival (door to needle time.)**

[National Service Framework for Coronary Heart Disease (2000b), chapter 3, page 15]

The NHS Plan (DOH, 2000a) further reflected the importance of speeding up emergency cardiac care by initiating the following performance standards.

- **By April 2003 75% of eligible patients will receive thrombolysis within 20 minutes of hospital arrival as services are redesigned.**
- **There will be a three-year program to train and equip Ambulance Paramedics to provide thrombolysis safely for appropriate patients.**

[The NHS Plan (2000a), page 117, para 14.21]

## Methodology

The audit was carried out retrospectively over the period of January 2005 – August 2005. The Myocardial Infarction National Audit Project (MINAP) Ambulance Outcome Database was searched to identify the relevant patients for this audit. The results were documented on a Microsoft Excel Spreadsheet.

For the use of this audit the patients identified were those taken into hospital by Ambulance and either received pre hospital thrombolysis or subsequently were thrombolysed within hospital. For our purposes this group identified will be defined as thrombolysis eligible patients.

## Definitions

CTD	Call to Door time
CTN	Call to Needle time
CWA	Coventry & Warwickshire Ambulance NHS Trust
MINAP	Myocardial Infarction National Audit Project
PGD	Patient Group Directive
PHT	Pre Hospital Thrombolysis

## Limitations

This audit relies on the MINAP Ambulance Outcome Database for data collection. However the database has several omissions in the data. The Clinical Directorate will be continuing to liaise with local hospitals to rectify this issue and to ensure that all cases are being input onto the database.

## Inclusion and Exclusion Criteria

Inclusion criteria for this audit were all patients who were taken into hospital by CWA, received pre hospital thrombolysis or were subsequently thrombolysed in hospital.

Exclusion criteria were patients that did not have contact with the ambulance trust, and patients that did not initially present with symptoms associated with acute myocardial infarction.

## Results

Between the audit time period 191 patients, that received a thrombolytic drug, were identified from the MINAP database. Of these patients 43% (83) were transported by the Ambulance Trust. As shown in Table 1 and 2, of the 83 cases analysed, 41% (34) of patients met pre hospital inclusion criteria, 39% (32) did not meet the pre hospital inclusion criteria, 24% (20) of patients were thrombolysed in the pre hospital setting. Of the 34 patients that met the pre hospital inclusion criteria 59% (20) patients received pre hospital thrombolysis. 17 incidents were unable to be located due to the lack of information on the MINAP Database.

	Number	Percentage
Total number of patients thrombolysed either pre hospital or in hospital which were transported by CWA	83	
Number of these patients CWA thrombolysed	20	24

Table 1

	Number	Percentage
Total number of patients that met pre-hospital thrombolysis inclusion criteria	34	
Number of these patients CWA thrombolysed	20	59

Table 2

Further analysis was completed to identify the reasons that patients did not receive PHT. 14 patients, that did not receive PHT, met CWA inclusion criteria. As figure 1 demonstrates, out of these 14 cases, 79% (11) of cases appropriate trained staff were not dispatched to the incident and 21% (3) were exception cases. These exceptions include a refusal from a patient for the treatment, a cardiac arrest in the presence of the paramedic and a trained paramedic dispatched to the incident was unclear if the presenting ECG met the PHT inclusion criteria.

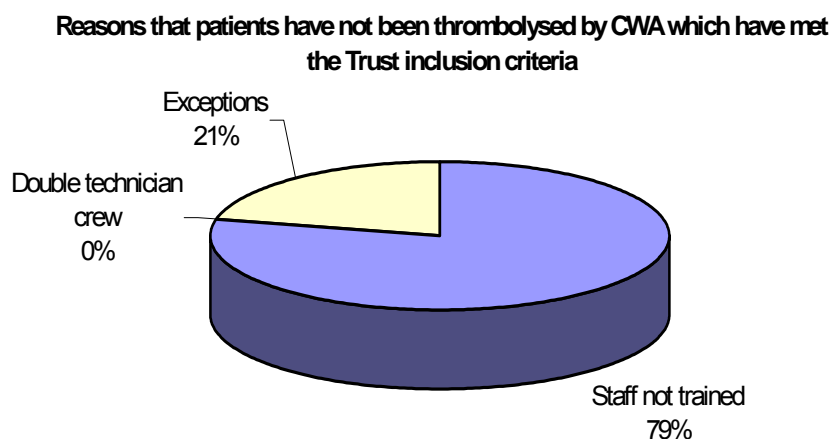


Figure 1

Figure 2 identifies the criteria which 32 patients did not meet. 47% (15) of patients did not meet the <75 age criteria and, 25% (8) of patients did not meet the 80 – 160mmHg systolic blood pressure criteria, 6% (2) of patients showed no ST Elevation or showed less than 2mm of ST Elevation in the required leads. Of the remaining cases 19% (6) of cases did not have an appropriately trained paramedic or ECP dispatched.

