

Faculty of Pre-Hospital Care HEMS Elective Report 2026

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Introduction

I had the privilege of undertaking a 4-week elective with The Air Ambulance Service (TAAS) and West Midlands Ambulance Service (WMAS). The elective was the highlight of my time as a medical student, and it served as a fantastic insight into the world of pre-hospital emergency medicine (PHEM). Prior to the elective, I had already been keen to pursue a PHEM career – but now even more so!



Understanding the role of HEMS within UK pre-hospital care

The elective commenced with WMAS shifts, providing an important context to how emergency services operate, and how HEMS integrates into these. I first undertook shifts on double-crewed ambulances. We responded to a wide variety of presentations ranging from falls and chest pains to mental health crises. I learnt about the equipment and medications available to clinicians on standard ambulances, and their remit for treating and/or conveying patients. As I discovered later during the elective, an understanding of the capabilities of ambulance crews is vital for HEMS clinicians, allowing them to work together in a highly effective team. In addition, my time with WMAS highlighted operational pressures facing ambulance services, such as handover delays at busy emergency departments.

I also visited the WMAS Emergency Operations Centre. I joined 999 call handlers, ambulance dispatchers, and the trauma desk coordinating HEMS responses. It was interesting to see how information obtained early in 999 calls evolved, often resulting in upgrading or downgrading the call priority, in turn influencing the dispatch of resources. I learnt about the specific dispatch criteria for HEMS, and how calls are interrogated to determine whether HEMS would be likely to provide additional benefit over other ambulance resources.

Joining a HEMS crew as a medical student

TAAS is a HEMS service that primarily covers Derbyshire, Leicestershire, Rutland, Warwickshire, and Northamptonshire. There are two TAAS crews on shift 24/7 based out of North and South sites. Crews consist of a critical care paramedic, a HEMS

doctor, and a daytime helicopter pilot. During daylight, crews have the option of mobilising to scene in either the helicopter or the response car. The choice between road or air depends on multiple factors, often including distance and weather conditions. After dark, it becomes riskier for the helicopter to land on scene, where there might be unexpected wires or fences that become challenging to spot. Instead, crews respond by road at night.



I undertook day and night shifts with the HEMS crews across both bases. I was both excited and nervous before my first shift. However, the latter soon dissipated as I met with the crew, who were incredibly welcoming and keen to show me the ropes. On my first morning, I was briefed not only on safety but also what to expect as the team was dispatched. Not long later, the phone rang with a tasking for us! We then undertook a coordinated sequence that was repeated for every air response I joined during the elective. First, the pilot would obtain a compass bearing before heading out to start the aircraft. I would leave our office with the pilot to secure myself in the aircraft before the rotors started, whilst the doctor and paramedic obtained further details of the case then joined us just as we were ready to take off. Amazingly, we often lifted off within 3 to 4 minutes!

On route to scene, the paramedic helped the pilot to navigate, and we were all responsible for spotting any potential objects in our path, like drones, cranes, and mobile masts. Once overhead at our coordinates, we needed to spot the actual scene - usually by looking for blue light vehicles or people waving - before making a safe landing as near as possible. After landing, we often had to climb over fences before reaching scene either on foot or with a lift from nearby police or ambulance vehicles. Remarkably, throughout this whole process, the HEMS clinicians were already



discussing potential plans for once they arrived on scene – including safety hazards; interventions or equipment required; how to extricate the patient; and where/how to convey the patient.

The most common cases I attended were road traffic collisions, cardiac arrests, and falls from height. I was able to learn about the interventions and benefit that HEMS can deliver. For example, I observed how a pre-hospital blood transfusion raised the blood pressure of a peri-arrest trauma patient with a suspected internal haemorrhage, buying us sufficient time to convey the

patient to a major trauma centre. Another example that I observed was the stabilisation of a cardiac arrest patient following their return of spontaneous circulation using pre-hospital emergency anaesthesia with intubation and ventilation. Aside from specific interventions, HEMS crews also provided leadership, clinical decision-making, and support for relatives and bystanders.

I was really impressed by the situational awareness and adaptability of HEMS crews. On scene, crews not only had to manage unstable patients, but also needed to navigate lots of operational challenges. These included changeable or hazardous environments, equipment availability, communication with other resources like fire and police, and transport to hospital. Despite the multitude of factors to consider and the associated risk of becoming too task-focused, HEMS clinicians were still able to maintain the “big picture” perspective of a patient’s priorities. Another interesting aspect of the HEMS crews was their use of a flat hierarchy. This is a team culture where every team member is valued and encouraged to speak up if they notice an issue or have new information – including pilots and students! Whilst there was still a designated clinical leader, I saw that decision-making was always shared with input from the wider team.

Training and development opportunities

There was a big focus on continuous training and development at TAAS. In the downtime between taskings, we undertook ad hoc training and simulation. During these sessions, I practiced the application of limb splints and pelvic binders, and learnt how to use the equipment for intraosseous access. I also attended an organisation-wide training day, where we learnt about how the HEMS and ambulance service responses to major incidents is coordinated and delivered. There were also several opportunities for my own career development. I attended TAAS’s new doctor selection day, to observe how HEMS doctors are recruited. In addition, I took part in a focussed cardiac ultrasound course with the Royal College of Emergency Medicine.



Conclusion and thanks

I am grateful to the Faculty of Pre-Hospital Care, TAAS and WMAS for facilitating the placement. I would particularly like to thank Dr Caroline Leech for organising the placement activities and being so supportive.