

East Anglian Air Ambulance

East Anglian Air Ambulance – Cambridge Base

Quality Report

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This report describes our judgement of the quality of care at this provider. It is based on a combination of what we found when we inspected, other information known to CQC and information given to us from patients, the public and other organisations.

Ratings

Overall rating for this ambulance location

Emergency and urgent care services	
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Summary of findings

Letter from the Chief Inspector of Hospitals

East Anglian Air Ambulance - Cambridge Base is operated by East Anglian Air Ambulance (EAAA) and is a registered charity. It provides a helicopter emergency medical service (HEMS) and rapid response vehicle from its air base in Cambridge. The service responds to demands from the local NHS ambulance trust emergency control room, where critical care paramedics triage emergency 999 calls and liaise with EAAA to deploy the most appropriate resource.

We inspected this service using our comprehensive inspection methodology. We carried out an announced inspection on 20 March 2018.

To get to the heart of patients' experiences of care and treatment, we ask the same five questions of all services: are they safe, effective, caring, responsive to people's needs, and well-led?

Throughout the inspection, we took account of what people told us and how the service understood and complied with the Mental Capacity Act 2005.

The main service provided by this service was emergency and urgent care.

Services we do not rate

We regulate independent ambulance services but we do not currently have a legal duty to rate them. We highlight good practice and issues that services need to improve and take regulatory action as necessary.

We found the following areas of good practice:

- The provider promoted a positive culture of learning and development. This included learning from incidents, encouraging staff development, promoting high standards of clinical knowledge, and increasing understanding of pre-hospital emergency medicine on patient survival rates.
- Staff maintained emergency equipment, medication, consumables, the air ambulance, and the rapid response vehicle to a high standard so the vehicles were ready for rapid deployment to emergencies.
- The registered manager ensured policies and standard operating procedures were comprehensive and reviewed in line with set review dates. The provider had embedded processes for maintaining patient safety, for example safeguarding and complaints and staff knew how to respond to and escalate any safeguarding concerns.
- There were effective systems in place to monitor service delivery and to improve performance, these included monitoring patient outcomes, and response times. The provider was part of local and regional networks to share performance data, adopt innovation, and quality improvement was at the heart of the service.
- The provider had established governance systems to monitor incidents, risk, and quality. Risk was owned at all levels of the organisation and managed appropriately, with key time scales and mitigating actions to reduce any adverse impact on the service, staff, and patients.
- Patient and stakeholder feedback was universally positive, with examples of staff going the extra mile to provide a service that was caring, responsive and met the needs of the local population.
- The provider had a clear mission, vision, and five-year development strategy focused on meeting the needs of the local population, enhancing staff training, skills, and knowledge whilst promoting innovation in pre-hospital emergency medicine.
- Staff universally described a positive working culture focused on providing patients with high standards of care, promoting team working with high levels of respect for colleagues and the leaders within the service.
- The service promoted the health and welfare of staff in innovative ways, including additional training in relation to promoting wellbeing, dealing with mental health and celebrating staff success.
- Staff described managers as highly approachable, supportive, and caring. The provider used innovative ways to promote staff wellbeing. A dedicated aftercare service for patients enabled staff to engage with the patient and discuss what happened to them as part of their recuperation.

Summary of findings

- During our inspection, we found high levels of engagement with the service's vision and strategy, led by the trustees and senior management team, and supported by the operational team, fundraising and volunteer staff.

Heidi Smoult

Deputy Chief Inspector of Hospitals on behalf of the Chief Inspector of Hospitals

Summary of findings

Our judgements about each of the main services

Service

Emergency and urgent care services

Rating Why have we given this rating?

The main service we inspected was urgent and emergency services.

We inspected but did not rate the service, however we found:

- The service had an incident reporting policy, staff knew how to report incidents, and there was a learning culture where the provider shared learning from incidents internally and with other providers.
- Staff benefitted from comprehensive mandatory and optional training, the provider monitored staff competencies, and the appraisals system encouraged staff to develop and maintain professional standards.
- Staff maintained equipment, vehicles, consumables, medication, and the environment to ensure the service could deploy staff and resources with minimal delay.
- The service had systems and processes reflecting relevant up to date safeguarding legislation to safeguard adults and children from abuse.
- The provider monitored patient outcomes, response times, and the quality of the service as part of ongoing quality improvement.
- Patient feedback was consistently positive; patients described staff as professional, caring, and respecting their wishes.
- The provider took into account the needs of the local population and worked with other agencies to develop the service.
- There were established governance systems to monitor incidents, risk, and quality.
- Staff described managers as highly approachable, supportive, and caring. The provider used innovative ways to promote staff wellbeing.
- During our inspection, we found high levels of staff engagement with the service's vision and strategy.

East Anglian Air Ambulance – Cambridge Base

Detailed findings

Services we looked at

Emergency and urgent care

Detailed findings

Contents

Detailed findings from this inspection

	Page
Background to East Anglian Air Ambulance – Cambridge Base	6
Our inspection team	6
How we carried out this inspection	6
Facts and data about East Anglian Air Ambulance – Cambridge Base	7
Findings by main service	8

Background to East Anglian Air Ambulance – Cambridge Base

East Anglian Air Ambulance - Cambridge Base is operated by East Anglian Air Ambulance and is a registered charity. The service opened in Cambridge in the year 2007 and began operating from its current Cambridge base in 2015. The service offers a helicopter emergency medical service (HEMS) providing a rapid response to trauma and medical emergencies across the East Anglian region including Norfolk, Suffolk, Bedfordshire, and Cambridgeshire.

The service uses a 'swoop and scoop' process with its air ambulance to collect patients from remote locations and provide pre-hospital emergency medicine at the scene of road traffic collisions, myocardial infarctions (heart attacks), and other serious trauma events. In the period January 2017 to January 2018, the service carried out 2,844 missions with an average of eight missions a day.

The service has had a registered manager in post since 2015.

Our inspection team

The team that inspected the service comprised of a CQC lead inspector, two other CQC inspectors, and a specialist advisor with expertise in urgent and emergency care. Fiona Allinson, Head of Hospital Inspection, oversaw the inspection team.

How we carried out this inspection

East Anglian Air Ambulance (EAAA) - Cambridge Base is an independent air ambulance service and registered charity specialising in providing a helicopter emergency medical service (HEMS) and rapid response vehicle to the most ill and severely injured patients, including adults and children. The service responds to demands from the local NHS ambulance trust emergency control room, where critical care paramedics triage emergency 999 calls and liaise with EAAA to deploy the most appropriate resource.

The service has a fleet of one air ambulance and one rapid response vehicle (RRV) at its air base in Cambridge. The air ambulance operated 365 days per year from 7am to 12am and the RRV operated 365 days a year from 7am to 1.30am.

The registered manager has been in post since 2015.

The service is registered to provide the following regulated activities:

- Diagnostic and screening procedures

Detailed findings

- Surgical procedures
- Transport services, triage and medical advice provided remotely
- Treatment of disease, disorder or injury

During our inspection, we visited the Cambridge base. We spoke with 16 members of staff including; the chief executive officer, registered paramedics, doctors, human resource staff, medical director, trustees, head of clinical operations and the clinical operations manager, and administration staff, amongst others.

During our inspection, we observed the care and treatment delivered to one patient during a mission. We spoke to a patient and a relative of a patient previously treated by the service to obtain their feedback.

During our inspection, we reviewed five sets of patient records and reviewed key policies, procedures, and standard operating procedures.

Facts and data about East Anglian Air Ambulance – Cambridge Base

Activity January 2017 to December 2017.

- In the reporting period January 2017 to December 2017 inclusive, the service carried out 2,844 missions and treated 1,762 patients. Of these, 2,039 were by air ambulance and 805 by RRV. The service averaged eight missions per day throughout the year and conducted 253 of its missions during darkness using night vision technology.
- The accountable officer for controlled drugs (CDs) was the Head of Human Resources.

Track record on safety

- One event classed by the service as a never event.
- Between February 2017 and January 2018, the service recorded 151 incidents, 36 with no impact, 60 minor incidents, 47 moderate incidents, and eight serious incidents.
- No serious injuries.
- One complaint.

Notes

Emergency and urgent care services

Safe	
Effective	
Caring	
Responsive	
Well-led	
Overall	

Information about the service

The main service provided by this air ambulance service was urgent and emergency care.