**Further analysis into patients that did not meet the inclusion criteria**

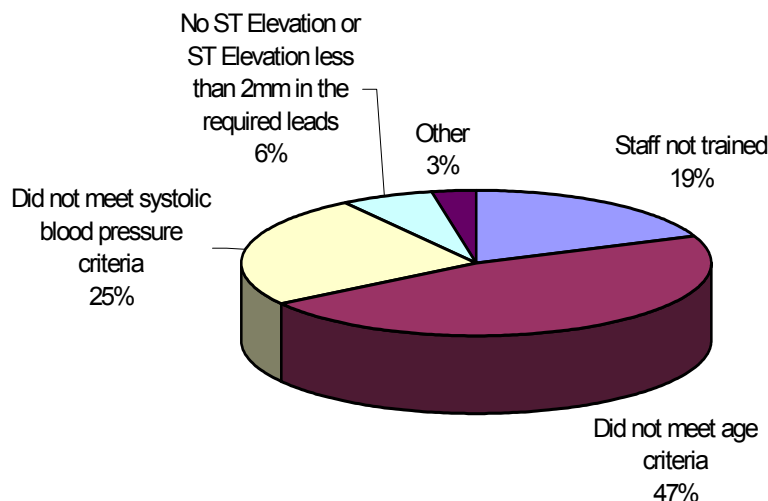


Figure 2

Table 3 highlights both the call to door time (CTD) and call to needle time (CTN) for patients who met the PHT criteria however only received thrombolysis within hospital. Of these patients the mean call to door time was 48 minutes, a range of 32 – 74 minutes. The mean call to needle time was 69 minutes, and 43% (6 of 14) of CTN times were ≥ 60 minutes. 57% of patients that did not receive pre-hospital thrombolysis subsequently failed to achieve the NSF target 60 minute call to needle time.

The mean time of patients that received PHT was 31 minutes, a range of 13 – 66 minutes.

	Mean Time (minutes)	Range (minutes)
Call to door time	48	32 - 74
Call to needle time	69	47 - 103

Table 3

**Comments/Recommendations**

Although there has been a significant increase in the uptake of staff on the PGD, to date a total of 105 paramedics and ECPs; the audit has highlighted the need to ensure all staff are aware of the benefit of thrombolysis. Training and support should be provided to all paramedics and ECP's to ensure inclusion on the PGD. This will be achieved through the training programme, publications in the Clinical Times, and support packs all of which will be available on the Trust intranet. Case study scenarios for staff to review for learning outcomes will also be developed from the pre-hospital thrombolysis cases CWA staff deliver, these will also be available through the training programme, clinical times and on the intranet. Support from the Clinical Directorate will also be available for staff who have attended an exception case. These cases will be reviewed with the staff member on a one to one basis.

Through analysis of CTD and CTN times, it was identified that if a patient, that did not meet pre-hospital thrombolysis inclusion criteria, was received at hospital within 40 minutes of the call time, the NSF call to needle time standard of 60 minutes could be met. However the mean CTD time for these patients was 48 minutes, there is a need to ensure that the CTD time in this group of patients is minimised. This will require strong operational focus to minimise on scene times.

72% of patients identified by the audit did not meet the pre-hospital thrombolysis age and systolic blood pressure criteria therefore did not receive PHT. Extending the age criteria from 75 years to 80 years and increasing the systolic blood pressure upper limit from 160mmHg to 180mmHg could ensure PHT is available to a wider range of patients throughout Coventry & Warwickshire and bring CWA in line with Coronary Care Units across the region. These alterations have been discussed and agreed by the Clinical Committee.

Further work will be completed to identify, from the CRF audit database, patients that meet CWA inclusion criteria but do not receive thrombolysis in the pre-hospital setting and each of these cases will be reviewed individually.

## **Re-audit**

A re-audit will be carried out in January 2006, retrospectively over the period of September 2005 – December 2006.

## **Reporting**

The results will be reported to the Board, Clinical Committee, Cardiac Network and CHD Implementation Teams.

## **References**

Great Britain Department of Health (2000a). The NHS Plan: A plan for investment. A plan for reform. London, HMSO.

Great Britain Department of Health (2000b). The National Service Framework for coronary heart disease. London, HMSO.

National Institute for Clinical Excellence (2002). Technology appraisal guidance – No 52. Guidance on the use of drugs for early thrombolysis in the treatment of acute myocardial infarction. NICE London [on line] Available: <http://www.nice.org.uk.html>



<b>Audit Title</b>	Asthma Audit
<b>Audit Subject</b>	To re-audit the assessment of asthmatic patients
<b>Time period of audit</b>	18 July 2005 – 18 August 2005
<b>Audit produced for</b>	Clinical Directorate
<b>Audit produced by</b>	J Lumley-Holmes
<b>Date produced</b>	12 October 2005

2.

3. **Re-Audit Asthma Audit**

**1. Introduction**

Asthma is a common medical emergency that can lead to death. Asthma presentations to the ambulance service cover a wide spectrum of disease from mild exacerbations to acute life threatening attacks. JRCALC guidelines equip paramedics with a range of treatments for asthma and provide guidance on assessing the severity of the attack. Asthma however is sometimes unpredictable and even chronic sufferers may be caught out by the speed of onset of symptoms and the severity of the bronchospasm.

