

## Overview of a UK Air Ambulance service.

Dr. Dave Bramley\*

### Background

Anyone in the UK requiring emergency care will receive an ambulance and acute hospital care via an Emergency Department, all provided by the National Health Service (NHS). However the Air Ambulance Services in the UK are all charity funded. It should be noted that this concept is not unusual in the NHS: there is a vast network of charity-funded organisations working in partnership with the NHS for many different areas of healthcare, for example Cancer Research UK.

This article will consider issues surrounding the air ambulance service in the UK.

### History

The first air ambulance service became operational in the UK in the late 1980s and there are currently 15 charities operating a total of 25 helicopters (England and Wales, May 2008). The majority are crewed by two paramedics, however a steadily growing number use a doctor-paramedic partnership, thereby allowing advanced skills at the scene including anaesthesia, chest drainage etc.

Figures 1 & 2 show the current distribution of air ambulances in England and Wales [1].

Various funding models are used throughout the UK, with some charities funding and running the service, and others providing the funding for the NHS ambulance service who directly control operations.

### HEMS operations

The Great North Air Ambulance Service (GNAAS) model will be discussed for illustration. This charity covers the North of England (see figure 1) and operates three helicopters. Teesside always operates a doctor-paramedic partnership, Cumbria has doctor-paramedic for about 50% of shifts and paramedic-paramedic otherwise. Northumberland currently operates a paramedic-paramedic crew and operates five days per week. The service is during daylight hours only. It flies approximately one thousand missions per year covering predominantly trauma cases, but also medical emergencies especially in rural locations and ST elevation MIs which are

taken directly to centre providing Primary Coronary Intervention. Dispatch is by way of ambulance control, direct requests from ambulance crew and also a GNAAS paramedic reviewing all emergency („999“) calls to identify suitable cases.

It is entirely charity funded by individual donations, corporate donations (predominantly from local companies), volunteers organising fundraising events etc.

The three aircraft are contracted (with pilot) on a lease arrangement. GNAAS directly employs its own state-registered paramedics, and funds its Consultant doctors. It also accepts senior trainees in Anaesthetics or Emergency Medicine (registrar level) for subspecialist training in pre-hospital care (funded by their own training deanery). Appendix A outlines staff requirements. Note Pre-Hospital Emergency Medicine is currently undergoing development into a formally recognised medical speciality in the UK, but at the time of writing this has not been finalised.

GNAAS operates a rigorous governance package to ensure the following:

Compliance with the relevant regulations regarding aviation issues, charity regulations, a Clinical Governance package including staff selection criteria, mandatory training (appendix A), Standard Operating Procedures (approved by a Clinical Advisory Group), annual staff appraisal, bimonthly training days, audit, incident reporting/ risk management etc.

There has recently been the launch of UK HEMS [1], a body which aims to support clinical excellence in helicopter medicine which has worked closely with GNAAS to develop a National Governance package (for example the Standard Operating Procedures) such that all HEMS services in the UK may operate a similar system.

### Conclusion

The doctor-paramedic model of HEMS operation in the UK is expanding. The aircraft provision will continue to be charity funded, although NHS funding for staff may be achievable. The governance will be as rigorous as for any other healthcare service and UK HEMS will support organisations with regard to this.

\* Dr Dave Bramley MBChB MRCS FCEM DIMC HEMSCC  
Consultant in Emergency Medicine and Pre-Hospital Care  
The Great North Air Ambulance Service;  
Imperial Centre, Grange Road  
Darlington DL1 5NQ  
UK  
Email: dave.bramley@chs.northy.nhs.uk  
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**Appendix A** (see also figure 3)

Mandatory training in order to become GNAAS crew member:

Paramedics: Registered Paramedic with the Health Professions Council  
Member of the British Paramedic Association

Doctors:

Consultant in Emergency Medicine or Anaesthesia, or General Practitioner with suitable pre-hospital experience and a member of BASICS (the British Association of Immediate Care)

OR

Trainee doctor („Specialist Trainee“ with minimum of 4 years postgraduate experience) in Emergency Medicine or Anaesthesia with nominated consultant as educational supervisor.

ALL crew must complete the following:

Completion of Helicopter Emergency Medical Service Crew Course [3].

Completion of Great North Air Ambulance Pre-Hospital Anaesthesia Course.