Summary of findings

We found the following areas of good practice:

- The provider promoted a culture of learning and development, including learning from incidents, encouraging staff development, promoting high standards of clinical knowledge, and increasing understanding of the impact of pre-hospital emergency medicine on patient survival rates.
- Staff maintained emergency equipment, medication, consumables, the air ambulance, and rapid response vehicle to high standards ready for rapid deployment to critical emergencies.
- The registered manager ensured policies and standard operating procedures, were comprehensive and reviewed in line with set review dates. The provider had embedded processes for maintaining patient safety, for example safeguarding and complaints and staff knew how to respond to and escalate safeguarding concerns.
- The service promoted the health and welfare of staff in innovative ways, including additional training in relation to promoting wellbeing, dealing with mental health and celebrating staff success.
- There were effective systems to monitor service delivery, these included monitoring patient outcomes, and response times to improve service performance. The provider was part of local, regional networks to share performance data, adopt innovation, and quality improvement was at the heart of the service.
- The provider had established governance systems to monitor incidents, risk, and quality. Risk was owned

Emergency and urgent care services

at all levels of the organisation and managed appropriately, with key time scales and mitigating actions to reduce any adverse impact on the service, staff, and patients.

- EAAA used data based on EAAA patients eligible for inclusion in Trauma Audit and Research Network (TARN) from the last three years. This data included EAAA patients taken to the major trauma centre (MTC) at a local NHS trust. Data showed there had been an average of 5.39 additional unexpected survivors per 100 patients, representing a significantly higher number of additional survivors than the nationally reported average.
- Patient and stakeholder feedback was universally positive, with examples of staff going the extra mile to provide a service that was caring, responsive and met the needs of the local population.
- The provider had a clear mission, vision, and five-year development strategy focused on meeting the needs of the local population, enhancing staff training, skills, and knowledge whilst promoting innovation in the arena of pre-hospital emergency medicine.
- Staff universally described a positive working culture focused on providing patients with high standards of care, promoting team working with high levels of respect for colleagues and the leaders within the service.
- Staff described managers as highly approachable, supportive, and caring. The provider used innovative ways to promote staff wellbeing. A dedicated aftercare service for patients enabled staff to engage with the patient and discuss what happened to them as part of their recuperation.
- During our inspection, we found high levels of engagement with the service's vision and strategy, led by the trustees and senior management team, and supported by the operational team, fundraising and volunteer staff.

Are emergency and urgent care services safe?

Incidents

- The service had a system and policy to enable staff to report and respond to incidents. Staff reported incidents directly into an electronic incident tracking system. Where appropriate the provider engaged with external agencies and the local NHS trusts to investigate incidents and share learning.
- Due to the nature of the incident reporting process and a culture where incident reporting was positively encouraged by the service, incidents covered a broad range of subjects ranging from issues in relation to fundraising, equipment, and staffing amongst others. For this reason, a serious incident could relate to finance not necessarily clinical practice.
- The incident reporting process encouraged staff to report untoward incidents or near misses. Between February 2017 and January 2018, the service recorded 151 incidents, 36 with no impact, 60 minor incidents, 47 moderate incidents, and eight serious incidents. Serious incidents included an IT issue, youths congregating near an air ambulance and resulting in the air ambulance staff calling the police, concerns regarding complaints from the public regarding fundraising activities with volunteers and one clinical incident.
- Never events are serious incidents that are wholly preventable, where guidance or safety recommendations that provide strong systemic protective barriers are available at a national level, and should have been implemented by all healthcare services.
- Whilst East Anglian Air Ambulance (EAAA) is not part of the NHS, they do treat NHS patients and have taken the view that they should report incidents likely to be a 'never event' in line with 'never event' reporting guidance and NHS providers.
- As part of the providers pre-inspection data requests EAAA submitted an incident report from June 2017 relating to a retained guidewire following a patient intervention, which they classed as a never event. EAAA reported the incident to the National Reporting Learning Service (NRLS). We reviewed the root cause analysis of the incident and noted this was comprehensive,

Emergency and urgent care services

included other professionals from external stakeholder groups and that EAAA made and implemented recommendations to prevent similar events in the future.

- The service's medical director reviewed all incidents, took appropriate action to investigate incidents, and recorded any learning or actions taken from the investigation process. Where appropriate, the service requested other organisations to investigate incidents where they had been involved.
- All incidents were risk rated and had a root cause analysis completed. During our inspection, we reviewed records in relation to five incidents and found the service had undertaken any necessary actions in line with the service's incident management policy.
- As part of the service's governance processes the trustees and senior team scrutinised incidents to share learning and minimise any repeat incidents. The provider gave an example where an item of bed linen was drawn into the helicopters rotors on a helipad from a patients stretcher, the service had implemented significant safety changes with the NHS trust to reduce the risk of this happening again.
- The service measured and analysed safety performance overtime, using its IT based incident-reporting system and data from incidents and held clinical governance days on a monthly basis, attended by key staff, for example the operations director and medical director amongst others. We reviewed minutes from February and March 2018, which demonstrated staff discussed incidents, including incident outcomes and actions taken.
- Staff we spoke with during our inspection knew how to report incidents on the providers IT based incident-reporting system. Staff told us the management team informed them of incidents at team briefings, handovers and through email and they received feedback on any incidents they had reported.
- We reviewed the services 'Team Reads' which was a dedicated newsletter to inform and update staff on any incidents or areas for concern within the service, for example updates from pharmacy inspections, and safety surveys.
- The duty of candour is a regulatory duty that relates to openness and transparency and requires services of health and social care services to notify patients (or other relevant persons) of certain 'notifiable safety

incidents' and provide reasonable support to that person. This regulation requires staff to be open, transparent, and candid with patients and relatives when things go wrong.

- The service had a dedicated policy entitled 'Being Open with Patients and Duty of Candour', implemented in October 2015 and due for review in June 2018. The policy explained the duty of candour and the principles of being open and transparent with patients when things go wrong. The policy also included information about specific requirements, staff carried out when initiating the duty of candour.
- The senior team we spoke with during our inspection had a comprehensive understanding of the duty of candour and knew how to apply this when things went wrong within the service.

Mandatory training

- Staff received annual mandatory training in safe systems, practices, and processes appropriate to their roles and responsibilities.
- Mandatory training covered a range of topics including, accident and incident reporting, infection control, mental capacity act, information governance, equality and diversity, moving and handling, health and safety, and safeguarding amongst others.
- Data provided by the service prior to our inspection showed that critical care paramedics (CCPs) achieved 80% training compliance with accident and incident reporting, 75% with fire training, 75% with health and safety, 75% with equality and diversity and 85% with moving and handling. The provider set an 80% compliance target for training.
- Doctors achieved 83% compliance with accident and incident reporting, 73% with fire safety, 70% with health and safety, 73% with equality and diversity, and 67% with moving and handling.
- The service held a central data set within an electronic training records system. This system was integrated with the service's human resource electronic records system and meant that managers were able to check compliance with mandatory training alongside other important staff details, for example appraisal and staff absence.
- Members of the clinical team completed mandatory training at their substantive place of employment within the NHS. The service required evidence from the staff's current NHS role as proof of compliance with

Emergency and urgent care services

mandatory training. The service did not allow staff to take part in missions until they provided evidence of compliance with mandatory training in their substantive employment, and we reviewed evidence of this on the service's IT based training records.

- Staff accessed training both face-to-face and electronically through E Learning. Staff we spoke with during our inspection said the service encouraged them to attend training and take on extra responsibilities to improve their clinical practice. Staff told us the service promoted a learning environment, and encouraged staff to bring new ideas and training into the organisation.
- The local NHS ambulance trust assessed CCP staff for their emergency driving competency, data supplied by the service prior to inspection showed 100% compliance with appropriate driver training.
- The service did not require clinicians to undertake basic life support training, as they were advanced life support trained to enable them to perform critical care interventions. Their substantive employer provided this training.

