East Midlands Ambulance Service NHS
NHS Trust

Time Required	10 mins	Paper No.	PB/12/44

Report to: **PUBLIC BOARD OF DIRECTORS' MEETING**
Date: **19 March 2012**

Subject:	Review against position of Clinical Ambulance Quality Indicators (AQIs)
Report by:	Dr James Gray, Medical Director

Purpose of Report

Concern was expressed at the January Trust Board meeting regarding the position of the clinical AQIs. This paper seeks to provide assurance as to the current position and actions taken to deliver continued improvement.

The paper demonstrates that the Trust has made considerable improvements in the areas of Stroke and STEMI care and is in a good place with respect to cardiac arrest and re-contact rates of patients following telephone assessment has been resolved and was due to reporting challenges.

Implications:

Quality (including Patient Safety, Staff Safety, Dignity and Patient Experience) • The AQIs are a key measure of quality
Human Resources including Equality • N/A
Legal • N/A
Policy • N/A
Financial (including any funding requirements) • N/A
Media/Communications • The AQIs have the ability to have an impact on our reputation externally

Details of any identified risk(s):	**Risk Assessment**		
	Consequence (A)	**Likelihood** (B)	**Score** (A x B)
Failure to improve in these areas would be both a reputational risk and a potential patient safety risk.	**4**	**3**	**12**
Details of mitigation of identified risk(s):	Described within the paper		
This paper links to the following Trust Strategies:	Clinical Strategy; Quality Strategy;		
This paper links to the following Strategic Objectives:	Delivering excellent patient focussed services Delivering consistent high quality services		

Recommendation(s)

That the Trust Board accepts this paper as assurance of the position of the Trust against the Clinical Ambulance Quality Indicators.

Management of Item *(delete tick boxes as appropriate)*	PMO: Level 1 Level 2	Function ☑

East Midlands Ambulance Service NHS
NHS Trust

Review of position against Clinical AQI's

At the January formal board specific concern was raised regarding the position of EMAS against the clinical AQI's specifically:

- **STEMI Care** - The percentage of patients who have suffered an ST-elevation myocardial infarction (STEMI) – a type of heart attack - and who have received the correct treatment (appropriate care bundle) in line with ambulance guidelines.
- **Stroke Care** - The percentage of suspected stroke patients who were assessed face to face and who received the correct treatment (appropriate care bundle) in line with ambulance guidelines.
- **ROSC** - The total number of patients who having had suffered a cardiac arrest and stopped breathing have then been recorded as having had a return of spontaneous circulation (a pulse/heartbeat) at the time of their arrival at hospital.
- **Cardiac – STD** - The overall percentage of patients who having suffered a cardiac arrest and stopped breathing were successfully resuscitated and survived to be discharged from hospital.
- **Resolved by Telephone** - The proportion of 999 calls that have been resolved by providing telephone advice and no ambulance response.
- **Re-contact 24hrs (Telephone)** - The number of patients who have re-contacted the ambulance trust within 24 hours of them having called 999 and been offered clinical advice over the phone.

Based upon the data received in the January Board report there was concern that, for these areas, the Trust appeared to be poorly performing.

Data Issues

The Clinical indicator reporting lags significantly behind the others and the data currently reported is a year to date figure up to and including August 2011, this means significant improvement since then are not reflected in the current data. It is for this reason the care bundles and ROSC are included in the IBR from our more up to date data.

Currently the AQIs are in development format and so there is variation in reporting between services with some trusts giving complete figures for each area with others giving a sample. Currently EMAS gives samples from ECS for Stroke and STEMI and complete data for cardiac arrest. EMAS will move to complete reporting of these indicators from March 2012.

The month to date figure comparison will always be lowest for EMAS compared to other services during this year due to the low baseline and cumulative effect.

With all care bundles there is a cumulative effect due to them being multifactorial e.g. if the bundle has 3 elements each can be at 95% but if it is a "different" 5% for each element the care bundle will be 85%. This is why the bundle is a better indicator of quality.

STEMI/Stroke

STEMI Current Position (Dec 11 data) – STEMI care bundle 74.6%

The main figure which lowers this figure is the delivery of analgesia which is not going to be at 100% due to not all patients requiring it. The DOCC group has sought advice on thresholds however none have been clearly defined by cardiology experts. Advice has been given to staff on this. The other primary area of concern is the recording of 2 pain scores which was at 91% in November. This appears to be primarily a recording issue.

A slight drop from 79.6% for the care bundle in November was seen due to a slight decrease in patients recorded as having analgesia given. It is worth noting that the CQC set 75% as the target for the ambulance service QRP.

Stroke Current Position (Dec 11 data) – Stroke care bundle 96.0%

Specifically on Stroke there was noted to be a problem with the way a complete FAST test was being entered for data leading to an artificially low position. This was rectified in June 2011 and the clear step change can be noted to above 90% at this point. It is also worth noting that our figure for September 2011 was 97% with a slight drop to November due to a drop in Blood sugar recording in suspected stroke patients from 97.5 to 94.4%

Large amounts of work have been undertaken on the Clinical Performance Indicators to attempt to improve the results which have led to marked improvement across all areas.

