



Clinical Audit Annual Report 2014-15

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For further Information

All documents referred to in this report are available on request from the Clinical Audit & Research Administrator on 0207 783 2504 or from CARU.enquiries@londonambulance.nhs.uk.

1.0 Preface

The quality of care delivered within the NHS is an ever increasing topic of importance. All NHS Trusts need to ensure that they evidence they are doing their best for patients. Clinical audit is one of the most prominent ways the London Ambulance Service NHS Trust (LAS) is able to demonstrate the high quality of care we provide to patients across the capital and, where quality issues are identified, clinical audit can be a quick and effective method to address these.

Kaoru Ishikawa, one of the pioneers of quality improvement, emphasised the responsibility of individual to seek to improve what they do (Ishikawa, 1985; Ishikawa, 1990). This is particularly important within healthcare to ensure every patient receives the best possible care, especially in the ambulance service where many of our patients see a very limited number of our staff. In order to facilitate quality improvement, the Clinical Audit and Research Unit (CARU) have for many years encouraged staff to reflect on and improve their own clinical practices through the Clinical Performance Indicators (CPIs). The CPIs enable continuous audit of care in eight specific areas allowing for individualised face-to-face clinical feedback.

In addition to the CPIs, and other areas of continuous audit, CARU also undertake specific clinical audit projects and share learning from the findings with staff and recommend changes to practice. Over the last year these projects have looked across a spectrum of patient groups, from patients who require emergency care to those we are able to safely leave at home. We have also looked at our relationship with other emergency services and the way we deliver care to patients.

Collaboration continues to be an important factor in improving care nationally. Participation in national clinical audit via the NHS England Ambulance Quality Indicators and National CPIs demonstrate the LAS' commitment to improving care across the country. The LAS continues to promote this learning externally through publications and presentations at national conferences. CARU provide training and support not only to our own staff, but also students from academic institutions and other NHS Trusts.

This report aims to build on the 2013-14 Clinical Audit Annual Report and detail all clinical audit activity undertaken within the LAS in 2014-15.

2.0 Clinical Audit Projects

All clinical audit findings and recommendations are approved by the Clinical Audit and Research Steering Group (CARSG) prior to sharing with staff and key stakeholders, including other ambulance services. This section outlines the key findings and recommendations from projects completed in 2014-15.

2.1 Non-conveyed (April 2014)

In 2013, the LAS examined how patients who were not conveyed to hospital perceived the care they received. This clinical audit further examined if this care was appropriate, allowing us to cross reference each patient's questionnaire with their clinical record – the patient report form (PRF).

We found that most patients suitable for an enhanced telephone assessment (Hear & Treat) received a call back within the LAS target timeframe. However, for many patients this was still longer than they expected to wait. To address this, information on the external LAS website was reviewed to increase patient awareness of expected waiting times for call backs. In addition, some patients did not have trust and confidence that they were getting the best care and treatment possible. As a result, the standard operating procedure used for Hear & Treat was amended so the patient knows they are speaking to a Paramedic.

In contrast, the majority of patients who were sent an ambulance and not conveyed to hospital (See & Treat) were happy with the length of time they waited, despite most patients not receiving an ambulance within the LAS aspirational target timeframe. Appropriate advice was given to most patients. However, many patients did not have full observations recorded, clinical impressions and management plans were not documented for all patients, and documentation of capacity for patients who declined conveyance against advice was poor. A Clinical Update article was published to ensure crews are aware of the importance of recording all of these. In addition, clinical audit and CPI data for the same time period were reviewed which showed some discrepancies (confirming the need for a CPI quality assurance process). The clinical audit also found that non-conveyance codes were used inconsistently and therefore these will be reviewed to ensure it is clear which codes should be used in which circumstances.