Safeguarding

- The service had effective systems and processes in place to protect people from harm. These reflected relevant safeguarding legislation to safeguard adults and children from abuse; including communicating safeguarding concerns to other health care services and local authorities.
- The service had up to date policies for safeguarding adults and children easily accessible in paper or electronic form through the service's intranet. The policies outlined what safeguarding was and provided definitions to the different types of abuse including female genital mutilation (FGM), child exploitation, and sexual, psychological abuse amongst others. The policy was up to date and covered staff responsibilities regarding raising safeguarding concerns and the procedure by which to report these.
- The service's CCPs and doctors received level two safeguarding children and adult training. This was in line with the safeguarding children and young people: roles and competencies for health care staff intercollegiate document 2014. This states that all non-clinical and clinical staff that have any contact with children, young people, and/or parents/carers should be level two trained.

- Critical care paramedics achieved 85% compliance with safeguarding adult's level two training and 75% with safeguarding children level two. Doctors achieved 83% compliance with safeguarding adult's level two training and 87% with safeguarding children level two. Non-clinical staff achieved 87% compliance with safeguarding adult's level one training and 89% with safeguarding children level one. The provider set an 80% compliance target. The provider had a rolling programme of training arranged to ensure the service met its compliance target by the end of the reporting quarter.
- Both the service's clinical safeguarding lead and non-clinical safeguarding lead achieved 100% compliance with safeguarding adult's level three training and safeguarding children level three.
- Critical care paramedics and doctors also completed training in dealing with bullying and harassment achieving 80% and 83% compliance respectively.
- EAAA subcontracted pilots from an external aviation company and the pilots did not have direct or unsupervised contact with patients at any time. The director of operations explained that pilots were aware of the services safeguarding policies and procedures. Pilots confirmed that they were aware of the safeguarding policy and knew how to raise a concern. The service had recently agreed with the air ambulance pilot contractor to roll out safeguarding adults and children level two training to all pilots that worked for the service.
- The service's staff may only be with the patients for a short period in the pre-hospital phase of treatment and would usually hand over care in the emergency department (or to ambulance staff on scene if the patient were less severely injured). If the team became aware of a safeguarding protection plan for people on scene, or had any safeguarding concerns for the patient, staff would inform the safeguarding lead and follow the services procedure for notifying the local authority.
- In the event of staff identifying an immediate risk at the scene, the medical team would contact the police to maintain safety of the immediate area, patient, and staff. If the patient was at an address flagged by the local NHS trust as an address of concern, staff would be notified on route to the incident to take appropriate action and risk assess the scene on arrival.

Emergency and urgent care services

- Staff we spoke with during our inspection knew the processes for recognising and referring a safeguarding concern.

Cleanliness, infection control, and hygiene

- There were effective systems and processes in place to protect people for the spread of infection. The service had an infection prevention and control (IPC) policy and the head of clinical operations, oversaw this and provided assurance to the senior management team and trustees through audit results. An external company provided some domestic services within the office, however the service's own staff team also carried out domestic duties, for example jet washing vehicles.
- Data provided by the service prior to our inspection showed that paramedics achieved 85% compliance with infection control training and doctors achieved 77%.
- The service carried out routine infection, prevention, and control audits of its base, the rapid response vehicle (RRV), and air ambulance. IPC data supplied by the service at the time of our inspection showed 100% compliance at the Cambridge base in March 2018 and 100% compliance with the Cambridge air ambulance and RRV in March 2018.
- We checked the RRV and aircraft and found the inside of the vehicles and passenger areas were visibly clean and free from clutter. The equipment stowed on the aircraft and vehicles was also visibly clean. Critical care paramedics and pilots were responsible for the daily cleaning of their vehicles and maintained cleaning records for the aircraft and RRV.
- Strict rules governed the cleaning equipment used on the aircraft, and the aircraft owners advised on this. For example, staff used specialist wipes due to some chemicals possibly affecting the aircrafts' integrity.
- We asked staff about the cleaning of the aircraft interior, in the case it might be heavily soiled. Staff used a specialist cover to place the patient inside during transport, which wrapped completely around the patient to prevent spillages of bodily fluids whilst the patient was being transported in the aircraft. This would collect any spillage during transit and restrict contamination of the aircraft. However, the CCP and pilots cleaned down the air ambulance or RRV vehicle if it became contaminated using the appropriate cleaning solutions and methods. Staff told us they were given enough time to do this before tasked to go on another mission.

- The aircraft and RRV contained personal protective equipment (PPE) to protect staff, and prevent and control the spread of infection. Staff carried gloves, aprons, facemasks, and cleansing wipes and we observed staff using these when providing clinical care. Staff had access to hand gel and gloves at all times.
- Staff accessed hand-washing facilities outside the main office base and we noted the World Health Organisation (WHO) "Five Moments for Hand Hygiene" guidance displayed next to hand washing sinks to promote good hand hygiene and reduce possible cross infection.
- Clinical staff accessed PPE such as disposable masks and aprons on vehicles and aircraft. Staff had lockers within the base for changing and access to spare uniforms should they need to change. Uniforms were laundered onsite at correct temperatures in a separate cleaning room.
- The service had a contract with a local NHS trust for collecting clinical waste, including sharps. We reviewed the clinical waste and sharps bins and noted that staff locked and stored these appropriately at all times.

Environment and equipment

- East Anglian Air Ambulance (EAAA) operated from an aircraft hangar and office base situated at Cambridge airport. EAAA staff stored the air ambulance within an aircraft hangar away from the office base. Staff transported the air ambulance on a helicopter handling and moving cart to the landing and take-off area next to the office base before the start of the morning shift. Staff operated the air ambulance and RRV from the office base a short distance from the hangar within the airport boundaries. At the time of our inspection, the service leased one air ambulance and had one RRV.
- The hangar provided space for the air ambulance to be safely stored and serviced; the RRV was stored outside the base under a canopy. The base was split into various areas with a dedicated reception, offices, training rooms, storage and cleaning areas, restrooms, changing rooms, and briefing and meeting areas. The area was secure with surveillance and we found all storerooms locked during our inspection.
- The base had strict requirements for all staff and visitors when entering, including reporting to the main base reception and EAAA reception, allocating identity badges, supervision by EAAA staff at all times, and wearing high visibility jackets.

Emergency and urgent care services

- Staff maintained the base, office and storage areas to ensure they were visibly clean and safe from any trip or fall hazards. Within the base, clear signage was in place warning staff of the dangers in relation to Control of Substances Hazardous to Health Regulations (2002) (COSHH) and other key health and safety issues.
- Medical equipment was stored ready for use and included equipment for adults and children. Equipment was visibly clean and stored safely in a dedicated locked storeroom. Clinical support staff checked the medical equipment on a daily basis to ensure it was safe to use and to facilitate rapid deployment.
- Staff stored equipment required for missions, for example blood testing kit, chest compression units, and ultrasound scanning machines, amongst other items within a dedicated grab case within a locked storage area.
- Staff made the grab cases mission ready, then they date tagged, and sealed them. When called to a mission, staff would grab the case and take this with them on the mission. On return, the staff restocked the case and checked the equipment, before date tagging and sealing the case again. The service held a number of cases, which meant the staff, could leave a used grab case and pick up another to go straight out to another mission.
- After each mission, staff would complete a scene checklist to ensure that all the equipment returned to base and ensure no equipment was missing or unaccounted for.
- We checked the service records in relation to the RRV and found it had been serviced and held a Ministry of Transport certification (MOT) in line with specified requirements. The servicing and MOT on the RRV was managed by a local NHS ambulance trust.
- Staff checked the RRV on a daily basis for serviceability and safety. This included tyre pressures, fluid levels, static and moving brake tests and emergency audio-visual warning systems check. Staff documented this on the service's electronic forms each day.
- The maintenance and use of equipment kept patients safe during their journeys. Suitably trained technicians checked aircraft prior to missions. Aircraft had to meet the requirements of the Civil Aviation Authority (CAA). A maintenance contract was in place with an external contractor for maintenance and servicing.
- The service maintained a central database of all its electrical equipment showing its location, equipment type, servicing due date and servicing done date. We checked the database and a number of items of electrical equipment within the air ambulance base, noting managers' ensured servicing of equipment took place.
- Staff reported any areas of concern in relation to vehicle cleanliness, or equipment directly to the clinical operations managers for action. If staff identified a piece of equipment as being faulty, they removed it from use and documented this on a record sheet. The service arranged to rectify the fault to ensure the equipment remained safe to use and staff replaced the equipment. Staff told us this took place quickly and if equipment were unrepairable; the service would replace it with a new piece of equipment.
- Due to the nature of the service, staff also had access to flight suits, hard helmets and other safety equipment for example safety gloves to help protect staff hands on scene at incidents.
- The service undertook missions in darkness, for which the staff used special night vision goggles. EAAA were the first Air Ambulance to provide this service to un-surveyed, unlit sites in the UK.
- Staff had access to mobile phone and IT based tablet systems within their day-to-day roles to ensure good communication. Staff also used radio telecommunications systems to communicate to the base, air traffic control, the local NHS ambulance trust control centre, and the hospitals.
- The aircraft was fitted with CAA approved four point harness restraint systems on all seats. There was a six-point harness restraint system on the aircraft stretcher for securing patients. Staff secured medical devices in bespoke mounting brackets designed and tested to the appropriate European Aviation Safety Agency (EASA) regulations. Staff secured any additional medical equipment either on the stretcher with the harness restraint system or alternatively through tie downs to the floor of the airframe as approved by the aircraft operator and CAA. As part of the pilot's pre-flight take off checklist they carried out a security check, the aircraft captain had ultimate responsibility for the security of equipment and personnel in the aircraft at all times whilst on the missions.