Figure 1

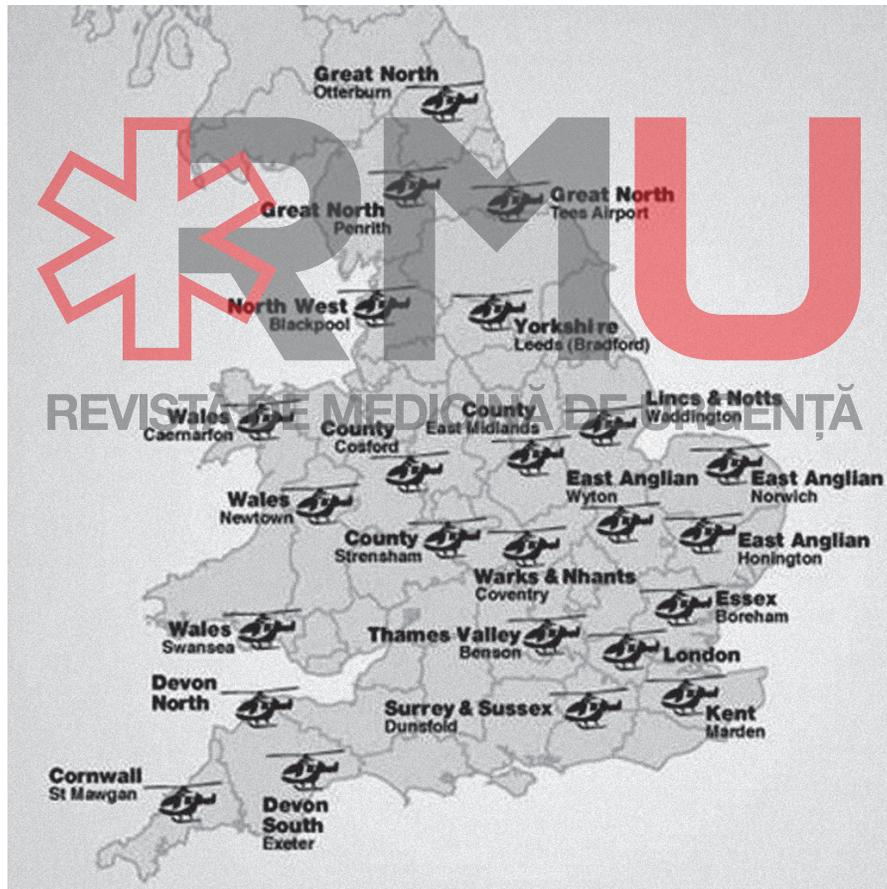


Figure 2. Helicopter Air Ambulances England & Wales

Service	Operational Bases	Aircraft
Yorkshire Air Ambulance Charity	Leeds Bradford Airport	MD902
	Sheffield Airport	MD902
Cornwall Air Ambulance Trust	RAF St Mawgan	EC135
Devon Air Ambulance Trust	Middlemoor Exeter	BK105
	North Devon	BK105
Warwickshire & Northamptonshire Air Ambulance	Coventry Airport	Augusta 109
Kent Surrey and Sussex Air Ambulance	Marden Kent	MD902
	Dunsfold Surrey	BK105
Essex and Herts Air Ambulance	Boreham Air Field Essex	EC135
Great North Air Ambulance	Teesside	MD902
	Cumbria	Dauphin
	Northumberland	BK105
London Air Ambulance	Royal London	MD902
Northwest Air Ambulance	Blackpool Airport	EC135
Lincs & Notts Air Ambulance	RAF Waddington Lincoln	MD902
County Air Ambulance	RAF Cosford	BK105
	Strensham	BK105
	Tatenhill Air Field	BK105
East Anglian Air Ambulance Trust	RAF Honington	BK117
	RAF Wyton	BK 117
Hampshire & Isle of Wight Air Ambulance	Southampton Airport	BK105
Thames Valley & Chiltern Air Ambulance	RAF Benson Oxfordshire	EC135
Welsh Air Ambulance Charitable Trust	Swansea	BK105
	Welshpool	BK105
	Caernarfon	BK105

Figure 3

Plus ongoing
<b>Annual mandatory training</b>
Life support / defib
Manual Handling
Pre-Hospital Anaesthesia
Aviation line check
<b>3 yearly mandatory training</b>
Infection control
Child protection
<b>Other</b>
Valid ATLS
Valid APLS
Valid MIMMS

#### References

1. <http://www.uk-hems.co.uk>
2. <http://www.greatnorthairambulance.co.uk>
3. <http://www.greatnorthairambulance.co.uk/pages/training/hcc>