



London Ambulance Service **NHS**  
NHS Trust

# Clinical Audit Annual Report 2012-13

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## **For further Information**

All documents and reports referred to in this report are available on request from the Clinical Audit & Research Administrator on 0207 783 2504 or from [CARU.enquiries@lond-amb.nhs.uk](mailto:CARU.enquiries@lond-amb.nhs.uk).

## **1.0 Introduction**

Clinical audit is a quality improvement tool which aims to evaluate clinical practice against evidenced best practice. Clinical audit is used not only for quality improvement but also to provide assurance to the trust board, commissioners and public regarding the high standard of care provided by the London Ambulance Service NHS Trust (LAS).

Clinical audit provides a systematic approach to the LAS's quality improvement agenda, aiming for sustained improvement in clinical care, addressing risks and providing assurance against these risks and complaints. The results from clinical audit projects are reported frequently to the Trust Board, form part of the Quality Accounts, and are a necessary part of Care Quality Commission registration and compliance with NHS Litigation Authority standards.

At the beginning of each year, the LAS sets a clinical audit programme which is developed to reflect national and local priorities as well as the Trust's strategic interests and concerns.

During this financial year (2012-13) the LAS completed a number of clinical audit projects, as well as continually auditing the areas of cardiac arrest, acute coronary syndromes, stroke, major trauma, difficulty in breathing, glycaemic emergencies, mental health, patients left at home (non-conveyed) and general documentation.

Most clinical audit in the LAS is undertaken by the Clinical Audit and Research Unit (CARU). However, under the Standards of Proficiency, all staff registered by the Health Care Professionals Council (HCPC) must demonstrate that they participate in audit and are able to review their own practice. The LAS Clinical Performance Indicators ensure that every member of staff has the opportunity to reflect on the care they have provided and consider their own areas for improvement. CARU also encourages staff to collaborate in clinical audit and have this year supported several different members of staff – both frontline and from the Emergency Operations Centre (EOC) - to undertake clinical audit projects, providing training and guidance when necessary. The LAS also work collaboratively with other ambulance services and NHS Trusts in London to ensure the quality of care provided to patients nationwide is of a high standard.

This year clinical audit has led to substantial changes to practice in the LAS, including policy and training reviews, and the introduction of continual monitoring and feedback of the care provided to patients with diagnosed psychiatric problems. Evidence from clinical audit projects has also contributed to the decision to purchase oxygen saturation monitors for every ambulance across the LAS.

In addition to promoting clinical audit internally, CARU have also promoted our clinical audit and quality improvement achievements at external national and international conferences. Through this promotion, the LAS's Ambulance Service Cardiovascular Quality Initiative (ASCQI) project was recognised and won an award.

This document aims to summarise the LAS's clinical audit accomplishments in 2012-13.

## **2.0 Clinical Audit Projects**

In 2012-13, the LAS completed ten clinical audit projects as summarised below. The recommendations and actions developed as a result of these projects were approved by the LAS Clinical Audit & Research Steering Group (CARSG) and the findings communicated to staff and to key stakeholders as appropriate.

### **2.1 Mental Health (April 2012)**

Every year a large number of patients present to the LAS with a mental health disorder. This clinical audit of 169 patients demonstrated that our staff provide a high level of care to patients with a mental health disorder by obtaining the patient's medical and psychiatric history and assessing their condition, behaviour and ability to communicate. However, staff do not routinely assess the patient's capacity to refuse a course of action or treatment, or consider safeguarding. Whether or not the patient had a current psychiatric nurse or Approved Social Worker was also poorly documented.

In response to these findings, the LAS Mental Health training packages were reviewed to ensure they include indicators for safeguarding referrals and use of the capacity tool. The patient report form (PRF) was also updated to include a box that will prompt staff to record the name of the patient's psychiatric nurse or approved social worker.

To ensure staff are aware of the importance of using the capacity tool and undertaking safeguarding referrals, posters were distributed to all ambulance stations and an article was published in the LAS Clinical Update. A new Mental Health Clinical Performance Indicator (CPI) was also introduced in April 2012 to ensure continual monitoring of the care provided to patients with a diagnosed mental health disorder.

This work was showcased externally as a poster presentation at the 999 EMS Research Forum in Cardiff during February 2013.

### **2.2 Paediatric pain re-audit (April 2012)**

A clinical audit conducted in 2006, which focussed on pain management delivered to paediatric patients with a suspected fracture, identified a need for improvement in both the assessment of pain and the administration of analgesia. This re-audit of 214 patients found that following the introduction of a child friendly pain assessment tool (which was a direct action of the original audit), there were substantial improvements in the proportion of children who had a pain assessment recorded and received analgesia. There is still room for further improvement and the use of immobilisation techniques remains an area of concern.

