

Air Ambulance Working Group

**AIR AMBULANCE SERVICE
(England)**

SITUATION AUDIT 2007

**Final Report
September 2007**

Contents

1. INTRODUCTION

2. FINDINGS
 - 2.1 The Air Ambulance Sector
 - 2.2 The Helicopter Fleet and Helipads
 - 2.3 Operational Management
 - 2.4 Staffing Arrangements and Training
 - 2.5 Clinical and Quality Systems
 - 2.6 Charity and Governance
 - 2.7 Finance and Performance

3. CONCLUSIONS AND NEXT STEPS

1. INTRODUCTION

The Air Ambulance Charities requested the Department of Health to establish an Air Ambulance Working Group (AAWG) to develop an agreed set of standards which describe an excellent helicopter emergency service. As part of this work the AAWG agreed to carry out a Situation Audit of the air ambulance service in England. The audit was carried out in August and September 2007. The Situation Audit covered the following areas:

- Service Information;
- Helicopter Issues;
- Helipad Issues;
- Operational Issues;
- Clinical Issues; and
- Charity and General Governance Issues.

14 air ambulance charities returned the audit form. The services that participated in the survey were:

- Cornwall Air Ambulance
- County Air Ambulance
- Devon Air Ambulance
- East Anglia Air Ambulance
- Essex & Hertfordshire Air Ambulance Trust
- Great North Air Ambulance Service
- Great Western Ambulance Service
- Kent Air Ambulance Trust
- Lincolnshire and Nottinghamshire Air Ambulance
- London Air Ambulance
- North West Air Ambulance
- Thames Valley and Chiltern Air Ambulance Trust
- Warwickshire and Northamptonshire Air Ambulance
- Yorkshire Air Ambulance.

The returns were analysed by an independent consultant to ensure anonymity. This report presents the findings from the Situation Audit 2007.

2. FINDINGS

2.1 The Air Ambulance Sector

Air ambulance services in England are provided by 14 charities of which 10 are independent charities with the others being NHS Corporate Trustees or independent charities with NHS representation on their Board.

The first service became operational in 1987 and the latest in 2003. Together the air ambulance service in England lease or own 24 aircraft, fly nearly 19,000 missions per year and serve 177 accident and emergency departments.

In the last year for which published accounts are available*, the service as a whole spent £19.4 millions and held £32.6 millions in reserves. The average and range of annual spend are given below:

	Average	Maximum	Minimum
Annual Spend £m	1.5	3.6	0.6
Reserves £m	2.5	7.6	0.0**
Years Covered by Reserves	1.7	3.8	0.0
Spend Per Helicopter £m	0.8	1.7	0.5

* Figures for 13 charities as financial information was not provided for one charity.

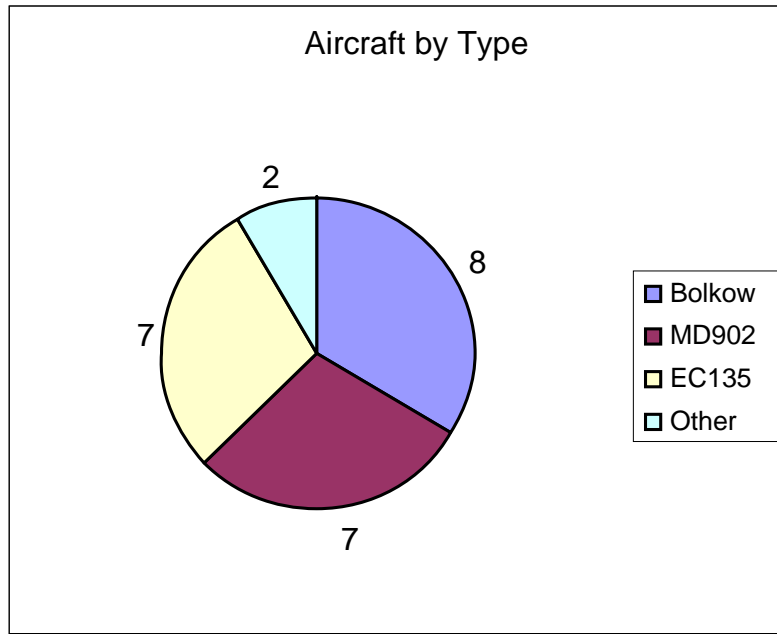
** Reserve may be held in another organisation since the service is unlikely to be solvent with no reserves.