2.2 Joint Response Unit (May 2014)

The Joint Response Unit (JRU) aims to reduce long on-scene waiting times experienced by the Metropolitan Police Service (MPS) when they attend a patient who requires assessment by the LAS. On average, JRU vehicles arrived on scene 10 minutes and 10 seconds following dispatch, and JRU clinicians spent 35 minutes on-scene. Only a very small number of patients would have been suitable for Hear & Treat and therefore dispatch of a JRU vehicle was appropriate for the majority of patients. Several aspects of care were well documented; however, numerous JRU activations could not be found on the call-log and paperwork was not available for even more patients. Where paperwork was available, a handover PRF was often inappropriately completed for patients who were not conveyed. JRU staff have been reminded to complete a full PRF for all patients not handed over to another LAS clinician and the JRU standard operating procedure was amended to reiterate current LAS guidance.

Many patients in the clinical audit did not have full observations recorded. For patients who were not conveyed to hospital, an insufficient number had a record that they were left with a responsible adult and/or received a copy of their PRF containing

advice as to what they should do if their condition did not improve or got worse. The capacity tool was also not used for more than half of the patients whose capacity was in doubt. Finally, a clinical handover was not recorded for lots of patients who were conveyed. To address these issues directly, staff will receive on-going feedback when the JRU is included in the CPIs.

2.3 Police Attendance (May 2014)

An inquest into the death of a patient in a police custody suite determined that the patient's death (caused by opiate and alcohol intoxication) was contributed to by neglect that included two gross failures by LAS. These failures were: the patient should have been taken to hospital, and the LAS crew did not take the opportunity to carry out a basic assessment at the custody suite. It was acknowledged, however, that this may not have been easy to achieve given the aggressive behaviour displayed by the patient. To address the Coroner's recommendations from the inquest and determine how regularly similar circumstances arise, this clinical audit assessed the level of clinical risk associated with calls that both the LAS and the MPS attend.

The clinical audit identified several areas of good practice; however, only one of the cases of aggression and/or violence towards staff was reported. Not all patients had full observations recorded, including many patients who appeared to have consumed alcohol that did not have a blood glucose measurement recorded. A Clinical Update article was published encouraging staff to report all incidences of aggression and violence and to highlight the importance of recognising that patients who have low blood glucose levels may appear to have drunk alcohol.

Several patients who refused LAS advice did not have their capacity assessed. Therefore capacity has been assigned a higher priority for CPI feedback. Worryingly, we found PRFs that were similar to the incident described above and most patients who were taken into police custody were not handed over to another clinician, although it was recognised this is often not possible. A safeguarding referral was only made for half of the vulnerable patients and therefore this is now highlighted monthly as an area in need of improvement in the CPI report. Very few paediatric patients had a record of their school or nursery so the legal requirement to record this has been reiterated in the Clinical Update. These findings have been shared with the Coroner and the MPS.

2.4 EZ-IO (July 2014)

In 2010 the LAS introduced the EZ-IO® Intraosseous Infusion System. EZ-IO involves the placement of a needle into the patient's bone marrow and is an effective alternative route to failed or delayed peripheral intravenous (IV) access when a patient is moribund. EZ-IO should be used as the primary route for vascular access in paediatric patients in cardiac arrest and only following two peripheral IV sites and EJV in adult patients.

The clinical audit found that all paediatric patients in cardiac arrest appropriately received EZ-IO as the primary route. The time the EZ-IO was placed was well recorded, as was the name of the Paramedic who placed it. A saline flush was recorded for most patients and almost all EZ-IO catheters were appropriately used for drugs or fluid administration. There were no cases of failed EZ-IO insertion recorded. Crews were congratulated via posters on the areas of good practice above.

Proportionately few PRFs showed two peripheral IV sites attempted, followed by EJV before EZ-IO was attempted. The current 2xIV→EJV→EZ-IO protocol has been reviewed and is no longer mandatory. The protocol used for the majority of patients in this clinical audit was considered appropriate following clinical review. Needle size documentation was poor and the site of insertion was recorded for a relatively small number of patients. A Clinical Update article was published to remind crews to encourage full documentation of procedure, and findings have been summarised in the Clinical Routine Information Bulletin (RIB). A reminder of needle sizes and IO sites will be produced for the Paramedic drug bag and the cannulation section on the PRF will be amended to improve documentation of IV/IO attempts and placement site.