As a result of the re-audit, a review was undertaken of paediatric immobilisation equipment and training; and paediatric pain management was specifically incorporated into the LAS pain training package. The LAS also reviewed the

quantities of Calpol available for use by staff, ensuring easier administration of an appropriate dose to older children. The key findings from the clinical audit were communicated to staff through posters at ambulance stations and an article in the LAS Clinical Update.

An abstract of the findings of this project was accepted for showcasing as a poster presentation at the International Forum on Quality & Safety in Healthcare in April 2013.

### **2.3 Assessment of paediatric patients with pyrexia (May 2012)**

Following the 'under ones left at home' clinical audit (2010), the Clinical and Quality Directorate released a bulletin outlining the procedures for staff attending all paediatric patients who do not need further assessment or treatment at hospital. This bulletin prompted a clinical audit of 145 paediatric patients aged two to eight years who were not conveyed to hospital, specifically focussing on pyrexia and the advice given to parents/carers.

The findings of this clinical audit showed a first set of observations were well documented, including reports of the patient's medical history. Staff also considered administering anti-pyretic drugs for the majority of patients and gave advice to seek medical help if their condition deteriorated. However, following intervention, a second set of observations (twenty minutes after the first set) were less well documented and it was not always clear whether staff considered the patient's observations and medical history when deciding whether to convey or refer the patient.

The Clinical and Quality Directorate conducted a more detailed clinical review of PRFs where the child's medical history indicated conveyance to hospital and where necessary provided feedback directly to staff. The LAS paediatric training package was also reviewed to emphasise the clinical risk of not appropriately undertaking at least two sets of observations and not referring paediatric patients left at home directly to their GP. A poster was sent to every ambulance station communicating the findings and recommendations of this clinical audit and an article was published in the LAS Clinical Update outlining best practice for this patient group.

### **2.4 Paediatric respiratory assessment (June 2012)**

The LAS attend a large number of patients under the age of three years with difficulty in breathing. This clinical audit of 253 PRFs examined the respiratory assessments undertaken for these patients with a potentially life threatening condition. Findings showed that many patients did not have two oxygen saturation levels recorded and reasons for this were often due to equipment not being available. Most patients did have their chest listened to (auscultated) and a respiratory rate recorded, although there remains room for improvement.

As a result of these findings and other related work within the Service, the LAS purchased approximately 500 portable oxygen saturation monitors with both adult and paediatric probes to alleviate concerns regarding availability of this equipment.

A poster was sent to all ambulance stations to inform staff of the findings of this clinical audit and an article was published in the LAS Clinical Update emphasising the importance of undertaking these assessments. The LAS paediatric training packages were also reviewed to ensure respiratory assessments are included in core training.

## **2.5 Sudden Unexpected Death in Infants, Children and Adolescents (SUDICA) (July 2012)**

In 2009 the LAS released a bulletin outlining the appropriate management of SUDICA, encompassing the Joint Royal Colleges Ambulance Liaison Committee (JRCALC) and London Safeguarding Children Child Death Review guidance. Therefore a clinical audit of the care provided to 106 infants, children and adolescents was conducted to assess LAS compliance to the SUDICA bulletin.

The clinical audit found all eligible patients were resuscitated appropriately and all infants were conveyed to the nearest emergency department (ED) for examination by a paediatrician, in accordance with the LAS agreement with the London Coroners. When the patient was handed over at the ED, the name of the paediatrician receiving the patient was often not documented; therefore posters were displayed on all ambulance stations to make staff aware of the importance of recording the receiving clinician's name on the PRF. For patients not conveyed to the ED, the shoulder number of the police officer on scene was documented for all patients. A safeguarding form was completed for all patients, however for many this could not be retrieved from the paper records, demonstrating inconsistency between documentation and record keeping. A trial is underway to allow staff to telephone safeguarding referrals to the Emergency Bed Service and scan the safeguarding form to allow them to be stored electronically. Without these forms the Local Authority may not be aware of the LAS's involvement with the patient and this could result in the LAS not being included in any investigation into the child's death. The child safeguarding policy was also reviewed to ensure it adequately reflected the bulletin and a memory aid was produced to assist staff with documentation.

## **2.6 Alcohol intoxication (August 2012)**

The LAS attends a large number of alcohol related calls every year, the majority of which involve patients who are acutely intoxicated through over-consumption. This clinical audit of 200 cases of alcohol intoxication showed many patients refused to communicate with or allow staff to undertake observations. Almost all of the patients who allowed observations to be undertaken received an assessment of their vital signs. For patients with a reduced level of consciousness, most also had their blood sugar level measured. The main reason for staff not undertaking a blood sugar level assessment was missing equipment.