An initial snapshot asthma audit was undertaken in November 2005 for the time period of April 2005. Following this audit the following actions were taken:

- ✓ Asthma Study Days included in the Training Plan;
- ✓ Hand held SP02 monitors purchased and distributed to all vehicles;
- ✓ New European Standard Peak Flow meters distributed throughout the Trust;
- ✓ Asthma articles published within Clinical Times.

The results of the two audits will be compared to highlight any variations further to the above recommendations implemented from the initial audit.

**2. Audit Aim**

To ensure asthmatic patients are being assessed appropriately to allow accurate severity of the attack to be determined.

**3. Audit Objective**

To identify if the treatment for asthma patients is in line with JRCALC Guidelines (v2.2)

**4. Standards**

The following standards are those to measure against and refer to the assessment and treatment of asthma attacks:

<b>Observation</b>	<b>Standard</b>
Respiratory rate recorded	100%
Complete primary survey	100%
Heart Rate recorded	100%
BP recorded	100%
Peak flow (PEFR) recorded pre-bronchodilator	100%
PEFR recorded post-bronchodilator	80%
Saturations recorded	100%
Ability of patient to speak noted	50%
Patients usual therapies documented	50%
Oxygen delivered at 100% (or as close to 100% as possible)	100%
Hydrocortisone given when scene arrival to hospital time prolonged (> 30 minutes)	80%
IM adrenaline given if life threatening features present	50%
If any life threatening features or acute severe asthma requiring 2 or more nebuliser doses given that patient is transported to hospital.	100%

## 5. Methodology

The audit objectives and design were discussed and agreed within the Clinical Directorate.

The audit was carried out retrospectively over the period of 18 July 2005 – 18 August 2005. All CRFs marked as “Asthma” or where Salbutamol has been given within this time period were selected for this audit. All CRF’s identified were reviewed to ensure that all non asthmatic cases were excluded. The remaining CRFs were searched electronically and manually to measure against the above standards.

In the case of non conveyance incidents the forms were further analysed for evidence of appropriate follow up advice and the address searched again for evidence of repeat attendance within 48 hrs.

## 6. Results

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Respiratory rate recorded	100%	100%	100%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Complete primary survey	100%	100%	98%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Heart rate recorded	100%	97%	100%

<b>Observation</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
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	<b>expected</b>	<b>Achieved April 2005</b>	<b>Achieved August 2005</b>
BP recorded	100%	65.7%	86%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Peak flow (PEFR) recorded pre-bronchodilator	100%	22.9%	46%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
PEFR recorded post-bronchodilator	80%	2.9%	38%

\*3 cases documented patients unable to produce peak flow\*

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Saturations recorded	100%	25.7%	94%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Ability of patient to speak noted	50%	22.9%	30%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Patients usual therapies documented	50%	34.3%	66%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Oxygen delivered at 100% (or as close to 100% as possible)	100%	28.6%	83%

\*5 Non-Conveyed cases therefore unable to identify if oxygen delivered\*

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
Hydrocortisone given when scene arrival to hospital time prolonged (> 30 minutes)	80%	0%	40%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
IM adrenaline given if life threatening features present	50%	100%	50%

<b>Observation</b>	<b>Standard expected</b>	<b>Standard Achieved April 2005</b>	<b>Standard Achieved August 2005</b>
If any life threatening features or acute severe asthma requiring 2 or more nebuliser doses given that patient is transported to hospital.	100%	100%	100%

All Non-conveyance forms included in this audit were analysed; all of these cases did not require a further ambulance within 48 hours of their initial call.

## **7. Comments**

- 7.1 Peak Flow recorded pre-bronchodilator: this has improved by 23%. This is a substantial increase however is still 54% short of the expected standard.
- 7.2 Peak Flow recorded post-bronchodilator: this has improved by 35%, although this is a considerable increase this is still 42% short of the Trust's expected standard.
- 7.3 Saturations recorded – following the previous audit, and the distribution of all hand held SpO2 monitors, this standard has improved dramatically. The standard has increased by 68% and is only 6% short of the expected standard.
- 7.4 Ability of patient to speak noted – although the documentation within the comments box of the CRF has greatly improved the ability of the patient to speak noted has only improved by 8% from the previous asthma audit and is 20% short of the required standard.

## **8. Recommendations**

- 8.1 The importance and need of a peak flow and documentation should be re-enforced throughout the Trust by including in the training schedule and continuing to publish articles highlighting the issues above.
- 8.2 Any improvements which have been made following these audits, for instance the improvement in saturations recording, should also be published in the Clinical Times for staff awareness.
- 8.3 Currently the Non-Conveyance Form does not allow for oxygen delivery to be recorded. An oxygen delivery box, as on the Case Report Form should be included on the new version of the Non-Conveyance Case Report Form. The re-design of the Non Conveyance CRF will be completed by November 2005.

## **9. Reporting**

The results will be reported to the Clinical Committee and passed to the respiratory and A&E teams of the local hospitals.

A further audit to determine the outcome of asthmatic patients admitted to hospital after treatment in the pre-hospital setting is being undertaken, in conjunction with local hospitals and will be completed by November 2005.