The information on missions (total and by type) was not comprehensive or entirely consistent. However it has been possible to get a reasonably accurate estimate of total activity levels for 2006. It is estimated that the 14 charities flew some 18,850 missions in 2006 with Primary HEMS accounting for just over 70% of these and a further 26% aborted or stood down. The range of reported missions that were aborted or stood down varied considerably. Further work is needed to ensure the accuracy of the data before using breakdown by type of missions for planning or performance assessment. Transfers of patient accounted for 2.5% of missions with six charities accounting for nearly 90% of transfers.

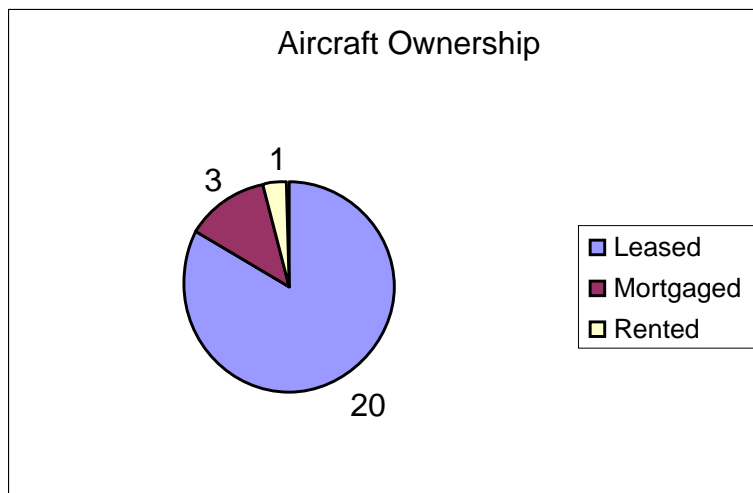
Information on the number of missions for 2004 and 2005 was not available for over half and a third of charities respectively, so it has not been possible to look at trends in activity levels.

2.2 The Helicopter Fleet and Helipads

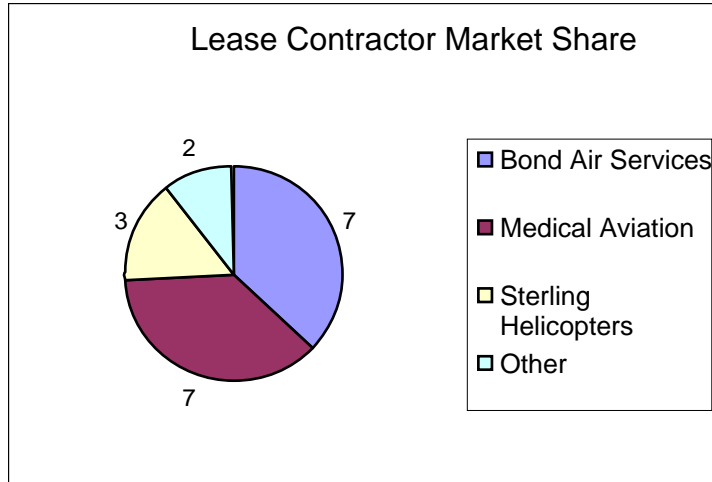
The 14 charities operate 24 helicopters of which three types (Bolkow, MD902 and EC135) each account for around a third of the fleet.



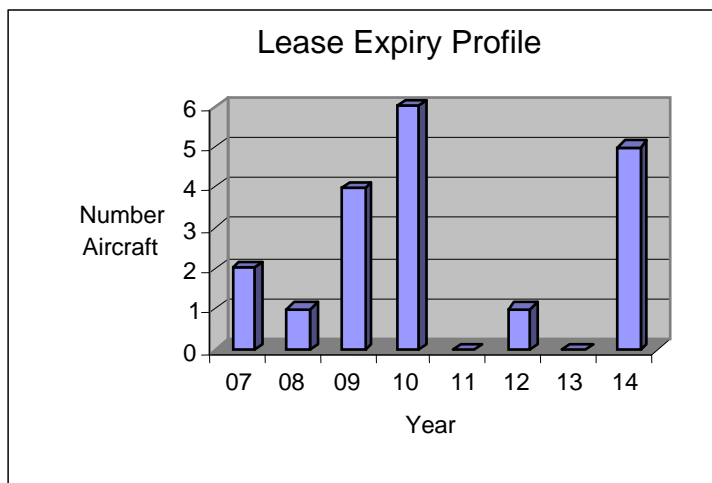
20 helicopters (83%) are leased. In the majority of cases (91%) the contractor holds the air operators certificate. Of the 20 helicopters leased, 60% (12) are leased by the charity and 8 (40%) by the ambulance service.