Since commencement of this clinical audit, diagnostic bags have been allocated to every ambulance vehicle which should increase the number of patients who have their blood sugar level measured. During the re-audit we will assess whether the

addition of these diagnostic bags has improved the documentation of blood sugar level measurements.

A history of the presenting complaint for this patient group was poorly recorded; therefore a poster was sent to every ambulance station to remind staff of the importance of documenting the patient's history and presenting complaint.

## **2.7 Appropriate care pathway use (September 2012)**

For a large number of patients conveyance to an ED is not always appropriate nor in the patients' best interest. In order to ensure patients are conveyed to the most appropriate destination, the LAS is encouraging staff to take patients who do not require hospital treatment or assessment, but still require further care, to Appropriate Care Pathways (ACPs). The use of ACPs varies widely across London with anecdotal evidence showing more patients are conveyed to ACPs co-located with hospital EDs than those that are not. It is therefore important to understand whether patients are being conveyed to the appropriate destination and whether staff documentation supports conveyance decisions.

This clinical audit of 259 patients conveyed to Kingston ED during the opening hours of Queen Mary's Hospital Minor Injuries Unit (a nearby ACP) showed that all patients who were taken to the ED were conveyed appropriately. Most patients' clinical condition was not appropriate for treatment at the ACP, however there were a small number of patients who could have been treated at the ACP but were closer to the ED. Where there is a distance between an ED and an ACP decisions have to be made as to the best unit for the patient to be seen and treated in a timely fashion. An article was published in the LAS Clinical Update to remind staff that ACPs should still be considered when they are further away from the patient's location than the ED if conveying the patient to the ACP will not prolong the journey time greatly.

## **2.8 Immediate inter-hospital transfers (November 2012)**

In addition to responding to 999 calls from members of the public in an emergency situation, the LAS transfers patients between hospitals and other healthcare locations. The service provided to patients during an immediate inter-hospital transfer (when a patient is being transferred for life or limb saving treatment) was assessed. This retrospective clinical audit of 192 calls showed wide variation in the frequency of questions asked by Emergency Medical Dispatchers during the call. Despite this variation, the majority of calls were still correctly categorised as an immediate inter-hospital transfer and an ambulance crew with the appropriate skill level was sent within one hour of the call, meeting the time target. To ensure that all required information is sourced during the initial call the LAS will work with other UK ambulance services to review suitability of the questions currently used to assess inter-hospital transfer calls. The LAS Clinical Support Desk (CSD) provided advice for more than half of these calls, however there was no documentation on the CSD log of the specific advice provided for the majority of cases. The CSD will be reminded to record all advice given and will review and reissue the inter-hospital



transfers flowchart to hospital staff to remind them of the LAS criteria for inter-hospital transfers and their responsibility to escort the patient.

Only half of the patients in the clinical audit had two full sets of observations documented; an article was published in the LAS Clinical Update and poster sent to every ambulance station to ensure staff are aware of the importance of undertaking and documenting two full sets of observations for hospital transfer patients.

## **2.9 Transient loss of consciousness (March 2013)**

In August 2010, the National Institute for Clinical Excellence (NICE) published guidance on the management of Transient Loss of Consciousness (T-LOC). A clinical audit of 94 patients in the northeast area of London was conducted to assess compliance with this guideline. We found excellent documentation of history and assessment including respiratory rate, blood pressure and the Glasgow Coma Scale. However, history taking and assessments that are specific to patients experiencing T-LOC, including auscultation of heart sounds and family history, were poorly documented. A prompt card is being developed to remind staff of the importance of T-LOC specific history taking and assessment and a T-LOC study day will be run to educate staff in the pathology and relevance of the elements of patient history and assessment specific to T-LOC.

ECG completion and recognition also requires improvement as only three quarters of patients had an ECG undertaken. Of those patients for whom an ECG was available, more than half had an abnormality on their ECG that was not identified by the attending staff. The LAS will validate a mnemonic to assist staff to recognise ECG findings specific to T-LOC and amend the PRF to prompt staff to explain 'other abnormality' on the patient record.

Most patients were conveyed to hospital. However for those left at home, the majority were only advised to see their GP and were not directly referred (as recommended in the NICE guidance). A poster was sent to ambulance stations and an LAS Clinical Update article was published to remind staff of the importance of direct referrals for this group of patients.

