Northern Ireland Ambulance Service
Health and Social Care Trust

AIR AMBULANCE
NORTHERN IRELAND
CHARITY

HEMS SPRING REVIEW REPORT

NIAS /AANI

March 2018
V1.0 FINAL

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Approval

Version	Name	Responsibility	Date
V1.0	Ray Foran	AANI Trustee	24 May 2018
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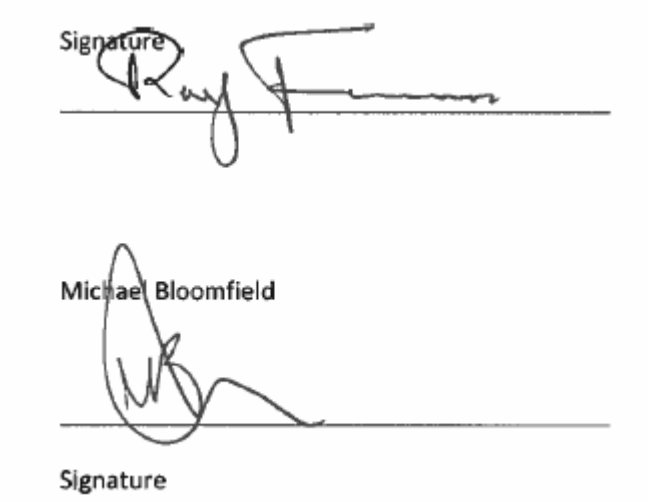

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1. Introduction

The Helicopter Emergency Medical Service (HEMS) went live at the end of July 2017. The service is delivered through a partnership with the Northern Ireland Ambulance Service (NIAS) and the Charity, Air Ambulance Northern Ireland (AANI). Both parties have signed up to an agreed memorandum of understanding (MoU) setting out the various roles and responsibilities with the Health and Social Care Board as an interested party. Paragraph 4.2 of the MoU states that "*both the Trust and the Charity are responsible for undertaking timely (at least bi-annual) reviews of performance against agreed objectives, service quality standards and targets as detailed in the MoU. The Association of Air Ambulances (AAA) provides a framework[1] for best practice, both parties will review performance using this assurance framework to demonstrate levels of compliance with the MoU*".

This report provides the first Spring review of the service.

2. Background and Timeline

2014: In May 2014 AANI convened an "Air Ambulance Summit" at St Angelo Airport, Enniskillen attended by the Health Minister, senior representatives of the Northern Ireland Ambulance Service, HSCB, DoH and other public representatives supporting the service.

2015: July 2015, Air Ambulance NI registered as a company limited by guarantee and registered as a charity with Charity Commission NI in September 2015. In September, the same month, in the wake of the tragic motorcycling death of popular HEMS campaigner Dr John Hinds, the HEMS4NI campaign submitted a petition to Stormont with 84,500 signatures in support for the service. AANI submitted an application to HM Treasury for substantial seed funding sourced from LIBOR fines. On 3rd September 2015, the then, Minister for Health, Simon Hamilton MLA, announced his decision to invest in the development of both the Regional Trauma Network and a Helicopter Emergency Medical Service (HEMS) for Northern Ireland. An 8 week public consultation on establishing HEMS for Northern Ireland commenced in Nov 2016. One of the outcomes of the consultations was that AANI be appointed as the charity partner for the service.

[1] Association of Air Ambulances, Framework for a High Performing Air Ambulance Service 2013.

2016: March 2016, Chancellor George Osborne confirmed approval of £3.5m and £1m of matched funding for the Charity "to help establish an emergency helicopter medical service in Northern Ireland".
AANI supported by BSO PALS ran an OJEU procurement for the aviation element for the HEMS service. This contract was awarded to Babcock Mission Critical Onshore Services Limited.
2017: On 1st March 2017, the former Minister for Health, Michelle O'Neill MLA, confirmed that HEMS would be introduced in Northern Ireland, proceeding with a doctor-paramedic model located at Maze Long Kesh.
22nd July 2017 – Service went live. Official launch date 2nd August 2017.

3. Objectives

3.1 Northern Ireland Ambulance Service

The establishment and implementation of HEMS for Northern Ireland set out to achieve a number of objectives as outlined in the NIAS Outline Business Case.