Medicines

Emergency and urgent care services

- The provider had a dedicated medicines policy that reflected current practices in medicine such as ordering, storage, administration and disposal, which was accessible to all appropriate staff in paper version and through the provider's IT based intranet.
- The medicines policy gave guidance on managing controlled drugs (CDs) (medicines that require extra checks and special storage arrangements because of their potential for misuse) the disposal of expired medication, how to render them irretrievable using a denaturing kit and then dispose of them in the clinical waste bin.
- During our inspection, we found that staff stored medicines in line with manufacturer's recommendations and medical gases such as oxygen were stored securely in a locked area. Medicines were stored securely with access restricted to authorised individuals and the service kept a stock of medical gas cylinders, which were stored and locked appropriately outside the office building.
- The service held a stock of CDs and held a home office controlled drugs licence. Staff kept some medicines in a locked fridge or locked metal safe when not in use, and stored these safely within the vehicles when on missions.
- Controlled drugs were stored securely and access was restricted to appropriate individuals. The controlled drugs register showed the transfer of controlled drugs with the staff and regular stock checks were completed. When on a mission, staff carried controlled drugs with them in secure pouches, and when finished, returned them to base for tallying within the CD register.
- Staff checked medication refrigeration temperatures and ambient medication storage room temperatures daily and reported any concerns to the clinical operations manager. Records we reviewed from November 2017 to March 2018 showed staff checked temperatures daily with no omission and that fridge temperatures were between 2°C and 5°C, which was within the safe tolerance level for the medications stored.
- The provider maintained and serviced medical devices appropriately, we found equipment labelled for both inspection and review date.
- Data provided prior to our inspection, showed that the service participated in routine pharmacy audits with a

local NHS trust pharmacy team. The pharmacy audit from November 2017 rated the service as good. The service shared the results with the team who took action to address any areas for development.

Records

- Clinical staff completed and managed patients' individual care records in a way that kept the patient safe. We found patients' records were accurate, complete, legible, and up to date and stored securely.
- Due to the service responding to trauma and medical emergencies, not all patient information was available before staff dispatched, therefore they started the patient record at the scene. The clinical team initially used a paper-based system to record medical information about the patient called a patient record form (PRF).
- Clinical staff shared appropriate information with the NHS staff team on arrival at an emergency and urgent care centre following patient transportation. On return to base staff scanned the paper patient record onto the service's electronic records system and shredded the original document into a confidential locked waste bin.
- We reviewed five PRF's, which included key patient information, for example the patient's name, date of birth if available, any allergies, initial observations, and any clinical activities undertaken amongst other things.
- Data provided by the service prior to inspection showed that paramedics achieved 80% compliance with information governance training and doctors achieved 77% compliance against the service's standard of 80%.

Assessing and responding to patient risk

- The service provided pre-hospital emergency care to patients. Due to the emergency service they provided, staff could not carry out individual risk assessments for patients until they arrived on scene.
- Due to the nature of the service and the specialism provided, the service had developed standard operating procedures to support clinicians in assessing and responding to patient risks. Critical care paramedics and doctors risk assessed patients using these standard operating procedures, using for example, tools to assess for stroke, or head injury, amongst others, all based on best practice models.

Emergency and urgent care services

- Patient report forms contained clinical observations to allow for early detecting of deterioration. Observations included; blood pressure, oxygen saturation, level of consciousness, pulse rate and respiratory rate.
- Staff assessed wider risks on the way to the patient, based on the information given by the local NHS ambulance trust emergency control room (the tasking agent). There was also informal risk assessing of potential scenes they were going to, for example, road traffic collisions, the landscape, terrain, and addresses where there had been a previous history of violence. The service already knew about some of the risks because they were contained on the services risk assessments and registers.
- If the patient was likely to panic or become delirious during a flight, the clinicians would risk assess this. If they could reduce the risk by making the patient calm and comfortable with medication, they would do this, especially if clinically they required urgent transfer, or if they were in a remote area.
- The local NHS ambulance trust emergency control room did not task EAAA staff to attend patients detained by the police under a section 136 of the Mental Health Act unless they were suffering from life threatening injuries or illness. If this was the case, staff applied common law and any medical intervention in an emergency setting would be undertaken if considered to be in the best interest of the patient.
- Staff alerted the appropriate hospital urgent and emergency care centre about the inbound patient once they had stabilised and transferred the patient into the aircraft. They had a list of hospital trauma centres, which were the first choice in cases of trauma, and maps that showed the areas covered by the service. All staff knew the hospitals, and which specialised in specific areas, for example, cardiothoracic surgery, neurosurgery or had the right services for patients with a cerebrovascular accident (stroke) or myocardial infarction (heart attack). The service had not had any issues with receiving hospitals not able to take their patients. However, the air ambulance staff maintained constant communication with the NHS ambulance trust control room, which could divert to a different hospital if necessary.
- Staff deployed on missions wore body cameras. This enabled staff to record events during each mission. This assisted staff to reflect on any actions taken during the

mission, and review footage of recorded missions. There was a dedicated standard operating procedure to support this practice including recording, reviewing and deleting any footage.

Staffing

- The service planned and reviewed staffing levels and skill mix to ensure that people were safe from avoidable harm and received safe care and treatment at all times.
- The service employed some CCPs however; the service subcontracted the majority of clinical staff including doctors from NHS trusts, the service paid the NHS for these staff. The service aimed to have a minimum of one doctor and one CCP on each shift to ensure appropriate staff covered all missions with two pilots on each shift.
- As the provider was a registered charity, it had over 300 volunteers that helped the service with fundraising and various other roles. All of the staff we spoke with during our inspection had a unique reason for working or volunteering for the provider, these included losing a loved one in an accident, experiencing care or treatment from the emergency services, or wanting to develop a career in pre-hospital emergency medicine, amongst many other reasons.
- Under a subcontract with a specialist aviation service, the service used ten pilots. The service used 10 CCPs and 44 doctors as a minimum to operate the service and give 100% shift coverage at all times. The service directly employed seven consultants, one clinical fellow and a number of regular associate doctors who were required to fly regularly to maintain currency in their given field of expertise. The service also employed five registrars who were subcontracted from the NHS as part of the Pre-hospital Emergency Medicine (PHEM) pathway and one clinical fellow who was subcontracted from a local NHS hospital.
- We reviewed the service's monthly shift analysis, which showed 99.4% compliance with the required staffing levels between January 2017 and November 2017. Staff we spoke with within the service explained that staffing was rarely an issue as so many people wanted to be part of the service. We spoke with the clinical operations manager who explained that sickness absence was minimal, but where there was an issue, the service had staff to fill any gaps within its rota.
- The CCPs working with EAAA were either on a permanent secondment or on a three-year cycle from the local NHS ambulance trust. The East of England

Emergency and urgent care services

Deanery placed some pre-hospital emergency medicine (PHEM) doctors with the service for a six-month period as part of their PHEM sub-speciality training, following which they moved onto another agency. The Deanery placed the remaining PHEM doctors with EAAA as part of their PHEM rotation for the period of one year (on a rotation of three weeks EAAA, three weeks emergency department). At the end of the PHEM doctor's placements with EAAA, the majority continue with the service as locum doctors.