## **2.10 Obstetrics emergencies (March 2013)**

Obstetrics emergencies are rare, and it is therefore important that the care provided in these difficult situations is assessed to ensure it is appropriate. This clinical audit of 162 women and babies focussed on the care provided when the baby was delivered in the presence of the ambulance crew, including those who required resuscitation, and women with a postpartum haemorrhage.

When an LAS crew delivered a baby most crews appropriately requested a second vehicle and a midwife, although the midwife did not always attend. The time of the birth was well documented, although the time that the woman delivered the placenta was not always recorded. A full assessment of the mother following the birth was

often undertaken, however only a partial assessment for the baby was documented for most patients.

The clinical audit findings were shared with the London Heads of Midwifery and Local Supervising Authority (LSA) Midwifery Officer to demonstrate the frequency of midwife non-attendance when they were requested.

When the LAS were called to attend a woman presenting with a postpartum haemorrhage, documentation of an estimated blood loss volume was very good and all women received an assessment for signs of shock. Treatment however was not as well recorded; syntometrine and intravenous (IV) fluids were indicated for some women who did not receive them.

Many elements of good care were identified during neonatal resuscitation with airway management, chest compressions and a transfer with a blue call pre-alert provided for most, if not all, newborns that required resuscitation. However, only half of the babies were dried, wrapped and warmed, and a full initial assessment was poorly recorded.

An LAS Clinical Update article was published and a poster was sent to every ambulance station to remind staff of the procedure during an obstetrics emergency. This will be supplemented by an aide memoir listing the areas for improvement identified by this clinical audit. LAS training slides were reviewed to ensure they cover all of the elements in the clinical audit and a series of maternity update teaching sessions are being delivered to staff placing particular emphasis on the identified areas for improvement.

### **3.0 Other Clinical Audit Activity**

#### **3.1 Continuous clinical quality monitoring**

In 2012-13 the LAS continued to collate data for every LAS patient who has suffered a cardiac arrest, ST elevation myocardial infarction (STEMI - a type of heart attack), stroke or a major trauma incident. The two cardiac databases have been established for more than ten years and provide a wealth of data that can be used for both clinical audit and research purposes. Monitoring of the provision of stroke and major trauma care has now also been in place for nearly three years.

Using this continuous quality monitoring the LAS continues to submit data for the Department of Health Ambulance Clinical Quality Indicators (DH ACQIs) on the outcomes from cardiac arrest, acute STEMI and stroke allowing for comparison of care provision between ambulance services in England. The data is also used to produce monthly or quarterly reports for use by clinical staff and operational management teams.

The DH ACQIs use these data for national comparative purposes. Historically when reporting data internally, the LAS have awarded exceptions for missing or faulty equipment however this was not accepted nationally and resulted in different figures being reported locally and nationally. In 2012-13, LAS internal reporting was

amended to allow for consistent reporting. This change enables us to further highlight the issues around missing and faulty equipment, as identified in much of our clinical audit work, and to ensure greater responsibility is taken for the huge amounts of equipment that goes missing.

Further information regarding the continuous clinical quality monitoring of cardiac arrest, STEMI and stroke data are provided in individual annual reports for each area.

### **3.2 Clinical Performance Indicators (CPIs)**

CPIs are used within the LAS to monitor general documentation and the standard of care delivered by crews in the areas of: cardiac arrest, acute coronary syndromes (ACS), stroke, difficulty in breathing, glycaemic emergencies and patients left at home (non-conveyed). In April 2012 the LAS introduced a new CPI which assesses the care provided to patients with diagnosed psychiatric problems. The CPIs enable the LAS to measure the extent to which guidelines for specific clinical conditions are followed, and to provide individualised clinical feedback to staff.

In addition to the individual face to face feedback sessions provided by Team Leaders, CARU have worked with Management Information to develop the CPI pages hosted on the Business Intelligence Portal. These pages allow staff to access, in their own time, information about their individual clinical performance for each CPI and to compare their performance with that of their Complex and the LAS. Through these pages staff can also view their top five areas of clinical good practice and areas for improvement.

The LAS produces monthly reports that are used by clinical staff and operational management teams to evaluate completion (the number of PRFs audited), compliance (the level of clinical care provided to patients) and feedback (the number of face-to-face clinical feedback sessions provided to staff). To provide assurance regarding consistency of CPI auditing, a quality assurance process was reintroduced in 2012 designed to identify any gaps in practice and provide an additional support mechanism for Team Leaders undertaking audits. The quality assurance process, undertaken by Clinical Tutors and Training Officers, allows for face to face feedback provision much like that which is provided to staff.