2.5 Re-contact (August 2014)

A national clinical audit examined the non-conveyance and subsequent re-contact of patients. This report found one LAS patient had, on re-contact, died unexpectedly. This subsequent recontact audit examined the same patient group over a longer period of time and found no further cases of unexpected death. This clinical audit supported the national findings that the LAS has lower non-conveyance and lower re-contact rates than the national average.

Most patients in this clinical audit were deemed to be at minor risk of deterioration. Most observations were well documented and clinical decisions, including conveyance, were appropriate for almost every patient. However, not all patients received a full assessment, with pain assessment being the most poorly documented. A Clinical Update article was published to emphasise the importance of recording pain scores and acting on them. The most common presenting complaint was falls, with half of the patients re-contacting the LAS for the same reason. Falls PRFs were assessed for compliance to the Falls Decision Tree and findings shared with GPs who receive falls referrals. We will also be undertaking a continuous review of severe and unexpected death re-contact cases in 2015-16 to review deterioration and mortality.

2.6 Sepsis (February 2015)

Ambulance staff may be the first healthcare professionals to see septic patients, yet there is little training or guidance for us on sepsis. This clinical audit found that although most patients had the observations recorded that were needed to identify sepsis, only one crew acknowledged these met the systemic inflammatory response syndrome (SIRS) criteria. A 'review of systems' was conducted and clinical evidence

of an infection identified for less than half of the patients. As a result, awareness of sepsis will be raised within the organisation and a sepsis screening tool produced. Current LAS training materials will also be reviewed and prompts included on the PRF to improve documentation of sepsis.

Of the 70 patients identified by the Paramedic author as having clinical evidence of severe sepsis or septic shock, none were identified by the clinician on scene. Other sepsis recognition techniques such as end-tidal carbon dioxide monitoring will be investigated to assist with this. A very small number of these incredibly ill patients received high flow oxygen and IV fluid resuscitation, and less than half were transported to hospital with a pre-alert. The feasibility of a sepsis pathway will be explored to increase the number of patients with severe sepsis or septic shock who receive a pre-alert.

We also asked crews to answer a questionnaire about sepsis. Just over half of the clinicians had heard of both sepsis and SIRS and more than two-thirds knew the correct definition of sepsis. However, less than a quarter knew all three stages of sepsis and very few knew all of the signs and symptoms. In addition to reviewing training, we hope to contribute to future pre-hospital guidelines by sharing this report with the Association of Ambulance Chief Executives and The UK Sepsis Trust. In the LAS we will maintain the focus on sepsis care and ensure these changes have led to improvements by developing an LAS Sepsis CPI.

2.7 Elderly Fallers (March 2015)

A serious incident occurred in July 2013 whereby a crew did not obtain the drug history for a patient who was not conveyed following a fall. The patient was on warfarin and died as a result of a sub-dural haematoma. This clinical audit found that patients on anticoagulant or antiplatelet therapy who experienced head injuries were all appropriately managed. Overall, patients' medication was generally well documented; however some crews wrote 'polypharmacy' or 'medication with patient' and therefore it was not known if the patient was on anti-coagulant or anti-platelet medication. Documentation of the four assessments specified in the guidelines for patients with a suspected neck of femur fracture was poor with chest infection, dehydration and pressure sores rarely documented. Crews have been encouraged to document patients' medications and specific observations in line with fractured neck of femur guidelines via posters and the Clinical Update.

In addition, at each of the three stages of the Falls Decision Tree, some clinicians did not record whether potential flags had been considered which meant the patient may not have been conveyed or referred appropriately. Flags at stage three (advice) were the most poorly documented and only 63% of patients whose documentation indicated that a referral was actually required received one. Copies of the Falls Decision Tree with an accompanying information pack will be sent to complexes and its addition to the LAS phone app will be explored.

Patients frequently did not receive a response within the appropriate time for the category of the incident. Immobilisation of suspected fractures and administration of analgesia was also poorly recorded. A national elderly faller guideline has been proposed and a local Elderly Fallers CPI will also be developed to maintain focus on improving care for these patients.