- The rota for doctors and CCPs was organised using the service's web-based rota system, which ensured delivery of three shifts a day 365 days a year. The local NHS ambulance trust undertook the scheduling for the CCPs and fed this into the service's web-based rota system.
- One of the consultants planned the draft doctors' rota and the operations team sent out requests for shift coverage, managed the web-based rota system, and arranged changes. All rotas were designed to comply with the European Working Time Directive and comply with the service's own fatigue policy, aiming for minimum 12 hour breaks between shifts and restricting late shifts and 12 hour shifts to a maximum of four in a row.
- To manage available shifts the web-based rota system allowed clinicians to claim open shifts. To manage short notice cover issues such as sickness, the service used two groups on a mobile phone application (EAAA and EAAA CCP) notifying the clinical teams that a shift had become available at the last minute. The service found this to be a reliable communication system enabling continuity of shift cover. EAAA employed two current critical care practitioners within the operations department providing the service with additional resilience.
- The service employed seven medical consultants on a part-time basis to provide clinical governance, advice, and supervision. This allowed additional resilience for shift cover if required.
- The service-subcontracted pilots from a specialist aviation contractor under a contract agreement where they must achieve 98% service availability, which includes the aircraft and pilots, at all times or face financial penalties. The clinical operations manager told us that relationships with the external contractor and the pilots were extremely positive and that they worked closely together to maintain pilot coverage.

- Staff held comprehensive handovers following missions and did key safety checks prior to each mission before deployment. As part of the pilot's pre-flight take off checklist they carried out a security check, the aircraft captain has ultimate responsibility for the security of equipment and personnel in the aircraft at all times on missions.
- We spoke with the operations manager; a CCP and a doctor who all told us they had sufficient staff on each shift to safely run missions. There were no formal scheduled staff breaks during a shift; however, this was not an issue, staff told us they had enough 'down time' in between each mission.
- The service had recently recruited a full-time data analyst to review data and draw together research activities.

Anticipated resource and capacity risks

- The service planned for any resource or capacity risks and outlined these in its draft business continuity plan. For example, poor weather conditions posed a risk to delaying and disrupting missions. The service had access to weather forecasts, checked prior to each mission to ensure it was safe to fly. The pilot made the final decision. In the event they could not fly the aircraft, the team dispatched the RRV. The operations manager said it was unusual for weather to disrupt flights and that they always tried to operate the service.
- If there was an unexpected staffing problem within the clinical staff team, the service had qualified staff within its managerial team, whom were up to date with their relevant training and competencies that could cover the shifts at short notice.

Response to major incidents

- East Anglian Air Ambulance responded on behalf of the local NHS ambulance trust and was included within their major incident policy and planning.
- At the time of our inspection, the service had a draft major incident plan that it was reviewing in order to agree with the local NHS ambulance trust and integration within their major incident plan.
- We reviewed the service's draft crisis communication plan. This document was the service's response to a crisis or a significant incident affecting the charity and aims to complement the service's business continuity plan for example, in the case of significant interest from local, regional, national, and international media.

Emergency and urgent care services

- At the time of our inspection, the service also had a draft business continuity plan under review. The purpose of the business continuity plan was to prepare East Anglian Air Ambulance for any period of extended service disruption caused by factors beyond their control for example natural disasters, manmade events, and to restore services to the widest extent possible in a minimum period.

Are emergency and urgent care services effective?

Evidence-based care and treatment

- The service had a number of detailed and relevant standard operating procedures (SOPs), including, clinical supervision, medical appraisal amongst others. These were all evidence based. Many of the doctors subcontracted to the service, were contributors to professional journals and all were specialists in the field of Pre-hospital Emergency Medicine (PHEM). Many of these doctors helped to develop and review the policies and SOPs to ensure they were current. We noted a drive and passion in the clinical and senior management teams in providing the best clinical practice for their patients and leading the way in the pre-hospital emergency medicine arena.
- The service analysed and reviewed any proposed change to clinical practice before implementing. If a SOP was updated, all staff received an electronic message via the service's intranet asking them to read and sign to say they had accepted the guidance. If staff did not read and sign the guidance the system would continually remind them until it was completed. The system would also inform the relevant manager who could also follow up with the staff member to ensure they had read and understood any changes in the SOP.

Assessment and planning of care

- Between January 2017 and January 2018, the service carried out 2,844 missions and treated 1,762 patients. The service conveyed 18% of these patients by air ambulance and 46% by land ambulance with an air ambulance staff as escort. The service handed over 22% of patients to the local NHS ambulance trust at the scene and 14% of patients were pronounced dead at scene.

- Due to the emergency service they provided, staff could not carry out individual risk assessments or plan patients care until they arrived on scene. Specialist clinical advice was available to doctors and critical care paramedics (CCP) and the service had an on call system where staff could call a senior clinician for advice if required, for example, they could contact the medical director.
- Staff knew who was immediately available to give further clinical advice. However, if staff needed to confirm their treatment options, they felt comfortable in approaching a colleague for advice. Staff we spoke with said that team working and communication was vital when responding to patient risk. Although the doctor was the lead in clinical decision-making, the CCPs told us that other clinicians always respected their knowledge and experience in relation to understanding risks to a patient.
- The service ensured that patients were conveyed to the most appropriate hospital in the most appropriate transport. They knew their primary and secondary trauma care services including information about the location of the hospital landing sites.
- Clinicians assessed the risk of transporting patients with a mental health condition. They were careful to choose appropriate transport, because for example, if a patient had previously attempted to take their own life, they might attempt to do it again, endangering the staff and potentially, other aircraft if the air ambulance deviated off course in flight. However, the local NHS ambulance trust emergency control room did not task East Anglian Air Ambulance (EAAA) staff to patients detained by the police under a section 136 of the Mental Health Act unless they were suffering from life threatening injuries or illness. If this was the case, staff applied common law and undertook any medical intervention in an emergency setting if considered to be in the best interest of the patient.
- The service used technology and equipment to enhance the delivery of effective care and treatment. A staff member gave the example of staff showing live audio and video of an emergency scene to the on call clinician and getting advice in 'real time.'
- The service had a comprehensive range of standard operating procedures in place for patients who had a suspected stroke or myocardial infarction (heart attack), mental health, amongst others conditions and for the treatment of children.

Emergency and urgent care services

Response times and patient outcomes

- The service monitored its response times to all mission call outs and aimed to have its air ambulance and vehicles deployed in under five minutes during the day and ten minutes during darkness due to the complexities of air readiness in low light conditions.
- The service also aimed to arrive and leave a scene within 40 minutes. This was not always possible due to some of the complex scenes the teams attended.
- Operational managers reported response times to the senior management team and the trustees for review and these formed part of the quality review for the service. Data supplied by the service prior to inspection showed that between January and December 2017, deployment within five minutes was routinely over 75%, the service aimed for 100% compliance but this was a stretching target given the complexities of launching a helicopter, for example weather conditions. Data supplied for January 2018 showed the provider launched 86.6% of its missions in under five minutes, 88.4% in February 2018, and 85.2% in March 2018. Data supplied during our inspection for the same period showed the provider achieved 100% of night launches in less than 10 minutes in January, with 91.7% in February 2018, and 100% in March 2018.
- The service benchmarked its performance against other services, and discussed these with other providers at joint air ambulance meetings and conferences.
- EAAA used data based on EAAA patients eligible for inclusion in Trauma Audit and Research Network (TARN) from the last three years. This data included EAAA patients taken to the major trauma centre (MTC) at a local NHS trust. Data showed there had been an average of 5.39 additional unexpected survivors per 100 patients, representing a significantly higher number of additional survivors than the nationally reported average.
- EAAA audited outcomes for patients who experienced a cardiac arrest and were resuscitated by their staff on scene and transported to a local NHS trust for primary percutaneous coronary intervention (PPCI), also known as coronary angioplasty or simply angioplasty. The audit identified that the NHS trust discharged 66.7% of these patients neurologically intact (normal sensation and strength in muscles) compared to the national average of 8%. This prompted EAAA to form the Anglia out of

Hospital Cardiac Arrest group (Anglia OHCA), working with colleagues from other air ambulance charities and the local NHS ambulance trust to collate regional data and contribute towards improving patient survival rates.