As well as auditing the care provided to patients by the LAS, this year we started to audit, via CPIs, the care provided by the voluntary and private ambulance services used by the LAS. This process is to ensure that whenever a patient calls 999, regardless of the type of resource sent, the LAS can be assured of a high level of care is provided.

#### **3.2.1 Completion**

After an initial dip in the percentage of CPI audits completed by Team Leaders at the beginning of the financial year, the completion rate has been maintained at over 95%

since September. In January 99% of audits were completed; the highest completion rate ever achieved by the LAS.

A high standard of general PRF documentation has been maintained over time. Therefore, to allow auditors to focus their time across all of the CPIs, the general documentation CPI (formerly known as the 1 in 20 CPI as it allowed for the assessment of 5% of all forms completed) was amended to audit 2.5% of PRFs completed by staff and is now known as the 1 in 40 CPI.

### 3.2.2 Compliance

CPI audits show that the LAS has maintained a high level of patient care for the existing CPIs: Acute Coronary Syndrome (ACS), Cardiac Arrest, Difficulty in Breathing, Glycaemic Emergencies, Stroke, Non-Conveyed and General Documentation. The graph below demonstrates the improvements in care provided to patients over the last seven years. It also shows the achievement of 95% compliance and above for each CPI in April 2013.

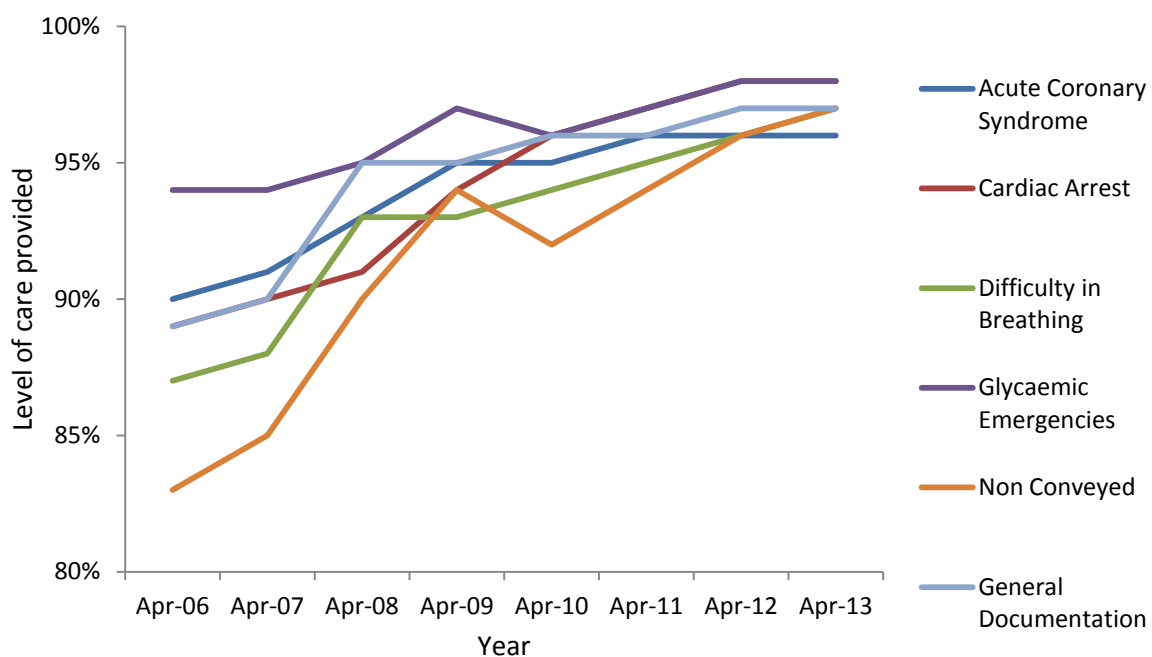


Figure 1: CPI compliance rates from April 2006 to 2013

The new Mental Health CPI launched in April 2012 shows the care provided to patients with a diagnosed psychiatric problem has continued to improve although it remains an area in need of attention, specifically the consideration of safeguarding referrals.

### 3.2.3 Feedback

Team Leaders are expected to meet with staff to discuss their clinical performance and provide CPI feedback twice a year, ensuring recognition is provided to staff who are performing well and discuss any areas for improvement. At the end of 2012-13,

14 of the 26 complexes as well as the Hazardous Area Response Team (HART) exceeded their expected feedback sessions. The LAS as a whole also achieved the required number of face-to-face feedback sessions.

### **3.3 National Clinical Performance Indicators (CPIs)**

The National CPIs measure and compare the care provided to patients by the twelve ambulance services in England. National CPI data is used by the Care Quality Commission (CQC) to assess whether the LAS have met their Quality and Risk Profiling targets.