EMAS STEMI

Annotation Ref	Date	Annotation on chart
R 1	Jul 10	Publicity campaign for project commences
R 2	5 Oct 10	First STEMI focus group held with follow up sessions and further focus groups planned.
R 3	15 Nov 10	2nd STEMI focus group
R 4	3 Jan 11	Educational posters in stations
R 5	1 March 11	CPI E-Bulletins introduced, STEMI aide memoir distributed to Notts Stations Trial of aide memoir and new pain scoring tool commenced in Hucknall, Beechdale, Worksop, Wilford, Retford, West Bridgeford, Stapleford, Kings Mill
R 6	23 May 11	Individualised feed back on care bundle completion sent to Clinical Quality Manager in intervention division
R 7	13 Jun 11	CPI check list distributed to Clinical Quality Managers Aide Memoirs distributed to all stations in Notts
R 8	29 Jun 11	Quality in Action Seminar held
R 9	27 Sep 11	Clinical bulletin distributed advising completion of care bundles are mandatory
R 10	20 Oct 11	Change over to ePRF R5a commenced Small CPI prompt cards issued to Notts staff
R 11	2 Nov 11	Pain Management Clinical bulletin distributed

EMAS Stroke

Annotation Ref	Date	Annotation on chart
R 1	Jul 10	Publicity campaign for project commences
R 2	25 Oct 10	Stroke workshops commence:
R 3	3 Jan 11	Educational posters in stations
R 4	March 11	CPI E-Bulletins introduced
R 5	31 May 11	Individualised feed back on care bundle completion sent to Clinical Quality Manager in intervention division
R 6	13 Jun 11	Stroke posters and aide memoirs distributed to intervention division, CPI checklist distributed to Clinical Quality Mangers along with stroke 'achieved and failed' control charts sent to CQMs
R 7	29 Jun 11	Quality in action seminar held
R 8	27 Sep 11	Clinical bulletin distributed advising completion of care bundles are mandatory
R 9	20 Oct 11	Change over to ePRF R5a commenced Small CPI prompt cards issued to Notts staff

In addition the final part of this is the placing of check sheets for the CPIs on each vehicle as a clear visual prompt for staff. The use of checklists has been associated with considerable improvement in areas such as hospital theatres.

ROSC/Cardiac

ROSC and Cardiac survival remains difficult to both quantify and understand with significant differences between services noted particularly at a national level. In order to better understand the variation consideration should be given to the Utstein comparator group figures – these put EMAS in the middle of the pack for outcomes.

The Utstein comparator group are Cardiac arrest cases that meet specific criteria for reporting namely cardiac arrest of presumed cardiac origin, where the arrest was bystander witnessed and the initial rhythm was ventricular fibrillation (VF) or ventricular tachycardia (VT). This group represent the type of cardiac arrest that would be expected to be most likely to survive and thus provide a better comparator of performance.

It should also be noted that the Cardiac outcome will have a considerable element which is hospital dependant and it is very difficult to breakdown which part of the pathway leads to the overall rate of discharge.

For further information on this there is a useful article in the Emergency medicine Journal written by Professor Matthew Cooke the Emergency Care Lead for DH which I can supply to board members on request. There is now a plan to have a National Cardiac Arrest registry hosted by the Resuscitation Council and this will hopefully further inform variation cause linked to issues such as demography, comorbidity etc.

Plans to try and Improve ROSC rates:

1. Introduction of the I-Gel Supraglottic Airway – allows rapid airway control particularly for the solo responder
2. Discussion Nationally on potential of moving to a “stay on scene to Return of Circulation or Life Extinct” but a research project would be needed for this. Evidence demonstrates poor CPR in moving ambulances and during transfer to a vehicle

All of our staff have appropriate regular reassessments of their Advanced Life Support Skills to ensure their technique is appropriate which is known to be a key determinant in survival.

Calls Resolved by Telephone/Recontact 24hrs (Telephone)

These Quality indicators look at the number of people whose 999 call is resolved by telephone and then the proportion of these who re-contact the service within 24hrs. The main issue with this has been a data recording issue.

When the CQI database was constructed in April 2011 it was based on the issued guidance. However, in July of last year, a decision was made by NIAG (National Ambulance Information Group) to remove HCP (Healthcare Practitioner calls) from the calculations; these calls are to book transport 999 or Urgent’s. The EMAS Business Intelligence Unit then made the required changes to the our database SQL Query to ensure the CQI Dashboard launch was achieved. Unfortunately the change caused additional problems in the data calculator which removed more calls from this area and lowered our calls resolved figure.

Additionally this removed a large number of calls from our denominator for the calculation of re-contact rate thus pushing up our figure for this area again and making us an outlier when compared to other Trusts. This has now been resolved and will be reflected in December’s data – the difference is illustrated below (line 7 KA34 is the denominator):

The table below highlights the change which took place in regards to the data submission for December 2011.

Revised				Previous			
Month	**Re-contact with 24 hours**	**Line 7 KA34**	**%**	**Month**	**Re-contact with 24 hours**	**Line 7 KA34**	**%**
December	**95**	**2854**	**3.33%**	December	95	898	10.58%

The above change now puts our figures in line with other Trusts. Given the variation in figures it is likely that there are additional reporting differences between services and this will require further work between providers to understand and attain consistency prior to the next financial year.

It is worth noting that the DoH has confirmed that if we wish we can resubmit our data for period April 2011 to Nov 2011. This is currently being considered.

Dr James Gray

20 February 2012