- The use of ultrasound, arterial monitoring and blood gases had become routine in trauma and cardiac arrest care in EAAA. This enables the staff to use real time critical information, for example, blood pressures and blood gasses, to provide immediate clinical intervention, stabilise patients at the scene and inflight in turn increasing the chances of patient survival.

Competent staff

- Staff had the skills, knowledge, and experience to deliver effective care and treatment. The service had systems in place to manage an effective staff recruitment process.
- Recruitment processes for the staff teams were comprehensive and included specific checks with the Disclosure and Barring Service (DBS), and registration with the Health and Care Professions Council (HCPC) and the General Medical Council (GMC).
- The service offered a comprehensive induction process for all staff, specifically tailored to the needs of their role, for example for staff who were clinical and those who were non-clinical. Initial induction included a local orientation within the premises, as well as a who's who in the organisation, security, and human resource details amongst others. As staff progressed, they learned about standard operating procedures (SOPs), completed mandatory training, read, and understood the service values, and covered incident reporting, amongst other key points.
- We reviewed the annual appraisal records of seven members of staff and found these were comprehensive and up to date. The appraisal system was values based and encouraged staff to discuss their individual professional goals in line with the service's strategic aims and values.
- Staff we spoke with during our inspection valued the appraisal process as an opportunity to discuss their performance and plan for their future roles. In all of the appraisals we reviewed, managers had given effective feedback that encouraged staff to reflect on their performance and how they could improve to get the best from their role.

Emergency and urgent care services

- Appraisal compliance for critical care paramedics conducted by either East Anglian Air Ambulance (EAAA) or the local NHS ambulance trust was 94%.
- Where EAAA were the designated body for doctors, the appraisal compliance rate was 100%. The compliance rate for doctors where EAAA was not the designated body was 100% and associate doctors was 66%.
- Appraisal compliance for trainee doctors or those who had completed their final Annual Review of Competence Progression (ARCP) within the last 12 months was 100%.
- The overall rate of compliance for appraisals across the service at the time of our inspection was 98%.
- The service had an in-house consultant advice line where staff could contact a medical consultant whilst on a mission for advice and guidance. The service's medical director was also available to support staff with any questions and was a leading figure in the field of pre-hospital emergency medicine. Staff described the medical director as the 'go to' staff member for updates and advice, who would go the extra mile to support staff to improve their clinical skills and competencies.
- The service supported staff to complete the PHEM (Pre-hospital Emergency Medicine) National course and PHEM sub-speciality regional course for new trainees providing pre-hospital critical care and environmental exposure. All new clinical staff achieved 100% compliance.
- All new clinical staff completed a medical passenger course for aviation awareness and safety training, with 100% compliance.
- The service was participating in a multi-centre randomised controlled trial of pre-hospital blood product administration, versus standard care for traumatic haemorrhage. To support this trial, 77% of doctors had completed Resuscitation with Pre-Hospital Blood Products (RePhill) training.
- Staff used the service's IT portal to access electronic learning either at the base or remotely. Staff could access a wide range of mandatory training, and additional training, clinical updates, and updates to SOPs amongst other things. Staff we spoke with during the inspection told us the service was keen in ensuring they had access to a broad range of information to update their competencies and skills.
- Staff regularly practised scenario based training when not on active missions, which allowed them to encounter and plan for unexpected risks in a safe

learning environment. We observed staff participating in scenario based training exercise during our inspection. Staff communicated well and shared learning as part of the process.

Coordination with other services

- There were clear lines of responsibility and accountability for the service and care was delivered in a coordinated way with other services involved, for example, for the police, or fire services if they attended an incident.
- The service held agreed pathways with other services and arrangements for escalating issues with the local NHS ambulance trust via its standard operating procedures.
- Critical care paramedics in the local NHS ambulance trust emergency control room worked with the service on all 999 emergency calls to deploy the appropriate resources to incidents.

Multi-disciplinary working

- During our inspection, we observed a handover between the air ambulance staff and the receiving emergency and urgent care centre. EAAA staff handed over the patient professionally and followed the recognised clinical format for patients with traumatic injuries or medical emergencies.
- We noted a strong ethos of multidisciplinary working during our inspection. Staff respected each other's roles across the organisation working closely to coordinate individual elements of a mission to enable the most direct, efficient and seamless service for the patient.
- Staff we spoke with told us it was important to work as a team between themselves, as well as with the land ambulance staff and other services such as, police and fire and rescue. This enabled them to overcome any challenges or obstacles to ensure the best service for the patient, both on the ground and when airborne.

Access to information

- Due to the service responding to trauma and pre-hospital medical emergencies, not all patient information was available before staff dispatched. The tasking NHS ambulance trust had access to information such as, do not attempt cardiopulmonary resuscitation (DNACPR), and advanced care plans but often the CCP in the local NHS ambulance trust emergency control room was the main source of clinical mission information.

Emergency and urgent care services

- The tasking NHS ambulance trust also notified air ambulance staff if there were any known safeguarding children or vulnerable adult concerns.
- Staff used the provider's intranet to access the service's standard operating procedures, policies, and procedures that were comprehensive and reviewed in line with set review dates.
- The rapid response vehicles (RRV) had an up to date satellite navigation system in place and the service had reported no incidents or concerns reported relating to these. The aircraft were all equipped with the appropriate navigation systems as advised by the Civil Aviation Authority (CAA).
- The registered manager received an electronic notification each time the service deployed a mission. This meant they had up to date details for all of the missions and could respond to requests for resources, or media information for example. The service never disclosed information to the media if they were dealing with an incident that may involve some form of criminality, for example a physical assault.

Consent, Mental Capacity Act and Deprivation of Liberty Safeguards

- Staff understood the relevant consent and decision-making requirements of legislation and guidance, including the Mental Capacity Act (MCA). The service had a policy available for staff regarding capacity to consent as well as a draft policy on the use of restraint within the service.
- Staff we spoke with during our inspection told us they asked for the patient's consent where possible. Staff explained that often when responding to emergencies, patients were unresponsive, so clinicians considered their duty of care and the patient's best interests instead of formal consent.
- Staff we spoke with during our inspection were knowledgeable regarding the implications of the MCA. They were able to describe how they would assess a patient's capacity to make decisions about their care and treatment and the best interest decision-making process.
- Training data provided by the service prior to our inspection showed that critical CCPs achieved 85% compliance with MCA training and doctors achieved

63% compliance. Staff also completed training in the Deprivation of Liberty Safeguards (DoLS). CCP achieved 75% compliance with DoLS training and doctors achieved 80%.

- The patient record form (PRF) enabled staff to record whether the patient had capacity to consent.
- Do not attempt cardiopulmonary resuscitation (DNA CPR) notices were rarely available due to the emergency nature of the service. The tasking service (local NHS ambulance trust) may hold these, and carry out checks to ensure they were enforced. When air ambulance clinicians arrived on scene, patients were often unconscious, so clinicians acted in the best interests of the patient, but informed patients about what was happening if it was possible or practical.
- The local NHS ambulance control did not task EAAA to patients detained by the police under a section 136 of the Mental Health Act unless they were suffering from life-threatening injuries or illness.

Are emergency and urgent care services caring?

Compassionate care

- During our inspection, we spoke with one former patient and one relative of a former patient. They described the after care and support from the service as amazing and the staff as caring and supportive.
- Staff understood and respected people's personal, cultural, social, and religious needs. They were respectful, considerate, and friendly in their interactions.
- We observed one episode of care during our inspection. Staff ensured that the patient's dignity was protected during the episode of care and transferred to the air ambulance with the use of blankets. Pain relief was administered in a timely manner and regular checks on the patient's pain levels were made. Staff clearly communicated with the patient, obtaining consent, explaining any actions they were taking and advising them of next steps in their care.
- Staff we spoke with explained how they delivered care in line with the risk assessment at the time of attending an emergency, and promoted the patients care needs at all times.