The following table sets out the performance to date, against these objectives. It is noted that there have been delayed timescales outside of both NIAS and AANI control which have impacted on the ability to achieve the objectives within the original timeframes as outlined in the outline business case. Most of the objectives have however been achieved or partially achieved to date.

Table 1: Performance against Objectives

Objective	Target	Performance against targets
Patient Safety and Quality of Care		
To enhance patient care in cases of major trauma and time critical medical emergencies through the provision of a regional co-ordinated pre hospital emergency care system supported by helicopter air transportation	By Nov 2016 have an agreed and operational MoU in place with the designated Charity AANI to support the implementation of HEMS. By end Mar 2017, have established operational HEMS in Northern Ireland. By end Mar 2017 have in place a HEMS Clinical Advisory Group (CAG) with representation from the Regional Trauma Network. By end Mar 2017 have established clinical pathways for HEMS operations.	Signed MoU in place Nov 2016 April /May 2017 Operational team recruited. Jan 2016 Clinical Advisory Group established as part of regional trauma network including HEMS. Mar 2017, pathways established. Some delays in meeting the initial targets impacted by the delays in decision to approve the start of service.
To deliver a physician / paramedic operational model for HEMS	By end Feb 2017 to have recruited a minimum of 6 HEMS paramedics. By end Feb 2017 working with Charity partners facilitate HEMS training for up to 10 staff (2*Op and Clinical Leads, 6*HEMS Paramedics and 2 additional paramedics to provide service resilience) By end Mar 2017 to establish HEMS with a doctor/paramedic model employing the equivalent of 4WTE doctors on a rota to cover 23 PAs per week /52 weeks per year.	7 paramedics including Operational lead recruited by end May 2017 HEMS training for 10 staff completed by end June 2017 Doctor recruitment completed by end May 2017, equivalent of 4WTE doctors. (Clinical Lead and 15 doctors to operate the HEMS rota)
To deliver best outcomes for patients by ensuring	By end Mar 2017 have established standard operating procedures for the	Tasking protocols and SOPs established by August 2017

rapid access to the most appropriate specialist trauma and acute services across Northern Ireland particularly within the first hour.	tasking of HEMs to appropriate incidents. By end May 2017 to have processes in place to enable the audit and review of HEMS missions on a weekly basis by the HEMS Operational Lead and Clinical Lead. All HEMS patients to be appropriately triaged to the Major Trauma Centre with the commencement of HEMS. By Mar 2017, the CAG will have established baseline Clinical Performance Indicators reviewing HEMS clinical performance and patient outcomes on a monthly basis against estimated predictions of circa 445 trauma cases per year. Estimates across the UK are that on average the helicopter is offline 9% of the time due to essential maintenance, weather conditions or other. Air operations should be offline for no more than 9% of the operational hours.	By August 2017 and ongoing – audit and review of HEMS missions processes established. Ongoing monitoring of appropriate triage to the RVH, (the proposed MTC) in place and reported as part of performance review. Development of Clinical Performance Indicators is ongoing work with ongoing monitoring and recording of number of HEMS missions. AANI carry out contract review meetings with Babcock MCSO Ltd. Performance and availability of the helicopter is 97.2%
To enhance the quality and safety of patient care by ensuring equity of access to emergency care especially for patients in rural or remote areas through the provision of HEMS.	Prior to commencement of HEMS in Mar 2017, establish with Charity partners Air Ambulance NI (AANI), a HEMS base at a central location in the Greater Belfast Area. Based on dispersion of trauma data estimated at circa 445 per year - at least 60% of incidents to be reached within a 15 minute flight time or less,	Base for both Charity and Air Operations has been established at Maze Long Kesh Current KPIs indicate that 80.7% of incidents are reached by HM23 within 20 minutes.