The lease contractor market is dominated by two companies (Bond Air Services and Medical Aviation Services) each leasing nearly 40% of the helicopters. The other major player is Sterling Helicopters with a sixth of the market.



The lease profile is shown below. There are significant lease renewals in 2009 (4), 2010 (6) and 2014 (5). This offers scope for collaboration between charities in securing the best lease terms, particularly given the dominance of the lease market by a few players.



The aircraft flew from 24 bases. 13 of the charities reported adequate bases (permanent and temporary) and 6 had temporary bases.

Of the 177 A and E departments services by the air ambulance charities, just over half (55%) have acceptable landing sites. However half of the landing sites have required land transfers to convey patients from an adjacent site.

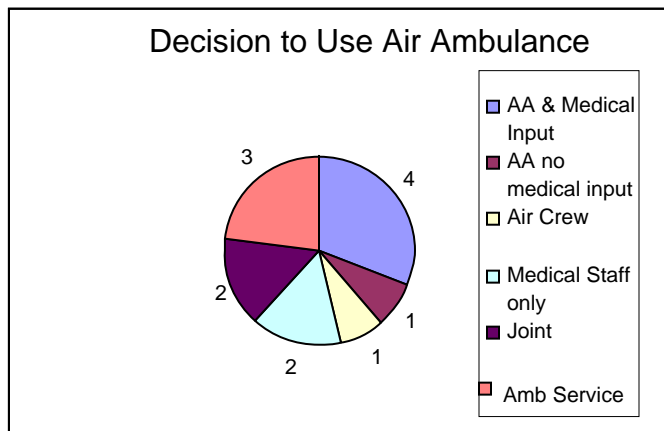
Eight sites are old landing sites which only continue through 'grandfather' rights. 11 helipads have closed over the last five years.

Just over a third of charities had plans to fly night HEMS within a year and another third within five years. Nearly a third had no plans to fly night HEMS. Nearly two thirds of charities would be willing to do critical care transfers, provided in the majority of cases they were funded. 14% would be willing to undertake transfers at night but 14% would not be willing.

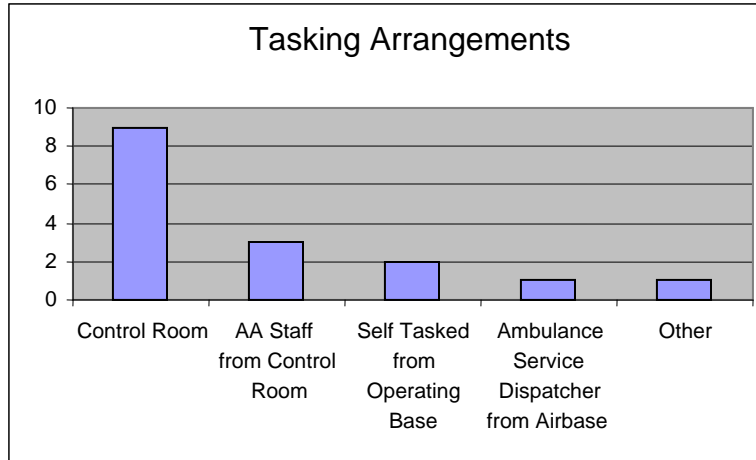
Three quarters of services reported never or rarely paying landing fees. Of those that did, two paid at the landing base and one at locations near the hospital. The furthest distance flown averaged 20 minutes, with the longest time being 30 minutes and the shortest 12 minutes.

2.3 Operational Management

The decision making process to use an air ambulance varies considerably as shown below. While this may reflect the fact that respondents were asked to describe their own arrangements, allowing similar arrangements to be described slightly differently, there is potential benefit in sharing in more detail the way in which use of the air ambulance is authorised. With regard to the decision to use an air ambulance, air ambulance staff are solely or jointly responsible in three quarters of services and medical staff involved in the decision in about half of the services.



The pattern of tasking arrangements is shown below. Tasking arrangements are mainly from the ambulance control room (75%) with air ambulance staff in the control room in a third of these. Some had more than one arrangement.



The quality of tasking arrangements was assessed as satisfactory or better in ten of the charities with only one assessing them as poor.