3.0 Continuous Clinical Audit Activity

3.1 Clinical Performance Indicators (CPIs)

CPI completion and feedback rates continued to decline in 2014-15. Low completion and feedback are a potential clinical risk for the LAS. If PRFs are not audited and areas for improvement not recognised or not fed back to staff, this could mean that poor practice is allowed to continue.

Despite a decline in completion and feedback, compliance levels in every CPI were maintained demonstrating that patients are receiving good quality care. In addition an improvement was seen in the Cardiac Arrest CPI. Figure one outlines a snapshot of the level of care provided for each patient group in April since 2006.

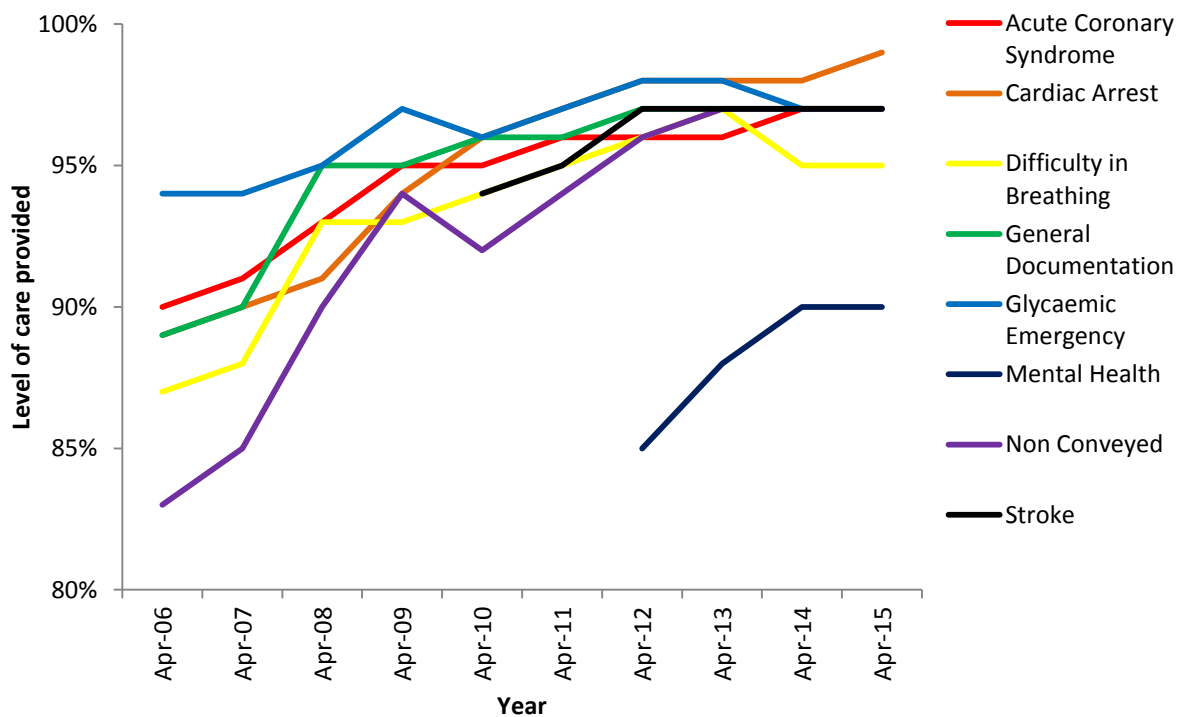


Figure one: CPI compliance rates from April 2006 to April 2015

In 2014-15 the significant developments to the CPIs were implemented: the Motorcycle Response Unit (MRU) were provided with the facility to CPI audit and feedback directly to their own staff. A programme of training for Training Officers and Clinical Tutors to undertake CPI quality assurance (QA) was also implemented.

In order to help with operational pressures on Team Leaders, alternative methods for CPI sample size calculation were presented to the Executive Management Team (EMT) for consideration; we await a final decision as to whether or not this will be adopted.