The cycle nine report (which summarises data collected from June – September 2012) shows the LAS met five of the six targets set by the CQC (see appendix one).

Due to the introduction of the DH ACQIs for patients who have suffered from a STEMI or a Stroke, these National CPIs were removed and were replaced with those assessing the care provided to patients with a suspected fracture below the knee on one leg and the care provided to patients who have had a febrile convulsion.

Starting with the National CPI data, CARU were able to further develop the LAS quality improvement programme. Areas for improvement were identified and initiatives investigated to try and improve compliance to specific aspects of care. CARU facilitated a focus group with staff to help the LAS understand the reasons peak flow may not be recorded and to discuss ideas for improvement, specifically addressing staff concerns with equipment and their understanding of the importance of undertaking a peak flow. All staff suggestions are currently being pursued and an article was published in the LAS Clinical Update highlighting the importance of documenting a peak flow reading for patients treated for asthma.

### **3.4 Ambulance Service Cardiovascular Quality Initiative (ASCQI)**

The ASCQI project aimed to improve the delivery of pre-hospital care for cardiovascular disease. The secondary aim of the project was to increase the diffusion of quality improvement methods to staff.

External funding and data collection for the project finished at the end of March 2012. However CARU continued to fund the ASCQI Quality Improvement Fellow for one day a week for a further six months to fully develop the remaining quality improvement initiatives, and to ensure successful initiatives were spread across London. After the successful creation and distribution of the pain assessment tool, 6,000 copies of the heart attack flow chart were printed and distributed to staff; and filming for the stroke training package for staff is now complete and editing is underway. The direct to CT trial (a collaborative service development with Northwick Park Hospital) has been extended to allow for more patients to be recruited. The trial aims to speed up the assessment and therefore treatment for FAST positive patients by taking them direct from the ambulance to the CT scanner, thus avoiding potential delays going via the ED. The trial should increase the percentage of

patients thrombolysed within 30 minutes of arrival at the Hyper Acute Stroke Unit (HASU).

The LAS ASCQI project was shortlisted for a Healthcare Quality Improvement Partnership (HQIP) clinical audit award for local improvement following national clinical audit participation. As a result, the LAS ASCQI initiatives and the impacts of the initiatives were presented at the HQIP Clinical Audit for Improvement Conference in February 2013. The LAS was commended for being the first ambulance service to present at this conference.

The LAS ASCQI project also received the award for Innovation from The Network (a forum for healthcare professionals to share quality improvement work), who recognised the project as a great example of frontline staff improving the quality of care we give to patients. This is the first time an ambulance service has won this award and as a result the project was also published in The Network Casebook, showcasing quality improvement from across the country.

### **3.5 Myocardial Ischaemia National Audit Project (MINAP)**

The LAS also contribute to MINAP. This Royal College of Physicians led project allows ambulance services and hospitals to improve the care provided to all patients with acute coronary syndrome. The LAS supply ambulance response time data, and validate the pre-hospital data entered by hospitals, providing feedback on discrepancies when necessary.

## **4.0 Clinical Audit Training**

### **4.1 Module J – Clinical Audit and Research**

As registered Health Care Professionals, Paramedics must demonstrate they participate in audit and are able to reflect on and review their practice. Module J is a series of training sessions created to bridge the gap between the higher education and Institute of Health and Care Development (IHCD) Paramedics; one of the sessions developed was clinical audit and research. The clinical audit and research session combines teaching with practical group sessions and provides students with an overview of both clinical audit and research, emphasising the importance of providing evidence for best practice in patient care. As well as attending the one-day session, students are required to complete a short assignment following the session. In 2012-13, 1,004 students successfully completed the clinical audit and research assignment.

### **4.2 Team Leader Training**

During 2012-13, 102 Team Leaders, Training Officers and Paramedics participated in CPI training. The half day session introduced the concept of the CPIs, how to do CPI audits on the database, face to face feedback, reporting, quality assurance and the impact of CPIs.

### 4.3 EOC Induction

To ensure staff in EOC are also aware of the importance of clinical audit and research and that they know how to get involved, CARU also provides training as part of the EOC Induction Course. In 2012-13, CARU taught 73 new starters the concepts of clinical audit and research, including the difference between the two. Staff were provided with examples of clinical audit and research projects relevant to EOC and were encouraged to get involved and share their ideas.

