

The Faculty of Pre-hospital Care HEMS Elective Report June 2022

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Essex & Herts
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Background

The Faculty of Pre-Hospital Care (FPHC) forms part of the Royal College of Surgeons of Edinburgh, who work to promote high standards of pre-hospital care through education, research and teaching. Each year, they recruit students to participate in elective programmes with both ambulance services and helicopter emergency medical services (HEMS). For 2022, the FPHC offered 4 reserved places with HEMS: 2 with Essex & Herts, 1 with East Anglia, 1 with The Air Ambulance (Midlands). Laws within Civil Aviation are strict and therefore only a handful of air ambulance charities have the provisions in place to take elective students. It is therefore a great privilege to be awarded an elective placement of this kind.

Essex & Herts Air Ambulance (EHAAT) are a HEMS charity delivering enhanced pre-hospital critical care to the people of Essex, Hertfordshire, and the surrounding areas. The charity has been operational since 1998, moving to a doctor-paramedic model in 2008 and then 24/7 with rapid response vehicles in 2018. During the day, they fly out of 2 airbases. One team responds from Earls Colne Airfield near Colchester, using an MD902 helicopter. A second team responds from North Weald Airfield near Epping, use an AW169 helicopter. After sunset, a single team responds from North Weald in a Volvo XC90 rapid response vehicle.

A critical care team like EHAAT are dispatched by the local ambulance service and frequently attend incidents including head injuries, penetrating trauma, road accidents, cardiac arrest and many more. They can provide critical level 3 interventions such as pre-hospital anaesthetic, blood transfusions and surgical procedures.



Timetable

I stayed in rented accommodation near Chelmsford, locating me roughly 30 minutes drive from each air base. Although my timetable varied week on week, my usual activities included:

- Around 2 clinical shifts a week (either helicopter days or night shifts on the response car)
- Attending the death & disability meetings every Tuesday which include simulation training
- Base days to work on a research project

In addition to this, I was also able to organise some additional opportunities. These included:

- An observer day with East of England Ambulance Service on a double crewed ambulance.
- An observer day at UCLH with North Central London Adult Critical Care Transfer Service.
- Attending Aeromed – an international HEMS conference run by EHAAT
- Teaching CPR to volunteers at an airbase open day



Experiences

Day One. Without a doubt, one of the most memorable experiences of the placement was my first flying shift. Halfway through the first week, I joined the duty team at Earls Colne for my first clinical shift. Having already picked out a flight suit and helmet, we checked and packed the helicopter with the medical bags and had our morning briefing from the pilots. At around 0800, the phone rings and it's a request for help from an ambulance crew on scene with a child who has been hit by a car. It's a matter of minutes before we are airborne and on our way to the incident. Once overhead, I could see the accident and quickly determine what we were dealing with and who was already there. We landed in a nearby field and had a short walk down a residential street to the incident. The patient was a young boy who had been hit by a car whilst riding his bike to school. We arrived to find him being looked after by an ambulance crew on the road, clearly in a lot of pain. The team quickly assessed him and moved him into the ambulance. After delivering some strong analgesia, a proper assessment revealed concerns significant enough to take the patient to the Royal London Hospital in Whitechapel (nearest major trauma centre). As my first experience of an incident with EHAAT, it was incredible to see just how quickly the service can deliver an expert team to patient, despite difficult geography.



It's the little things. It's my second clinical shift with EHAAT. I'm on the AW169 helicopter today based at North Weald Airfield. We'd had a quiet morning so far, doing the usual kit checks and running through some really useful training drills in the simulation suite. A job then comes in from the south of Essex, for a teenage boy in cardiac arrest. As someone still very new to HEMS, I instantly knew that this was going to be difficult. We landed and were by the patient's side within 20 minutes of the 999 call. Nearby police were first on scene and had already begun chest compressions. Ambulance colleagues then established advanced life support. Our team were then able to provide a few more advanced skills, but unfortunately the patient was unable to be resuscitated.

I feel no matter how experienced, the death of a child is not a pleasant situation to be part of. Nevertheless, I am sure that there will be more situations like this in my career. Being exposed to this early on and being surrounded by experienced clinicians to support me, is invaluable to my own professionalism and resilience. After leaving the emergency department following the incident, the team and I spoke in detail about the patient and rationale behind every decision. We met up with the aircraft at a nearby airport, to be greeted by a milkshake from the pilots. They clearly appreciated the difficulty of what we had just been through. It's the little things that make the difference.



The Night Shift. In my second week of the placement, I had my first night shift with the team. We've barely loaded up the car with our kit before being sent to an incident involving a stabbing to the neck in the south of Essex. It's my first time driving on blue lights, making speedy progress down the motorway to the scene. The patient is being guarded by armed police, now in the back of an ambulance. A brief assessment of the patient and we all agree to start driving to the Royal London Hospital, as patients like this can deteriorate rapidly. On route to the major trauma centre, we were able to give a blood transfusion and ketamine to help settle the patients pain. The evening's shift stayed busy, attending to a medical cardiac arrest and 2 traumatic brain injuries requiring a pre-hospital anaesthetic. This was definitely one of the busiest shifts on my elective and it was amazing to see so many injuries that I associate with the need for a critical care team. Learning about the intricacies in their decision making and clinical deliver is an experience that will stick with me through my career.



Triage. Another memorable incident whilst with EHAAT involved a multicausalty road traffic accident in Essex. Upon our arrival, there were 7 injured patients including 3 children. This was my first experience of the team implementing major incident and triage training. First, we met up with the incident commander and received a briefing on the accident, how many patients there were and who had been identified as the sickest so far. I then went around with the duty doctor to examine each patient in turn to clarify who was the most unwell and prioritise their evacuation to hospital. I wrote down as much information as possible for each patient, which proved to be useful post-incident for documentation. We had to liaise with the incident commander to decide which hospitals to send each patient to, as to not overwhelm a single emergency department. Overall, it was a great introduction to seeing triage in action and how to correctly prioritise patients in a multicausalty incident.



Reflections

Now I have completed my elective with EHAAT, I now have much to reflect on. Most obvious to me is how this elective has opened my eyes to what it is really like to work as a HEMS doctor. Whilst there are some shifts that can be quiet and filled with stand-downs, there are others which are non-stop. I have witnessed the team provide critical interventions on scene, with their associated benefits visible within a matter of minutes. Not only is this often lifesaving for the patients, but it is also incredibly satisfying work.

Apart from reinforcing my interest in a future career in HEMS, the elective has undoubtedly improved me as a clinician. My exposure to patients with traumatic injuries has significantly improved my confidence in performing primary surveys, applying devices like pelvic binders, and identifying patients who are “big sick”. As trauma is an area I had relatively little experience in as a medical student, this placement has kickstarted my abilities to care for trauma patients.

Aside from medicine, my time with EHAAT has taught me so much about aviation. As someone who has been watching air ambulances on TV since a child, getting to go out on the aircraft more than lived up to expectations. The excitement each mission brings is something I doubt ever wears off.



I would like to express my gratitude to everyone that made this elective placement possible. Thank you to the doctors, paramedics and pilots at EHAAT for welcoming me into the team. Thank you to the FPHC for awarding me this elective.

For anyone considering a placement with EHAAT or within Pre-hospital care in general, I would be more than happy to be contacted for advice. I couldn't recommend the placement more!

George Hamson