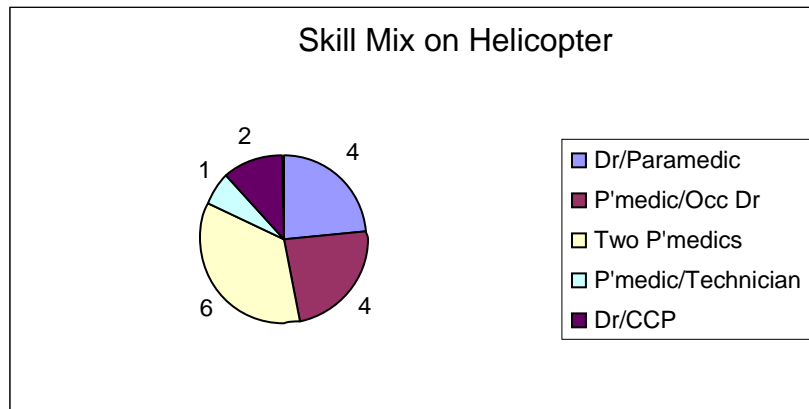
Hours of operation in summer averaged just over 12 hours and just under 10 hours in winter. The median summer operating hours were 10/11 hours with only one service operating more than 14 hours. The median winter operating hours was dawn to dusk (8 hours). Five charities expected to fly night HEMS within a year and a further five within five years. The remaining four had no plans or did not reply.

Half the fleet sourced their fuel from the base airfield with just over a third from the contractor. Two aircraft sourced their fuel from the refinery.

The most common data management system used is Easy Task (60% of services) with nearly a third by using another service (primarily the ambulance service). Data collection was carried out equally by the ambulance service and the charity.

2.4 Staffing Arrangements and Training

Staffing arrangements on the helicopters vary considerably with different combinations of paramedics, doctors, technicians and critical care practitioners on board. The variation in skill mix on the helicopters is shown below. One charity had different skill mixes on different aircraft.



Employment of paramedics and doctors also varied. In the case of paramedics nearly a fifth of the charities employed paramedics themselves with the others using paramedics employed by the ambulance service and either seconded or rotated. The audit did not ask detailed questions about the contractual relationship between the ambulance service and any particular charity but these are obviously key when staff are seconded or rotated.

Of the 10 services with doctors on board, the charity is the main employer (42%) with the hospital and volunteers accounting for 25% each. As with the paramedics the contractual relations between the different organisations were not explored but are critically important in terms of governance and accountabilities.

Nearly all charities employing doctors require demonstrated competencies in emergency medicine and all require doctors with a minimum level of competency at specialist registrar or above. Aero medical training was provided through the HEMS Contractors Course in six charities with in house training in another five.

The specialty requirements vary between the services. Seven charities (nearly three quarters of those employing doctors) want specialists in anaesthetics and/or Intensive care and half in emergency medicine and/or A and E. Two charities specified pre hospital care.

2.5 Clinical and Quality Systems

The audit asked questions about clinical supervision, quality systems and formal signing-off competency protocol. The findings from this are:

- clinical supervision was provided by the ambulance service in the majority of charities (80%) with the others being provided by a mixture of a hospital, the charity or another external service. Some charities had more than one organisation responsible for clinical supervision;
- 11 charities stated that they had complaints and critical incident reporting systems in place with the other 3 charities not replying. There was a significant reliance on systems in the ambulance service;
- the auditor of missions was almost equally divided between the ambulance service, the charity and others;
- as with other quality systems, formal competency sign-off protocols were reliant on the ambulance service (half) with the Medical Director being responsible in a fifth of charities.

Comments made in the responses together with the limited delegation by the Board of responsibility (see Section 2.6) raise questions about the robustness of arrangements within some charities.

2.6 Charity and Governance

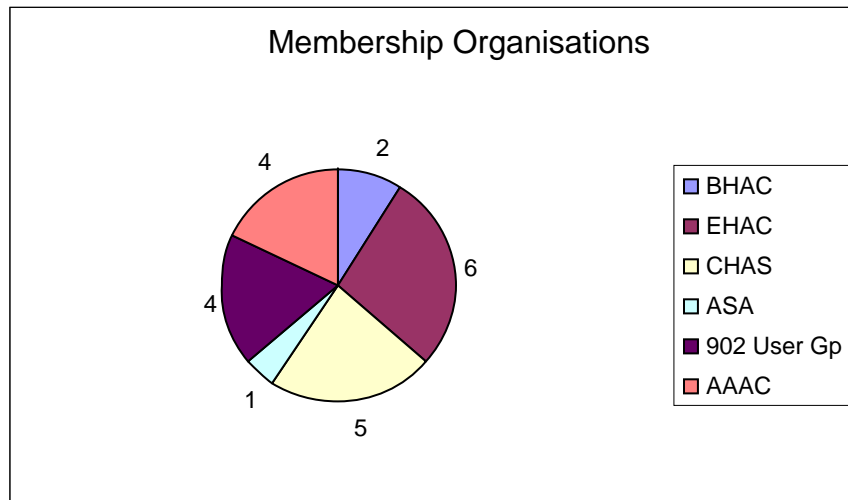
The majority of charities were independent charities (10) with three being NHS Corporate Trustees and one an independent charity with NHS representation of its Board.