3.2 Clinical Quality Monitoring

As in previous years, in 2014-15 we continued to look at the quality of care we provide to our cardiac arrest, ST elevation myocardial infarction (STEMI - a type of heart attack), stroke and major trauma patients. In 2014-15 we continued to have some of the best return of spontaneous circulation (ROSC) and survival rates in the world for cardiac arrest patients. However, the number of patients who receive the STEMI care bundle (specifically analgesia) needs improvement, as does the time it takes us to get stroke patients to a Hyper Acute Stroke Unit (HASU). Our monthly reports inform clinical staff and operational management teams of their progress and enable them to assess local improvement initiatives. Please see the cardiac arrest, STEMI and stroke annual reports for more detailed information.

4.0 National clinical audit

4.1 National Clinical Performance Indicators (CPIs)

The National CPIs are used to compare care across the country and to evidence national clinical audit participation to the Department of Health (DH) in the Quality Accounts Mandatory Assurance Statements. In cycles twelve (February to May 2014) and thirteen (August to November 2014) we saw varying levels of compliance to the different National CPIs as outlined below (NASCQG, 2014; NASCQG, 2015_a).

4.1.1 Hypoglycaemia National CPI

The cycle twelve report saw the overall downward trend in the LAS for most aspects of care under the Hypoglycaemia National CPI continue, with the exception of direct referrals as the LAS makes more than the average number of referrals for patients with hypoglycaemia. A national decision was made to remove the Hypoglycaemia National CPI prior to cycle thirteen.

4.1.2 Asthma National CPI

As the longest standing National CPI, we continue to see an upward trend for the level of care we provide to our asthmatic patients. Whilst it is recognised that there are still improvements to be made, particularly measuring peak flow, this is really positive. Various improvement initiatives are being developed for implementation in 2015-16.

4.1.3 Single Limb Fracture National CPI

The expansion of the Single Limb Fracture National CPI (formerly the Below Knee Fracture National CPI) to include all suspected single limb fractures below the knee or the elbow has resulted in an increased sample size for this National CPI. LAS continued to compare poorly with other ambulance services, particularly for: administration of analgesia, immobilisation, and assessment of circulation distal to the fracture. An article was published in Issue 39 of the Clinical Update reminding crews of the importance of immobilising suspected fractures and administering analgesia with further improvement initiatives due to be implemented next year.

4.1.4 Febrile Convulsion National CPI

Use of an appropriate discharge pathway and anticonvulsant administration remains high for patients who have had a febrile convulsion. However, despite improvements, blood glucose and oxygen saturation measurements are occurring less frequently in the LAS than in other ambulance services, impacting on our ability to deliver the full care bundle for these patients.

4.1.5 Elderly Falls National CPI (pilot)

The Elderly Falls National CPI, new for cycle thirteen, showed the LAS was better than the national average for every aspect of care. This pilot indicator looks at: primary observations, assessment of the cause of the fall, history of falls recorded, 12 lead ECG assessments, assessment of mobility to include what's normal for the patient and direct referral or sharing of information with other health or social care providers.

4.2 National Ambulance Non-conveyance Audit (NANA)

There is increasing pressure within ambulance services to safely leave more people at home. Through the Ambulance Quality Indicators (AQIs; NHS England, 2015), NHS England measures how many patients call back less than 24 hours after we have left them at home. The National Ambulance Non-conveyance Audit (NANA) looks in more detail at what happened to some of these patients.

In 2014-15 NANA was revised and data collected from seven days over a seven month period (April to October 2014). The report shows similar trends to previous work in this area with a distinct correlation between non-conveyance and re-contact rates. This year the LAS's non-conveyance rate increased slightly while re-contact rate decreased, both positive findings. Compared with all the other ambulance services, the LAS can attribute the lowest percentage of our workload to re-contact (NASCQG, 2015_b).

4.3 Other National Clinical Audit

In 2014-15, the LAS continued to supply data to the Myocardial Ischaemia National Audit Project (MINAP) and validate the pre-hospital data entered by hospitals. Monthly submissions and six-monthly resubmissions were also made to NHS England for the AQI clinical outcome measures for cardiac arrest, STEMI and stroke.