	-A further 30% between 16 and 25minutes flight time and; -10% reached > 25minutes Regionally, all patients to have equity of access to definitive care at the MTC within a transportation flight time by HEMS of no more than 40 minutes from the furthermost point.	Table 10 provides a further breakdown on percentage of calls and time boundaries.
Service Improvement		
To support affordability and value for money for the service delivery by establishing a long term sustainable funding model using other UK HEMS services as a benchmark.	Complete quarterly allocation and monitoring of Libor funding to Charity. Review charity's financial accounts on an annual basis. HEMS Management Board to meet as a minimum 4 times per year to review HEMS service provision.	Financial monitoring processes have been established. Charity produce quarterly management accounts to Finance Director at NIAS. Annual accounts for year ending March 2017 have been received by NIAS from AANI. HEMS Management board established and meeting monthly to date.
To establish effective data collection and audit on a regional basis to inform and improve HEMS development and service improvement.	Report against commissioning targets for HEMS on a monthly basis. By end March 2017 install, test and implement additional software modules specific to HEMS dispatch on the C3 Command and control system at the HEMS Dispatch desk. Monitor and review tasking of HEMS on a weekly basis against estimated predictions of circa 445 significant trauma cases per year.	Monthly Performance is reported at management board meetings. Airdesk is fully operational at NIAS Emergency Command and control (at Knockbracken HQ) No of missions monitored on a monthly basis. 297 activations over 8 months – within estimates of 1-2 per day. Tasking and stand down rates are monitored as part of the performance reporting. To date the number of HEMS missions are within the estimated range.

	Based on weekly monitoring establish baseline indicators for number of “stood down” missions.	
To support the Major Trauma Network (when established) and contribute data to a Northern Ireland Trauma Audit or as part of a national collection of data.	Establish procedures between NIAS, Major Trauma Centre and the Regional Trauma Network when it is established to share quality data and measure patient outcomes regionally. By March 2018 to contribute data to the Trauma Audit Research Network (TARN).	Process is ongoing – HEMS/NIAS represented on regional trauma network NIAS maintains a clinical database which is becoming TARN compliant through ongoing liaison with TARN co-ordinators. Current PRF requires rework on some fields to ensure TARN data is captured. Work is ongoing.

3.2 Air Ambulance Northern Ireland Charity

Air Ambulance Northern Ireland (AANI) fundraises for and manages the aviation service for the Helicopter Emergency Medical Service (HEMS) in Northern Ireland. The helicopter, pilots, maintenance and crew training service are contracted from Babcock Mission Critical Services Onshore

AANI have successfully secured a total of £4.5m in grant funding from the Banking Fine Libor Funds. £3.5m is guaranteed, whilst, £1m can be drawn down when the charity has raised £1m.

The £4.5M was allocated in two tiers:
Tier 1.
An initial grant of £3.5 million for the set-up of the operational HEMS in Northern Ireland and to ensure ongoing operations for the first 22 months.

Tier 2.
A second grant of £1m awarded to AANI on the basis that the Charity could raise an additional £1m in match funding within the first 22 months of operation.

In the AANI application to the Chancellor, AANI outlined a four-year business plan, whereby, over the first four years of operations the charity will become fully self-funding i.e. capable of raising the £1.8m required each year to operate the service. In keeping with the NI Charity Commission recommendation, it is AANI policy is to work towards the charity having a healthy circa one year of operating costs in reserves.

Table 2: Performance against objectives AANI

Objective	Performance against Objective
The Charity will fund raise extensively throughout Northern Ireland. The objective of the fund raising is to ensure:	
1. Within the first 22 months that we match the second grant of £1M in match funding from the Banking Fine Funds.	In the Libor application AANI estimated that the charity fundraising would increase from £390k in year 1 to £1.8m in year 4. AANI raised £302k prior to the 1st of April 2017. During the eleven-month period from 1st April 2017 to 28th February 2018 AANI raised £ 725,972.29 AANI has raised in excess of £1m with the 22 months.
2. There is enough funds raised in year 3 to fully fund year four of the Air Ambulance operation;	Based on the fundraising performance in year 1, AANI are confident that they will raise enough funds in year 3 to fully fund year 4 of the charity's area of responsibility for the service.

3. There is a momentum in the fund raising to ensure that in excess of one year's full operating cost can be raised within any 12 month period. This will enable the Charity to build up reserves, as per Recommendations of the Charity Commission.	The long-term success of the charity is vital, the Trustees recognise that the initial stage in establishing the Charity and having a HEMS operational in Northern Ireland is only the beginning. The long-term sustainability, whereby the Charity can continually raise funds to keep the aircraft operational, is the key objective for the Trustees and the dedicated Charity staff. We have confidence that the four year plan and the development of the organisation will deliver the long term future and objectives of the Charity. The achievement of this 4-year business plan will ensure AANI is in a strong financial position.