All the charities had chairmen in post and all but one had a Chief Executive or Principal Officer in post.

Formal delegation of powers by the Board varied considerably. Three charities had delegated authority to the ambulance service, four to the executive management team and one to a contractor (some charities had delegated to a combination of the above). Eight charities had made no formal delegation or did not reply.

The Medical Director and Operations Director/Manager were mainly employed by, or seconded from, the ambulance service (60% and three quarters respectively) with the charity being the employer in a quarter of instances.

Most charities belonged to one or more external organisations but no external organisation had a majority of charities signed up.



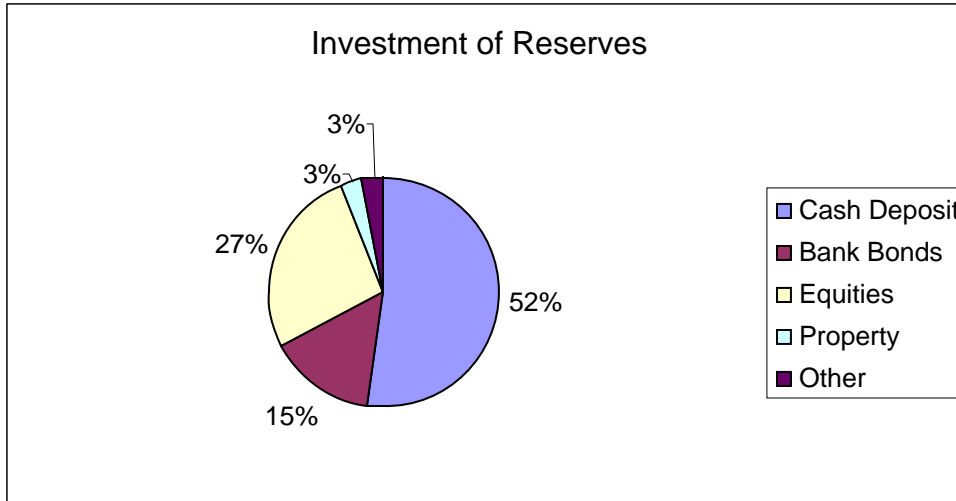
Only one charity had undertaken any work with regard to its environmental footprint and this at a very basic level.

2.7 Finance and Performance

During the last full year for which accounts are available, the charities spent £19.4 millions (one charity did not provide the information). Annual spend varied between £0.6 million and £3.7 million. In assessing levels of spend no attempt has been made for costs which are incurred by other organisations and not fully charged to the charity (for instance consumables) or 'lumpy' spend (lease payment patterns or one off costs). As such comparisons between charities should be treated with caution.

Drugs and dressings were paid for by the ambulance service for 11 charities (nearly 80%) with three charities funded by the charity themselves and one by a hospital. One charity had a combination of payors.

Reserves stood at £32.6 million for the 13 charities with the level of reserves varying from nil (where reserves may be held by another organisation) to £7.6 million. These are mainly invested in cash deposits followed by equities, as shown overleaf.



The data provided by the charities has been used to give some indicative indicators of performance. These are intended to show the type of indicators that could be developed but given the problems with the consistency and comparability of the data, further work is needed before they can be used as the basis for comparisons between services. In addition the indicators focus on expenditure and activity and do not cover administrative costs, clinical issues or income raising activities.

Indicator	Average
Missions per aircraft pa	857
% Mission Stood Down/Aborted	26%
% Missions that are Transfers	3%
Spend Per Helicopter £'000s	843
Spend per Mission	£1,229
Reserves: Annual Spend	1.7

Maximum and minimum for charities not shown as data do not allow for meaningful comparison at individual charity level.

3. CONCLUSIONS AND NEXT STEPS

The Situation Audit provides an overall picture of the work of the 14 air ambulance charities in England and provides the basis to develop an agreed set of standards which describe an excellent helicopter emergency service. This is likely to be a combination of descriptions of best practice and performance indicators. However there are a number of areas where further work is needed before this can be done rigorously and in a way that allows comparisons to be made between individual services. These include:

- ensuring clarity and consistency of definitions;
- accurate and consistent measurement of activity;
- some of the descriptive answers need to be defined more clearly before best practice can be identified and described;
- gaining a better understanding of the staffing, contractual and financial relationships between the ambulance services, contractors and the charities;
- developing performance indicators to include clinical outcomes.