5.0 Additional Data Requests

In addition to regular reporting, CARU often receive requests for data from within and outside the Service. Data is often requested by LAS staff and staff from other NHS organisations for coursework or to contextualise their own audit or research projects. Last year we also received several requests related to service development or improvement work being undertaken by LAS teams including: safeguarding, training and the community responders, as well as other emergency services and specialist networks in London. Our work with organisations such as the Health Innovation Network has enhanced their projects and CARU data has also been used in media campaigns such as 'Shockingly Easy'.

CPI compliance data was used as evidence in several legal enquiries including inquests and this year most prominently as part of the investigation into the internal paramedic exams. Data from the clinical quality databases and CPIs has also been used in presentations at various conferences and meetings with influential groups such as the Clinical Commissioning Groups (CCGs).

6.0 Engaging Staff in Clinical Audit

For Health and Care Professions Council (HCPC) registration Paramedics must demonstrate they are able to reflect on and review their practice. In addition to involvement in the CPIs, CARU also facilitate Paramedics' involvement in clinical audit through training and volunteering opportunities as detailed below.

6.1 Training

This year we continued to deliver a number of different training sessions to a wide variety of staff groups across the organisation (as shown below). Each session was tailored to the specific staff group and their requirements in order to understand how clinical audit is used to influence practice. Understanding the meaning of evidence based practice is important for all staff in the LAS so we can be confident we are providing the best care for our patients. CARU also offer one-on-one training and support to staff as required.

| Session | Audience | Participants in 2014-15 |
|-----------------------------------------------------------------------------|------------------------------------------------|--------------------------------|
| Team Leader Conference: Clinical Audit & Research Update | Team Leaders | 133 |
| Module J: Clinical Audit & Research | IHCD Paramedics | 118 |
| Emergency Operations Centre Induction: Clinical Audit & Research in the LAS | New Emergency Medical Dispatchers | 93 |
| Clinical Performance Indicators (CPIs) | Team Leaders, Training Officers and Paramedics | 79 |
| Clinical Development Module: Evidence Based Practice | Paramedic Managers and Team Leaders | 74 |
| Stroke Education Event | LAS clinicians and external organisations | 60 |
| Complex Management Team and PRF | Trainee Emergency Ambulance Crews | 57 |
| Medical Directorate Internship: Clinical Audit & Research in the LAS | New LAS Paramedics | 26 |
| Clinical Hub Training: Clinical Performance Indicators (CPIs) | New Team Leaders | 13 |

6.2 Volunteering

In 2014-15 seven members of front-line staff were supported to undertake clinical audit projects, and further staff were advised on service development or evaluation projects. In addition, 13 medical students from academic institutions were provided with one-on-one support and guidance whilst on placement to conduct pre-hospital clinical audit projects with CARU.

7.0 Patient and Public Involvement

Patient-centred care has become a key phrase for the NHS and the LAS have ensured that this is also reflected in the clinical audit projects we undertake. For a number of years, a patient representative has helped to set the clinical audit work plan as part of the CARSG and in 2013-14 they became more involved in the department by undertaking the assurance process described in section 8.0 which continued in 2014-15.

8.0 Clinical Audit Assurance

In 2014-15 CARU continued to evaluate whether completed clinical audit projects met their aims and objectives, and identified learning points for future projects. A cost analysis for every project was also conducted to demonstrate value for money.

For the second time, the Service's clinical audit working practices were reviewed to ensure compliance to our clinical audit strategy ('The Strategy, Process and Application of Clinical Audit in the London Ambulance Service'; LAS, 2014). This

annual review is conducted by the patient representative on CARSG and provides evidence that the clinical audit process is robust. The review found that clinical audits continued to be carried out in line with the clinical audit strategy. All clinical audit related recommendations from the 2013 review have been implemented.

9.0 Spreading Best Practice

All of the clinical audit work undertaken in 2014-15 demonstrated areas of excellent clinical practice and it is important that this is recognised and fed back to staff. These positive messages are routinely communicated to staff through posters, the Clinical Update and the RIB.

As well as communicating key clinical audit findings and congratulating staff, CARU also took the opportunity to promote the LAS and our clinical audit achievements. In 2014-15 five LAS clinical audit abstracts were accepted at national conferences (as shown in appendix two).