Emergency and urgent care services

- The service provided critical care in emergencies and often the patient was unconscious when the staff arrived. In these situations, clinicians could not interact verbally with the patient, but would continue to explain to the patient any interventions they were undertaking.
- East Anglian Air Ambulance (EAAA) conducted a patient survey for the period January 2017 to December 2017, which selected 24% of the patients that accessed the service during this time, and generated a 28% response rate. However, many of the patients would have been unable to provide some answers to survey questions due to their trauma and they may have been unconscious during treatment or conveyance.
- Eighty-one percent of patients surveyed said they were very satisfied with their care and treatment, 3% said they were satisfied and 16% did not answer.
- Seventy-seven percent of patients in the survey said the staff were reassuring and caring, 23% did not answer this question, 80% said staff treated them with dignity and respect, 20% did not answer this question.
- The service displayed 'thank you' cards and letters sent by patients and relatives who used the service. They referred to the staff kindness and professionalism and showed the gratefulness of the patients and their family for the services they received.
- We reviewed patient feedback provided during our inspection. One patient described the staff as, "calming and reassuring." Another patient said, "The air ambulance doctors were amazing. We are very grateful for your service and expertise."

Understanding and involvement of patients and those close to them

- Staff we spoke with explained they immediately involved any relatives who were present at the scene of an incident to ask them about the patient's medical history and the events leading up to incident, as this was important for treatment decisions.
- The service could not always offer relatives the chance to accompany the patient. This was sometimes because of weight restrictions in the aircraft, but also because the clinicians needed room to treat the patient in the aircraft on the way to the hospital. They also risk assessed the situation and if relatives were likely to panic or become distressed, this could have the effect of distracting the clinicians from the patient.

- Seventy-two percent of respondents to the EAAA patient survey said that staff kept them informed of what was happening, 26% did not answer, and 2% said it was not applicable to them.
- The EAAA patient survey asked patients if they felt staff respected their wishes, 76% said yes, 22% did not answer and 2% said it was not applicable to them.

Emotional support

- The service has a dedicated aftercare team to provide unique support for patients and carers throughout their rehabilitation or bereavement. The team invited survivors and family members to see the base and air ambulance following an incident as part of their rehabilitation, as patients often had no memory of the airlift to hospital.
- The aftercare team also conduct home visits to provide information to patients and their families in relation to incidents, to enable them to reflect and where necessary support them to access services for emotional support following trauma.
- Staff we spoke with explained how they used their experience to speak with patients and relatives at the scene, offering reassurance and guidance to maintain their wellbeing and reduce their anxiety.
- Sixty-nine percent of respondents to the EAAA patient survey said that during their conveyance, they felt safe and comfortable and 24% said that the staff explained what to expect from the motion and noise to offer reassurance.

Are emergency and urgent care services responsive to people's needs?

Service planning and delivery to meet the needs of local people

- The service analysed various data in order to plan and deliver new services. For example, they analysed how to meet the trauma needs of local communities during the evening and darkness which had led to implementing night vision technology and aiming to increase the use of the rapid response vehicle.
- The service worked closely with their NHS services and looked at research from the Trauma and Audit Research Network (TARN) to consider the type of pre-hospital

Emergency and urgent care services

emergency clinical interventions used, for example the prevalence of road traffic collisions, and cardiac patients so they could deploy the most effective resources to the scene.

- The service worked cooperatively with other stakeholders to review service provision and to meet the needs of the community as a whole. We reviewed minutes from the service's strategy review workshop undertaken in February 2017, which explored the development of a new hospital and the use of helipads and how this may affect the local communities.

Meeting people's individual needs

- EAAA staff could access the language line translation service provided the local NHS ambulance trust. Due to the nature of the service, a large proportion of patients had reduced levels of consciousness due to illness or injury therefore verbal communication was challenging regardless of language. Where possible staff used family members or friends to provide the initial translation at the scene until they were able to contact language line. The clinical team also had access to a translation application on their mobile phones, which assisted with initial translation.
- During our inspection, we observed a mission where the patient was a Hungarian speaker. The doctor on the air ambulance was also Hungarian so was able to explain the care and treatment they were providing.
- Critical care paramedics and doctors would always risk assess, and take appropriate actions, when responding to a patient with cognitive impairments or a mental health illness. This was important to avoid putting the staff and patient at risk mid-flight.
- We asked the service how it dealt with Bariatric (morbidly obese) patients. The staff did not always know about this before missions and they would provide the care and treatment at the incident site. If the patient's weight were a restriction, either for access into the air ambulance or in terms of weight limitations for the air ambulance, staff would transfer the patient to the appropriate NHS hospital by a land-based ambulance.

Access and flow

- The service responded on average to eight missions per day during 2017. The tasking NHS ambulance trust requested missions and the service responded to these in priority order. If staff were on scene and needed to be

dispatched to another incident before returning to base, the pilot, doctor and the critical care paramedic reviewed how much fuel they had and any equipment which needed replacing.

- The air ambulance operated 365 days per year from 7am to 12am and the RRV operated 365 days a year from 7am to 1.30am.
- The rapid response vehicle (RRV) was available for use when the air ambulance was unavailable.
- The service reviewed the types of incidents they attended and the type patient injuries sustained. For example during 2017, they attended 497 road traffic collisions, 457 cardiac arrests, 214 falls, 63 assaults, 40 equestrian incidents, 12 fires and 497 other events. The service used this data to plan its future capacity and consider how it could best support patient outcomes.
- Managers reported turnaround times to senior management team and the trustees for review and these formed part of the quality review for the service. The service aimed to arrive and leave a scene within 40 minutes. This was not always possible due to some of the complex scenes the teams attended. However, data supplied by the service prior to inspection showed that between January and December 2017 compliance with the 40 minutes standard was routinely above 75%. Data supplied by the trust over the period of the inspection showed compliance with the 40 minutes standard at 82% in January 2018, 77% in February 2018, and 83% in March 2018.

Learning from complaints and concerns

- The service informed patients, relatives, and acquaintances how they could complain. They advised them to make any complaint through the service's website. We reviewed the on line complaint page, which was easy to use and contained information on how to make complaints including response times and EAAA's responsibilities for dealing with the complaint.
- At the time of our inspection, the service had received one complaint that they investigated and feedback provided to the individual was within agreed timescales.
- The service handled complaints effectively and confidentially. The service recorded complaints on its electronic incident reporting system and the relevant department and manager and lead investigator assigned. If appropriate, the service informed the local

Emergency and urgent care services

NHS ambulance trust of the complaint who may participate or lead in the investigation, depending on its nature. In such cases, EAAA's records and the local NHS ambulance trust are likely to run in parallel.

- Leaders shared learning from the complaint with the wider teams and across the organisation. Leaders reviewed findings with the team involved and presented the findings in team meetings, and governance days where appropriate.
- The service did not benchmark its complaints with other air ambulance services; however, it had very few complaints.

Are emergency and urgent care services well-led?

Leadership of service

- The chief executive officer was the senior leader of the service, with strategic oversight by a chairperson and board of trustees. The medical director was the registered manager and oversaw clinical leadership of the service, supported by the head of clinical operations and clinical operations managers. The head of clinical operations oversaw organisational arrangements at the airbase.
- Leaders had the skills, knowledge, experience, and integrity they needed to be effective. The chief executive had an extensive background in leading high profile organisations. The medical director was highly qualified and highly regarded in the field of pre-hospital emergency care. The head of clinical operations had an extensive portfolio of working in the emergency paramedic arena and pre-hospital emergency care.
- The trustees oversaw the strategic direction of the organisation, but also played a key role in shaping the governance and quality within the organisation. All trustees were volunteers and varied professional backgrounds, for example, legal services, finance, and parliamentary roles amongst others.
- Leaders understood the challenges to good quality care in their service and had clear understanding of the risks and strategic challenges the service faced on a day-to-day basis and plans for future development.

- Critical care paramedics (CCPs) and doctors we spoke with told us leaders were visible and approachable. They knew what senior leaders were responsible for and that leaders were supportive, caring and respected their leadership skills and specialist knowledge.
- The registered manager was the service's Caldicott Guardian.

Vision and strategy for this core service

- The service's mission statement was to 'Reduce the impact of life-changing and life-threatening accidents and medical emergencies in the East of England'. The service also had a key set of values based on quality, community, innovation, accountability, and passion and a vision statement saying, "Together we save lives."
- There was a robust strategy for achieving strategic aims and priorities, with clinical quality and safety a top priority. The service outlined its strategy in its strategic plan 2016 to 2021.
- The strategy aimed to significantly and demonstrably improve patient outcomes, to be financially sustainable and provide its service for as long as it is needed and to ensure East Anglian Air Ambulance was consistently held in high regard.
- The service was clear on its priorities for 2018, which included extending operating hours for its rapid response vehicle.
- The service allocated resources to match its aim of continuously advancing rapid response critical care, showing that quality and safety were the top priority. Managers and clinicians explained how the service always funded clinical needs such as specialist training or equipment. The service prioritised funding by looking at how best potential plans would benefit the patient.
- Staff we spoke with during our inspection knew and understood the strategy and their role in achieving it. The service held strategy workshops that included staff at all levels within the organisation. Staff and managers monitored and reviewed progress against the strategy at these meetings, the chief executive officer, and chairperson feedback on performance to the board of trustees.