4. Service Quality Standards

Sections 6 and 7 of the MoU and the subsequent appendices 1 and 2 set out the services to be delivered by the Trust and the Charity and their respective roles and responsibilities. These are reviewed within the context of the AAA, Framework for a High Performing Air Ambulance Service 2013.

4.1 Trustees and Governance

Air Ambulance Northern Ireland (AANI) is a Private Limited Company by guarantee without share capital and with use of 'Limited' exemption, and was registered on 22 July 2015. Air Ambulance NI is a registered charity with the Charity Commission of Northern Ireland and is governed by its Articles of Association and Memorandum of Understanding.

The Board of Trustees is made up of the five founding directors. This voluntary board includes a Chairman and Vice-Chairman who are appointed by ordinary resolution of the board, formal board meetings occur monthly.

The existing board of trustees has been convened to take account of the skillsets required to develop an air ambulance charity. These skillsets include fundraising, administration of non-profit organisations, strategic business planning, public private partnership management, marketing and aviation expertise.

Strategic direction in the period has been determined by the Trustees as represented in the charity's submission of its strategic and operational plans to HM Treasury, approved in March 2016. Representatives from the board of trustees meet regularly with principal contractor Babcock MCS Onshore and Northern Ireland Ambulance Service to co-ordinate operational activity and enhance external cooperation.

The charity is a member of the Northern Ireland Council on Voluntary Action, Institute of Fundraising, Fundraising Regulator as well as the Association of Air Ambulances, the representative body for Air Ambulance charities in the UK that not only acts as an effective single voice for the AA community with central government, but which also oversees the activities of the Air Ambulance Association Charity.

Risk is managed through the maintenance of a risk register in partnership with the Northern Ireland Ambulance Service, and reported through the HEMS Management Board which is representative of Senior Executive Management from both NIAS and AANI. The group is constituted to support the delivery and strategic development of the HEMS service and meets no fewer than 4 times per year, to date meetings have been held every 4-6 weeks as the service has been established.

4.2 Clinical Standards and Clinical Governance

NIAS has overall responsibility for clinical standards and clinical governance working within the structures of the Medical Directorate.
The service is managed on a day to day basis by the HEMS Operational Lead supported by the HEMS Clinical Lead with a team of 6 paramedics and a sessional rota of 15 Doctors. The team of doctors have specialities in Emergency Medicine, Anaesthetics and Intensivists.

A Clinical Advisory Group has been established as part of the Regional Trauma Network and HEMS is represented by both the Clinical and Operational Lead. The HEMS team also hold regular Clinical governance days, to review clinical practice and learning outcomes.

Performance measures are in place linked with KPIs and service delivery. Clinical Audit processes are still developing as the service matures. All patient records are recorded on paper and are transferred into an electronic data base. Recording of patient data is in line with TARN to ensure that this will make an effective contribution to the gathering of TARN data. TARN sits outside of the control of NIAS and HEMS and data is held within the other Trusts who receive patients from HEMS. Work is ongoing to ensure that the prehospital data from HEMS is identifiable and compliant with the requirements of data collection for TARN.

Clinical Risk and Serious Adverse Incidents (SAIs) are managed using the Trust's Risk Management Structures.

The Pharmacy license was granted by Victoria Pharmacy. The pharmacy infrastructure and Standard Operating Procedures (SOPs) were internally and externally peer reviewed to ensure they met the required standards. These SOPs included control drug registers, storage of controlled drugs, storage of non-controlled drugs, delivery of controlled and non-controlled drugs and the signing in and out of these drugs. Several audits and inspections took place before the license was granted. A random inspection and audit has shown compliance with these procedures to date. Intermittent audit process will continue as part of the ongoing licensing process. Additional security measures were implemented at the MLK base in order to meet required standards. NIAS and AANI facilitated these measures both in terms of infrastructure and financial support.

Agreed Standard Operating Procedures and Clinical Operating Procedures are in place, and are also peer reviewed by the Clinical Advisory Group and benchmarked with other UK services.

