Elliot Desert
Warwick Medical School
HEMS Elective at Essex and Harts Air Ambulance (EHAAT)

EHAAT is described by the CQC, in its inspection report, as *"a registered charity, that provides a helicopter emergency medical service (HEMS) and rapid response service 365 days a year from its air bases in North Weald and Earls Colne. The service provides 24 hours 7 days a week life-saving critical care pre-hospital service by helicopters and rapid response vehicles (RRV) during the hours of darkness."*

EHAAT has a physician led staffing model of Prehospital Emergency Medicine (PHEM) doctors, and Critical Care Paramedics (CCPs), in addition to the pilots and aviation personnel. This MDT approach combines the skills and experience of the aviation industry, prehospital paramedicine, and medical training to provide a range of critical interventions to the patients it treats.

I had the opportunity to take part in an elective with EHAAT nearing the end of my medical school studies. Having worked previously as a paramedic, and at one point within civil aviation engineering, it was an elective opportunity that appealed to me in combining cutting edge medicine with the human factors and training approaches seen within aviation.

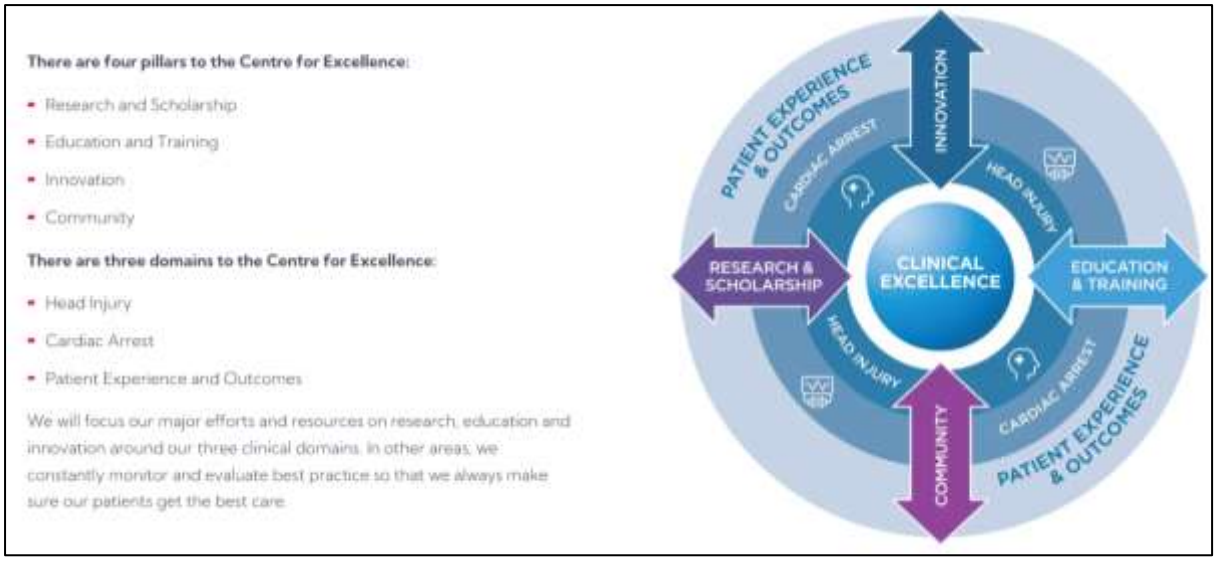
Induction at EHAAT

At the start of the placement, we were met by one of the charity volunteers who showed us around the bases and explained how the charity operated. This was useful as whilst I was aware of the charity funded nature of UK HEMS, I had never considered it in such detail.

From there we were given a clinical induction to the equipment used, vehicles, and issued the required Personal Protective Equipment (PPE) for our placement.

We were then introduced to the various members of the team who we would be working alongside during our placement.

A core area of focus at EHAAT is their research strategy, under its Centre for Excellence strategy (shown below).



This approach to research was explained to us as placing greater emphasis on those clinical domains, to focus research on these in an effort to improve patient outcomes, and given the relative lack of high-quality prehospital research in some of those domains.

Clinical Governance

A core part of the work that we saw at EHAAT was the intensive clinical governance process that underpinned the care offered.
This took various forms, from clinical standards and guidelines to the use of case review and audit.

Weekly we had the opportunity to engage in the Death & Disability review, which consisted of cases selected either by pre-defined criteria (such as patients undergoing thoracotomy), or by crew/consultant decision.

This was an interesting experience in the learning environment that had been fostered, with areas for improvement freely discussed.

It struck me that whilst such learning would be a great addition to NHS work, the time taken, and high-trust environment that underpin this approach may not currently exist in all work environments.

Operational shifts

Due to recent organisational changes, we were restricted to RRV shifts that ran out of North Weald overnight.

Arriving at the base early gave me the opportunity to meet the crew I'd be observing, help with kit checks, and observe the various processes of equipment and drug sign out.

A handover would be taken from the outgoing day shift, followed by a team brief. This was a very detailed briefing that covered all aspects of the upcoming shift ranging from weather conditions, any road closures etc, to our own readiness for work and fatigue levels.

From there it was a case of waiting for dispatch, and in that meantime either resting, or using the facilities available for simulation/training, or research/audit.

I was fortunate to respond to a number of incidents during my allocated shifts.
These ranged from cardiac arrests, road traffic collisions, assaults, and medical emergencies.

It was interesting to see where the HEMS team could compliment and work alongside the existing ambulance crews, and how this relied so much on both the communication skills and the preexisting reputation of EHAAT amongst local crews.

Research and Student Projects

EHAAT has a great range of projects, audits and research for students to be involved in, covering all aspects of prehospital care.

Teams within the operational side may focus on areas of practice such as anaesthetics and airway management, and within the organisation there is infrastructure available to support larger projects and studies.

I spent some of my placement for example, examining the literature on pupil reactivity/size in cardiac arrest, to feed into some research on how this may be used to prognosticate.

My key reflections and takeaways

Human factors – it was refreshing to see human factors being approached in such a consistent way, and whilst this is slowly coming into other areas of healthcare, I feel there is a long way to go before I see a similar standard to that within EHAAT.

Clinical governance – it was interesting to observe the process of clinical governance, and how it was seen not as an add-on to daily practice but embedded within it. For example, it could be seen in D&D how crew experiences fed into changing practices, equipment etc.

Again, whilst I have experienced aspects of such governance in other organisations, this was the first time I had seen it be used in a manner as agile and responsive to those caring for patients.

Psychological input – the team had dedicated psychological support, given the nature of the incidents they attended, but also there was a dedicated family liaison team. This was viewed as positive both for crews and those they had attended including their wider network.

Follow up – one of my key frustrations when working as a paramedic was the lack of follow up available, in order to learn and improve practice. It was great to see the systems that had been put in place to facilitate follow up, both from hospital and pathologists (in the case of

patients who had sadly died). The system had obviously taken a significant amount of time and effort to set up, in order to manage patient data in an appropriate and compliant way, but the benefits were obvious both for crew wellbeing and for learning.

Overall, my elective with EHAAT was a great learning experience and I would recommend the FPHC programme to anyone with an interesting in PHEM or emergency medicine!

I'd like to thank those at EHAAT and the FPHC for facilitating this programme.