Governance, risk management and quality measurement (and service overall if this is the main service provided)

Emergency and urgent care services

- The service had an effective governance framework to support good quality care. The service held regular senior management team meetings, which monitored progress on achieving strategic aims, and reported to the board of trustees.
 - A pre-hospital emergency medicine trained doctor undertook each mission with a critical care paramedic (CCP) and a consultant available on call to support the mission as part of its risk management processes.
 - The service's consultant group reviewed each mission looking at and challenging clinical decisions made in the field, as well as ensuring the psychological health of the teams is intact and support offered as required.
 - The service held regular case review sessions and monthly clinical governance days (CGD) which were open to the wider healthcare community to share learning, and promote patient outcomes.
 - Monthly operational group meetings monitored progress on the operational strategy. The director of operations fed any information from front line level such as achievements or incidents to the senior management team meetings and cascaded information from the meeting to the operational group.
 - There was a range of policies and standard operating procedures (SOPs), which underpinned the governance structure. The provider's intranet showed which staff had read and was yet to read the standard operating procedure or policy update. The service introduced new procedures to reflect good practice and national guidance.
 - The service reviewed policies, procedures, and SOPs in line with expected review dates. These covered key issues such as raising and responding to concerns, adverse incident investigation, complaints, driving policy, consent, and medication management, the management of controlled drugs, and infection prevention and control. This ensured patient safety as much as possible, and promoted a consistency of approach in day-to-day working.
 - The service actively reviewed their risk register, at the clinical governance days, senior management, and trustee meetings. The risk register was comprehensive and covered all aspects of the service, for example clinical, governance, finance, support services, and fundraising amongst others. The service described its three main risks as a disruption in service availability from a technical fault, accident, or grounding of aircraft, a fall in income and the possible inability to meet clinical standards and respond to clinical issues.
 - The trustees, senior management team, and operational staff knew the risks held on the services risk register and which of the risks were relevant to them. The service rated the risk register using a red rating signifying a high risk, amber medium risk and green low risk (RAG).
 - Managers reviewed risks routinely and reported them to the senior management team. They developed an action plan to mitigate each risk for example ensuring spare equipment was available, or completing equipment checklists after each mission.
 - The service had clear working arrangements with its local NHS trusts and ambulance trust. The local NHS ambulance trust also monitored activity reports from the service.
 - Clinical staff we spoke with during our inspection knew their roles and their accountabilities. They completed their annual appraisal (personal development and review) process and linked their objectives to the service's values and objectives, ensuring a focused approach throughout the organisation.
 - The service used a web-based portal to record helicopter emergency medical service activities and store data and service outcomes as part of its quality and performance monitoring arrangements. Managers used a wide range of data to measure quality and performance, for example mission times from deployment to arrival, time on scene, infection control audits, and medicines audits amongst others. Trustees, senior management, and operational staff all participated in monitoring audit outcomes.
- ## Culture within the service
- The service had a positively open and learning culture, focused on patient centred care and patient outcomes. Clinicians worked with a mutual respect, candour, and honesty for each other, there was a strong team working ethos and a culture of positive working throughout the staff team.
 - Staff shared learning through team meetings and their intranet and supported the learning culture by learning events.

Emergency and urgent care services

- The service managed organisational change through a project management approach but also through bringing in experts for specific projects.
- The organisational culture had a strong focus on staff wellbeing. Colleagues or managers debriefed the staff after their missions and provided peer support.
- All the staff we spoke with during our inspection showed huge enthusiasm for their role and for the service provided to the local community. There was a genuine verve, interest, and excitement when talking to the staff team, who described working for East Anglian Air Ambulance (EAAA) as a true accomplishment in their career and all said how proud they were to be part of the service.

Public and staff engagement (local and service level if this is the main core service)

- Staff employed directly by EAAA could use two “Duvet Days” per year. The human resource team explained these formed part of the services approach to staff wellbeing. Staff could take duvet days at any time, without fear of retribution, if they were in need of time off, feeling low in mood or had dealt with a difficult situation on a mission. Managers encouraged staff to share their reasons for the time off, but purely in a supportive manner to establish if there were any underlying concerns regarding the staff wellbeing and these discussions remained confidential unless there was a cause for concern.
- The service was in the top “100 Best Companies” (charity sector). They were acutely aware of their geographical spread and that many of their staff and volunteers worked remotely. Measures to ensure happy staff included the employee champions, a wellbeing programme that includes health support, introduction of the McQueen Charter, resilience training, emotional intelligence training, and mental health support.
- Critical care staff proactively made suggestions for improvement within the service, and told us the leadership team were extremely receptive to any new ideas or changes in practice. Staff felt listened to and engaged with the activities carried out.
- Clinical staff participated in public events where possible, to raise the profile of the service. Some of the staff involved themselves with fundraising for the charity. All the staff we spoke with during our inspection showed their passion for the charity and providing care for patients.

- The service had very positive public feedback. We noted many thank you cards posted on the walls of the airbase from grateful patients and relatives. Owing to the nature of the service, it was difficult to obtain patient feedback at the time of the emergency. Instead, clinicians invited patients to feedback through the service’s website and the service carried out annual patient and family surveys.

Innovation, improvement, and sustainability (local and service level if this is the main core service)

- The use of ultrasound scanning, arterial monitoring and blood gases had become routine in trauma and cardiac arrest care in EAAA. Other examples of innovation included the introduction of new cardiopulmonary resuscitation equipment for chest compression, which reduced weight on the aircraft and was easier for staff to use.
- The service had introduced a nebulisation device that reduced the requirement for pre-hospital anaesthesia and a new pain relief medication, which enabled patients to assess their own level of pain and titrate the amount of analgesia, inhaled for adequate pain control.
- At the time of our inspection, the service was working in partnership with other organisations on a project to develop a heated trauma board for potential use in pre-hospital emergency medicine. This would be an improvement on current equipment, as it enabled staff to maintain the patient’s body temperature more easily. The equipment would conform to the patient body shape making it more comfortable and reduce movements between stretchers, as it would be made of a material suitable for use in a magnetic resonance imaging (MRI) or computed tomography (CT) scanner.
- The service was participating in a multi-centre randomised controlled trial of pre-hospital blood product administration, versus standard care for traumatic haemorrhage.
- Critical care paramedics were also trialling the administration of aminosteroid non-depolarizing neuromuscular blockers (muscle relaxants).
- The service’s mission included training others to provide basic care to critically ill and injured patients and providing an extensive first aid training programme and schools cardiopulmonary resuscitation programme. The provider had applied to become an approved centre for advanced life support training.

Emergency and urgent care services

- The service had recently leased a new air ambulance that carried enough fuel to fly for over two hours with a

range of nearly 300 nautical miles (335 statute miles). In contrast, the previous model carried one pilot, two staff, and a patient for one hour and thirty minutes with a range of 186 nautical miles (214 statute miles).

Outstanding practice and areas for improvement

Outstanding practice

- The service collected Trauma Audit and Research Network (TARN) for eligible patients from the last three years. Data included EAAA patients taken to the major trauma centre (MTC) at a local NHS trust. Data showed there had been an average of 5.39 additional unexpected survivors per 100 patients, representing a significantly higher number of additional survivors than the nationally reported average.
- The service was shortlisted for the Association of Air Ambulance Awards in the categories of Volunteer of the year, Young Person of the Year, Innovation of the Year, Paramedic of the Year and Air Ops Support Staff Member of the Year.
- In February 2018, the Sunday Times ranked the service as the forty-third in the 100 Best Not-for-profit Organisations to work for in 2018.
- The use of ultrasound scanning and arterial monitoring / blood gases have become routine in trauma and cardiac arrest care in East Anglian Air Ambulance, unlike other pre-hospital services.
- The service routinely uses data to improve patient outcomes and work with other organisations to improve service to the local community and patient outcomes.