4.3 Operational Management

The operational Management of the service is based on the principles of Crew Resource Management as outlined in the AAA Framework. CRM is an essential part of air ambulance operations and encompasses a wide range of knowledge skills and attitudes including communications, situational awareness, problem solving, decision making and teamwork. In a HEMS environment all elements of CRM are intensified with the combination of aviation and medical decision making.

The service operates a daylight service from 7am -7pm, 7 days per week and is focused on trauma with clear pathways established with the Royal Victoria Hospital as the proposed Major Trauma Centre and other Trusts.

AANI manage the aviation contracts with Babcock for the service, whereby Babcock MCSO Ltd are responsible for providing two EC135 helicopters, experienced pilots, maintenance and Crew Resource Management training.

4.4 Dispatch

The Trust is responsible for the tasking of the aircraft and has established a fully functioning air desk at the Emergency Ambulance Control centre. The air desk is operated by a HEMS paramedic at all times.

During the early establishment of the service the air desk had been located at the base in MLK, as measures were put in place to get the service operational in a short period of time. The technology however did not benefit from the full functionality of an integrated communications and control system (ICCS) and tasking was limited to silent monitoring of all the calls. There remained a risk to business continuity should web services be lost and a continued risk that calls might be delayed or at worst missed.

In order to mitigate against this risk, a pilot was initiated in January2018 to relocate the air desk to the Emergency Ambulance Control Centre to ensure

that there was full system availability should there be any power outage. It also offered the facility to active as well as passive interrogation of calls with better efficiency in tasking the helicopter. The pilot was extended into February 2018 ; the outcomes demonstrate improved call to decision times, as well as the ability to actively and passively interrogate calls. We will continue to review how this impacts on stand down rates and appropriate tasking. Location at EAC fully mitigates for business continuity arrangements and is informed by expert advice from other UK services in particular London Ambulance Service.

4.5 Staffing and training

The service is staffed by a HEMS Operation Lead, HEMS Clinical Lead 6 paramedics and 15 doctors who operate a sessional rota.

There are high standards of training for the whole team broken down into daily, monthly, bi-annual assessments and annual assessments.

All HEMS paramedic staff have undertaken a 2 week mandatory HEMS training course and all doctors have benefited from CRM training.

Annual Training

Each paramedic is required to pass an annual ‘aviation line check’ assessment to ensure aviation confidence and competency. This assessment is facilitated by the local Babcock pilots.

Each HEMS paramedic has undertaken an in-house air-desk training course, facilitated by NIAS Control Training Department. This training provided the HEMS paramedic knowledge on dispatch, how to actively and passively monitor calls, interrogate and then to provide the operational crew the exact location of the incident. Communications between the air-desk, aircraft, road paramedics, call takers and other emergency services is co-ordinated via the air-desk paramedic during HEMS activation. The dispatch audit is regularly reviewed by the Operational Lead based on data from NIAS Information Department.

Daily Training

Daily training is mandatory for all operational HEMS team. This training carried out is on a simulated basis and encompasses all ‘skills and drills’ the team would be expected to carry out during their normal HEMS duties. This training is facilitated by the Operational Lead and/or Clinical lead and is recorded on a training database. Each paramedic and Doctor performs a simulated rapid sequence intubation (RSI) drill each month. Regular review of this database ensures all aspects of training are performed in a timely manner.

Monthly Training

Every month a training event is provided to the HEMS team, to attend and participate in. This ensures each team member is kept abreast of all clinical

and non-clinical HEMS related domains. The training varies each month. These events can include – Road Traffic Collision training with the Northern Ireland Fire and Rescue Service (NIFRS), paediatric training, hazardous training with Hazardous Area Response Team (HART)

6 monthly assessments

Each Paramedic and Doctor will be formatively assessed every 6 months in the critical interventions the HEMS team are required to perform. Each paramedic will be observed for one day per 6-month period by the Operational Lead paramedic. This will allow peer review, the identification of any learning needs and on-the-job clinical supervision. It will confirm consistency throughout the HEMS paramedic tier. Each HEMS Doctor will be formatively assessed by the Clinical Lead, to ensure consistency throughout the Doctor tier. Written feedback will be provided and recorded.

External Training

A HEMS Doctor and Paramedic attend the London Pre-Hospital Care Course (PHCC) every 3 months. It is the aim of the Service to provide this training to all operational Paramedics and Doctors. This course consolidates and enhances competency and confidence and provides an established UK benchmark for the HEMS paramedics and Doctors.