### 5.0 Clinical Audit Resources

With an increasing number of staff volunteering to undertake clinical audit projects we continue to review the resources available to support them through the process. Resources available to staff include a code of practice and a clinical audit handbook; plus access to the LAS's Clinical Audit and Research Library containing books, peer-reviewed journals, internal reports and reports produced by external organisations. We also hold clinical audit advice surgeries to provide guidance to staff who wish to undertake their own clinical audit project; 20 front line members of staff and clinicians from other NHS Trusts attended a clinical audit advice surgery in 2012-13.

### 6.0 Spreading Best Practice

It is important that the findings and recommendations from clinical audit projects are communicated to staff to ensure we are constantly improving the care we provide to our patients. CARU continue to regularly submit articles for the LAS Clinical Update, which is produced quarterly and is circulated to all permanent members of staff. The Update contains information on clinical and governance issues and, in 2012-13, highlighted the clinical audit findings and recommendations from a number of different projects.

In addition in 2012-13 the high quality of clinical audit and quality improvement work undertaken in the LAS was recognised at several external conferences and promoted through oral and poster presentations (outlined below).

#### 6. 1 Conference Presentations

<b>Title:</b>	Ambulance Service Cardiovascular Quality Initiative in the London Ambulance Service
<b>Authors:</b>	J Shaw, G Jones, G Viridi, F Moore, M Whitbread, N Thomson, R Donohoe
<b>Conference:</b>	Healthcare Quality Improvement Partnership: Clinical Audit for Improvement Conference, 12 <sup>th</sup> & 13 <sup>th</sup> February 2013

<b>Title:</b>	Does current pre-hospital care for patients with a mental illness reflect best practice guidance?
<b>Authors:</b>	J Shaw, G Viridi, R Fothergill
<b>Conference:</b>	999 Emergency Medical Service Research Forum: Making an Impact Conference, 27 <sup>th</sup> February 2013
<b>Title:</b>	Improving heart attack care: A bottom up approach to improve administration of pain relief
<b>Authors:</b>	J Shaw, G Jones, G Viridi, F Moore, M Whitbread, N Thomson, R Donohoe
<b>Conference:</b>	The Network Casebook Event, 13 <sup>th</sup> March 2013
<b>Title:</b>	Development & evaluation of a London-wide policy to convey all infant patients to hospital
<b>Authors:</b>	J Shaw, G Viridi, M Edwards, R Fothergill
<b>Conference:</b>	British Medical Journal and Centre for Evidence-Based Medicine: Evidence Live 13, 25 <sup>th</sup> & 26 <sup>th</sup> March 2013

## **7.0 Directions for 2013-14**

The focus of the clinical audit work plan for is outlined below (see appendix two for the complete work plan). Clinical audit will continue to be dynamic and responsive to the needs of the Service and as such the projects undertaken may change if the need arises.

- Non-conveyed patients (including patient feedback)
- Adrenaline re-audit
- ROLE re-audit
- Joint Response Unit
- EZ IO
- Sepsis
- Diazepam
- Hydrocortisone
- Overdoses
- See and treat (including focus groups with staff)



The Service will continue to participate in a programme of national collaborative clinical audit and promote the LAS further by presenting clinical audit work at a range of international events and conferences.

In 2013-14, CARU will also continue to provide support and expertise to clinical evaluation projects and develop quality improvement initiatives ensuring the Service is constantly improving the level of care provided to our patients. CARU are committed to ensuring staff have the opportunity to participate in clinical audit and in 2013-14 will continue to provide training and support to those wishing to participate.

It is good practice in clinical audit to have an assurance process that provides evidence to the Trust Board, Commissioners and other stakeholders that the clinical audit process is robust and provides a safety net against areas of clinical risk and complaints. In 2013-14, in addition to conducting evaluations and cost analysis for each individual clinical audit project, the LAS will also introduce a new audit process. CARSG will conduct an annual review of the clinical audit working practices and the clinical audit process will be assessed for compliance to 'The Strategy, Process and Application of Clinical Audit in the London Ambulance Service'.

## **8.0 References**

Burgess, R. (2011) *NEW Principles for Best Practice in Clinical Audit*. Radcliffe Medical Press

Joint Royal Colleges Ambulance Liaison Committee Clinical Practice Guidelines for use in UK Ambulance Services (2006)

Strategy, Process and Application of Clinical Audit in the London Ambulance Service (2012)

## Appendix one: National Clinical Performance Indicators

The cycle nine National Clinical Performance Indicator (CPI) data shows continuing trends from cycle eight. The downward trend continues for each of the three indicators under the Hypoglycaemia CPI; however, due to the high standard of care when the National CPIs were introduced, the LAS continues to meet the Care Quality Commission (CQC) target for each indicator. Data for the Asthma CPI displays that the high level of respiratory rate measured was maintained and shows continued improvement of the remaining two indicators: peak expiratory flow rate and oxygen saturation (SpO<sub>2</sub>) recorded before treatment. The LAS is yet to meet the CQC target for SpO<sub>2</sub> however the continued improvement in cycle nine means the LAS are closer to meeting this target in the future.