10.0 Directions for 2015-16

In 2015-16 we will be looking at a range of different areas of care, answering key questions that are important to both staff and patients. The clinical audit projects planned for 2015-16 will allow for a fuller investigation of areas of interest to the Service (see appendix three for the complete work programme). We will also continue to participate in national clinical audit and to promote clinical audit through training and publications. We will support the organisation to meet the Commissioning for Quality and Innovation (CQUIN) targets, specifically around sepsis and frequent callers and provide evidence for the Quality Accounts through our drive for quality improvement.

11.0 References

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Appendix one: Glossary of abbreviations

| | |
|-------|---------------------------------------------|
| AQI | Ambulance Quality Indicator |
| CARSG | Clinical Audit & Research Steering Group |
| CARU | Clinical Audit & Research Unit |
| CPI | Clinical Performance Indicator |
| DH | Department of Health |
| ECG | Electrocardiogram |
| EJV | External jugular vein |
| EMT | Executive Management Team |
| HASU | Hyper Acute Stroke Unit |
| HCPC | Health and Care Professions Council |
| IHCD | Institute of Health and Care Development |
| IO | Intraosseous |
| IV | Intravenous |
| JRU | Joint Response Unit |
| LAS | London Ambulance Service NHS Trust |
| PRF | Patient Report Form |
| MINAP | Myocardial Ischaemia National Audit Project |
| MPS | Metropolitan Police Service |
| MRU | Motorcycle Response Unit |
| NANA | National Ambulance Non-Conveyance Audit |
| NHS | National Health Service |
| QA | Quality Assurance |
| RIB | Routine Information Bulletin |
| ROSC | Return of Spontaneous Circulation |
| SIRS | Systemic Inflammatory Response Syndrome |
| STEMI | ST elevation myocardial infarction |

Appendix two: Abstracts accepted for conference presentations

| | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Title: | Audit: The use of hydrocortisone in acute severe and life-threatening asthma within the London Ambulance Service |
| Authors: | S D'Souza, J Shaw |
| Conference: | Clinical Audit Support Centre and the Healthcare Quality Improvement Partnership Junior Doctor 2014 Competition, 19 th November 2014 |
| Title: | 999 re-contact within 24 hours in the London Ambulance Service – a clinical audit |
| Authors: | S Bulford, J Shaw |
| Conference: | 999 EMS Research Forum, 4 th February 2015 |
| Title: | Does current prehospital care for patients at the end of their life reflect best practice guidance |
| Authors: | J Shaw, G Murphy-Jones, R Fothergill |
| Conference: | 999 EMS Research Forum, 4 th February 2015 |
| Title: | Improving prehospital paediatric pain management |
| Authors: | J Shaw, G Viridi, R Fothergill |
| Conference: | 999 EMS Research Forum, 4 th February 2015 |
| Title: | Ensuring an appropriate prehospital response to patients in sickle cell crisis |
| Authors: | J Shaw, G Viridi, R Fothergill |
| Conference: | 999 EMS Research Forum, 4 th February 2015 |

Appendix three: Clinical Audit Work Programme 2015 - 2016

In order to be responsive to the needs of the Service projects may change if the need arises.

Clinical Audit Projects

- Paediatric sepsis
- Continuous re-contact
- Oramorph
- Paediatric conveyance review
- Heart failure
- Clinical Hub
- Welfare checks
- Use of taxis

Clinical Performance Indicator Audits

- Acute Coronary Syndrome (all PRFs)
- 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 and 100% of police arranging removal)
- 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 posters disseminated to all stations

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
- Quality Dashboard

- NHS England Ambulance Quality Indicators: Clinical measures
 - 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

- Asthma National Clinical Performance Indicator (bi-annual data submission)
- Single Limb Fracture National Clinical Performance Indicator (bi-annual data submission)
- Febrile Convulsion National Clinical Performance Indicator (bi-annual data submission)
- Elderly Falls National Clinical Performance Indicator (bi-annual data submission)
- Mental Health National Clinical Performance Indicator (bi-annual data submission)

Additional Reporting for Meetings

- Clinical Safety Development and Effectiveness Committee
- Quality Committee

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