AANI Charity

Key to the long-term success of AANI is to ensure that the organisation has the appropriate structure and expertise to deliver its objectives.

The charity is headed by two full time executives, a Head of Fundraising and a Head of Finance & Operations, reporting directly to the Board of Trustees. The Head of Fundraising has responsibility for leading and directing all fundraising activities, with a small team of four fundraising managers.

The Head of Finance & Operations has responsibility for the day to day finance and for managing the operational relationships with AANI's Key partners, NIAS and Babcock Mission Critical Onshore Services.

The Board of Trustees has responsibility for ensuring that AANI meets its strategic objectives by collectively directing the organisation's affairs and ensuring compliance with all necessary legislation and regulation. The Board ensures high standards of governance, transparency and accountability. The Trustees work within the parameters of the Articles of Association for A Charitable Company, The Companies Act 2006. The company is limited by Guarantee of the Articles of Association of AANI.

AANI is supported by a number of professional service organisations providing services such as Human Resource Support, Marketing & PR, Finance, Insurance and Legal.

As is normal practice, AANI will continually evaluate the effectiveness of the organization and amend or change the organization structure to best meet its needs.

Babcock MSCO Ltd

The service is staffed by two pilots and one full time maintenance engineer. Pilots are trained and qualified to operate HEMS as per EASA SPA.HEMS.130 Babcock provide a copy of their Operations Manual which details how pilots and staff carry out their day-to-day duty, including HEMS training, ground training and flight training. Babcock have a pool of 15 relief pilots available to cover periods of leave. A full time Maintenance engineer is stationed at the base and available on-call outside of normal working hours.

5. Performance Measures and reported KPIs

The commissioning specification from HSCB sets out a number of KPIs. These have been used as initial basis for monitoring of the service during 2017/18. In addition NIAS captures a range of performance data on a daily basis and this is reported at all management meetings.

5.1 Summary of HEMS Activity

Table 3 Total number of calls by call sign

Month	HM23	D7	Total
July	9	2	11
August	34	9	43
September	30	7	37
October	34	9	43
November	28	10	38
December	19	8	27
January	19	15	34
February	31	7	38
March	21	5	26
Total	**225**	**72**	**297**

Up until March 2018, there have been 297 HEMS allocations, 225 responses by air (Helimed23) and 72 responses by road (Delta7).

5.2 Summary of Allocations and Arrival on scene

Table 4: Allocation and Arrival

Month	Total	%
July	5	45%
August	28	65%
September	26	70%
October	22	51%
November	25	66%
December	18	67%
January	21	62%
February	25	66%
March	17	65%
Total	**187**	63%

Table 3 provides the breakdown of total HEMS allocations, and the number of these calls where a resource arrived on scene. Currently 187 [63%] of call allocations have resulted in a resource arriving on scene.

5.3 Summary of Stand-downs

It is important to note the difference between a call being stood down and an aborted call. A call will be stood down if it is deemed that the HEMS team is no longer required, this may be because a patient is deceased on scene, minor injuries or the land crews have left scene prior to HEMS arrival. This will vary on a case by case basis.

A call will be aborted if for technical/weather related/other reasons, the helicopter cannot fly to the destination.

Current stand down rate is 29.5% - NIAS will continue to monitor stand down rates in line with its tasking protocols.

5.4 Summary of Chief Complaint

The below tables provide the most common reasons for the HEMS team to be dispatched. This is shown for both Allocation and Arrival on scene.

Table 5: Allocated calls and Chief complaint

Chief Complaint	Total	%
TRAFFIC / TRANSPORTATION INCIDENTS	161	54.2%
FALLS	35	11.8%
TRAUMATIC INJURIES (Specific)	30	10.1%
CARDIAC / RESPIRATORY ARREST/DEATH	18	6.1%
DROWNING (Nr) / DIVING / SCUBA ACC	11	3.7%

Table 6 Arrive on scene and Chief complaint

Chief Complaint	Total	%
TRAFFIC / TRANSPORTATION INCIDENTS	98	52.4%
FALLS	29	15.5%
TRAUMATIC INJURIES (Specific)	20	10.7%
CARDIAC / RESPIRATORY ARREST/DEATH	10	5.3%
DROWNING (Nr) / DIVING / SCUBA ACC	6	3.2%