	<b>CQC target</b>	<b>LAS compliance</b>	<b>Rank</b>	<b>Direction of travel</b>
<b>Hypoglycaemia</b>	<b>June 2012</b>			
Blood glucose level recorded prior to treatment	95%	99.7%	5 <sup>th</sup>	↓
Blood glucose level recorded after treatment	95%	96.3%	10 <sup>th</sup>	↓
Treatment recorded	95%	97.7%	12 <sup>th</sup>	↓
<b>Asthma</b>	<b>July 2012</b>			
Respiratory rate measured	95%	99.7%	4 <sup>th</sup>	-
Peak Expiratory Flow Rate (PEFR) measured before treatment	40%	78.0%	8 <sup>th</sup>	↑
Oxygen saturation (SpO <sub>2</sub> ) recorded before treatment	90%	88.3%	10 <sup>th</sup>	↑

## **Appendix two: Clinical Audit Work Programme 2013 - 2014**

### **Clinical Audit Projects**

- Non-conveyed patients (including patient feedback)
- Adrenaline re-audit
- ROLE re-audit
- Joint Response Unit
- EZ IO
- Sepsis
- Diazepam
- Hydrocortisone
- Overdoses
- See and treat (including focus groups with staff)

### **Clinical Performance Indicator Audits**

- Acute Coronary Syndrome (all Patient Report Forms)
- Cardiac Arrest (all PRFs)
- Difficulty in Breathing (alternative months: 50% of all PRFs)
- Glycaemic Emergencies (alternative months: 50% of all PRFs)
- Mental Health (all PRFs)
- Stroke (all PRFs)
- Non-conveyed (50% of all PRFs)
- General Documentation (1/40: 2.5% of all PRFs)

### **Clinical Performance Indicator Audit Activity**

- Continuous monitoring of audit completion
- Continuous monitoring of compliance to care guidelines
- Continuous monitoring of feedback provision
- Monthly training delivery
- Quarterly traffic light posters disseminated to all stations
- Bi-annual quality assurance of audits

### **Clinical Quality Monitoring**

- Cardiac Arrest (all PRFs)
- Major Trauma (all PRFs)
- ST Elevation Myocardial Infarction (STEMI: all PRFs)
- Stroke (all PRFs)

### **Routine Reporting of Audit Activity**

- Cardiac Care Pack (consisting of Cardiac Arrest and ST Elevation Myocardial Infarction Monthly Complex Reports)
- Major Trauma Care Pack (consisting of Major Trauma Quarterly Complex Reports)
- Stroke Care Pack (consisting of Stroke Monthly Complex Reports)
- Clinical Performance Indicator Monthly Report
- Ambulance Operations Manager's objectives

- Department of Health Ambulance Clinical Quality Indicators
  - Outcome from cardiac arrest – Return of Spontaneous Circulation (ROSC)
  - Outcome from cardiac arrest – Survival to discharge
  - Outcome from acute STEMI
  - Outcome from stroke

### **Annual Reporting of Audit Activity**

- Clinical Audit Annual Report
- Cardiac Arrest Annual Report
- ST Elevation Myocardial Infarction Annual Report
- Stroke Annual Report
- Strategy, Process and Application of Clinical Audit in the London Ambulance Service

### **National Clinical Audits**

- Hypoglycaemia National Clinical Performance Indicator (bi-annual data submission)
- Asthma National Clinical Performance Indicator (bi-annual data submission)
- Trauma National Clinical Performance Indicator (bi-annual data submission)
- Febrile Convulsions National Clinical Performance Indicator (bi-annual data submission)

### **Additional reporting for Meetings**

- Area Quality and Business Meetings
- Staff Officer Area Quality Reports
- Clinical Quality Safety and Effectiveness Committee
- Quality Committee
- Senior Managers Group
- Trust Board

### **Miscellaneous Activity**

- Facilitation of clinical audit – all clinical audit projects undertaken by front line staff will be registered with and receive support and guidance from the Clinical Audit & Research Unit
- Clinical Audit Database – all clinical audit projects will continue to be registered on this database, and the implementation of recommendations will continue to be monitored.
- Auditing Audit – clinical audit projects will be evaluated using the Health Services Management Centre's assessment tool and Best Practice in Clinical Audit evaluation tool.
- Cost analysis – each clinical audit will be assessed for its expenditure.