5.5 Performance against Key Performance Indicators 2017-18

(i) KPI 1 - % of HEMS response in which helicopter take off was within 10 minutes of decision to dispatch HEMS response

Table 7 Airborne or mobile within 10 minutes

Month	Yes	No	Not Mobile	Total
July	8	1	2	**11**
August	36	2	5	**43**
September	32	2	3	**37**
October	31	5	7	**43**
November	35	3		**38**
December	26	1		**27**
January	33		1	**34**
February	36	2		**38**
March	20	5	1	**26**
Total	**257**	**21**	**19**	**297**

Of the 257 missions that have gone mobile, 191 of these relate to Helimed 23. The current KPI performance is 91.4% of HEMS response in which the helicopter take off was within 10 minutes of decision to dispatch.

Table 8 HM23 Airborne within 10 minutes

HM23 only

Month	Within 10 mins	Over 10 mins	Total	Total
July	7	1	**8**	**87.5%**
August	30	1	**31**	**96.8%**
September	25	2	**27**	**92.6%**
October	23	4	**27**	**85.2%**
November	25	3	**28**	**89.3%**
December	18	1	**19**	**94.7%**
January	18		**18**	**100.0%**
February	29	2	**31**	**93.5%**
March	16	4	**20**	**80.0%**
Total	**191**	**18**	**209**	**91.4%**

(ii) KPI 2 % of arrival of HEMS to scene within 20 minutes from going mobile.

Table 9: % of arrival on scene

Month	Within 20 mins	Over 20 mins	Total (N)	Total (%)
July	5		**5**	**100.0%**
August	23	5	**28**	**82.1%**
September	24	2	**26**	**92.3%**
October	16	6	**22**	**72.7%**
November	19	6	**25**	**76.0%**
December	16	2	**18**	**88.9%**
January	20	1	**21**	**95.2%**
February	16	9	**25**	**64.0%**
March	12	5	**17**	**70.6%**
Total	**151**	**36**	**187**	**80.7%**

The range of arrival within 20 minutes is drilled down further. The following figures have been gathered from September 2018. Both an average time and median time are shown for each month.

Table 10 Detailed breakdown of arrival times for HEMS

	September		October		November		December		January		February		March	
		No.		No.		No.		No.		No.		No.		
Average time	00:13:46		00:16:03		00:16:36		00:14:50		00:13:00		00:19:41		00:18:32	
Median time	00:14:30		00:15:30		00:13:00		00:14:00		00:12:00		00:18:00		00:18:00	
% < 10mins	31%	8	23%	5	16%	4	28%	5	29%	6	0%	0	12%	2
%>=10min but <=15mins	23%	6	27%	6	44%	11	33%	6	48%	10	36%	9	29%	5
%> 15mins <=20mins	38%	10	27%	6	16%	4	28%	5	19%	4	32%	8	24%	4
%>20mins <=30 mins	8%	2	18%	4	16%	4	6%	1	0%	0	28%	7	24%	4
>30mins	0%	0	5%	1	8%	2	6%	1	5%	1	4%	1	12%	2
Totals	100%	26	100%	22	100%	25	100%	18	100%	21	100%	25	100%	17

Table 11 Totals of arrival times

	Monthly Totals	
Average time	00:15:39	
Median time	00:14:30	
% < 10mins	30	19%
%>=10min but <=15mins	53	34%
%> 15mins <=20mins	41	27%
%>20mins <=30 mins	22	14%
>30mins	8	5%
Totals	154	100%

(iii) KPI3 Hours when helicopter not available for HEMS response

Over all the helicopter has been available for 97.2% of the operational hours UK best practice across other services is that air operations should be available for 91% of the operational hours.

Downtime / Hours				
Month	**Weather**	**Crew**	**Technical**	**Total**
July	Nil	Nil	Nil	**Nil**
August	Nil	Nil	Nil	**Nil**
September	03:45:00	Nil	01:00:00	**04:45:00**
October	Nil	Nil	02:15:00	**02:15:00**
November	Nil	Nil	Nil	**Nil**
December	33:15:00	Nil	Nil	**33:15:00**
January	Nil	Nil	05:40:00	**05:40:00**
February	01:15:00	Nil	39:45:00	**41:00:00**
March	07:15:00	Nil	Nil	**07:15:00**
Total	**45:30:00**	**Nil**	**48:30:00**	**94:00:00**

(iv) KPI4 Number of cases which required onward transport to hospital and % of these taken to the Major Trauma Centre

The vast majority of calls that are attended result in the patient being transported to hospital. For the period of monitoring July 2017 –March 2018, in total 137 patients have been transported to hospital. This represents 73% of the 187 HEMS arrivals on scene which has resulted in a patient being transported to hospital.

Of the 137 patients transported to hospital, 89 (65%) patients were transported to the proposed MTC at the Royal.

(v) KPI5 Number of deployments of HEMS-related RRV response

As noted above in Table 3, the deployment of the Rapid Response Vehicle (RRV) response, known as Delta 7 (D7), has accounted for 72 of 297missions responded to in the period July to March 2018, i.e. 24%. Out of the 72 missions responded to the main rationale for a road response by the HEMS team is Proximity (33%), Weather (39%), Night (1%) and technical (13%). For a small proportion of call no reason was recorded (14%)

6. Clinical Performance and Audit

The development of Clinical Performance Indicators (CPI's) provides a measurement framework for the clinical and operational performance of the HEMS service within a Regional trauma network. HEMS provides a fundamental role in the development of the major trauma network delivering patients to definitive care to optimise patient outcomes and survival.

The measurement of operational performance and clinical care delivered to trauma patients is complex as it takes into account not just the pre hospital care and the clinical interventions but also the subsequent hospital interventions and patient outcome information. Trauma is measured using an Injury Severity Score (ISS) which is calculated in hospital and so is not known at the pre hospital stage. This requires retrospective analysis to the review of care for trauma patients.

Clinical Performance Indicators (CPIs) are being developed for the HEMS service with reference to the NICE[2] guidelines, AAGBI[3] guidelines and other benchmarking such as STAG[4] and TARN.[5] These CPIs will be presented to

[2] National Institute of Health and Care Excellence
[3] Association of Anaesthetists of Great Britain and Ireland
[4] Scottish Trauma Audit Group
[5] Trauma Audit and Research Network

the Clinical Advisory Group for review and approval as part of the HEMS Operations.

7. Financial Performance

As of the 28th February 2018 AANI have raised £ 1,028,557 . AANI have submitted a progress report to Treasury and have received a total of £2,534,408 from LIBOR funds. A further two payments are due for April – June 2018 and July –September 2018 each totaling £481,181 bring the final amount for this tier one LIBOR funding to £3,496,770 as detailed in appendix 3 of the MoU. AANI has achieved its fundraising target of £1m within first 22 months of operations i.e. in advance of the release of full LIBOR Tier one funds (October 2018). AANI now expect to request the draw down Tier two funds i.e. the additional £1m of Libor grant funding from April 2018.

8. Conclusion

The Helicopter Emergency Medical Service has been operational for 8 months at the time of writing this review. In this short time the service is already making significant progress towards achieving the objectives set out in the business case submitted to DoH and from the Charity perspective, its objectives as set out in its application to HM Treasury.

Both NIAS and AANI are delivering a partnership built on good relations and common objectives within the framework of the agreed memorandum of understanding between both parties and also the framework of the Air Ambulance Association, of which both parties are members.

The service has experienced activity levels as estimated, of 1-2 cases per day and we continue to monitor performance against the stated KPIs.

AANI as the Charity responsible for raising funds to support all the aviation aspects of the service in the provision of a helicopter, base and pilots has demonstrated success in meeting its fundraising targets and will continue to plan and progress this over the next number of years.

Moving forward, we will continue to refine our operational performance in terms of key performance indicators working with our commissioners at HSCB and with DOH.

We will further explore the development of our clinical performance indicators working within the clinical governance structures of NIAS and with the Clinical Advisory group and the Regional Trauma Network (RTN).

There is still some development work to be done to ensure that the work of HEMS is identified and measurable within TARN and we will ensure our efforts in achieving this with our partners across the RTN.

The HEMS management group will continue to explore the strategic development of this valuable service and its long term financial sustainability building on the early success.