

EMRTS Cymru

Emergency Medical Retrieval & Transfer Service

Annual Report

April 1 2016

March 31 2017



ELUSEN AMBIWLANS AWYRR CYMRU
WALES AIR AMBULANCE CHARITY



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government



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Section 1 Introduction

Director's Foreword

This has been a good year for EMRTS Cymru. Autumn 2016 saw the publication of the independently scrutinised First-Year Service Evaluation Report, offering tangible evidence that EMRTS Cymru is delivering against its aims (see page 16). Furthermore, an external review of our clinical governance model demonstrated that it is robust and of a high standard. EMRTS Cymru is now commissioned by the Emergency Ambulance Services Committee (EASC) with whom we have developed a National Collaborative Commissioning Framework. This framework will give NHS Wales a better understanding of how EMRTS Cymru fits into its strategic landscape.

This year we acquired an increasing role in the training of Pre-hospital Emergency Medicine (PHEM) trainees, established an EMRTS PHEM car and hosted the first IBTPHEM 'Train the Trainers' Day. In addition, the Service has engaged in, and run, over 100 stakeholder and CPD events.

EMRTS Cymru also enjoyed success at the Air Ambulance Association Awards in November 2016, winning the 'Special Incident of the Year' category (see page 17).

Our relationship with the Wales Air Ambulance (WAA) Charity goes from strength-to-strength. The establishment of the fourth aircraft (Helimed 67) has opened up new opportunities to support complex, long-distance transfers and neonatal/paediatric retrieval teams (see page 17).

In June 2016, the South Wales team moved into WAA's new state-of-the-art airbase at Dafen. Plans have also been finalised to improve the facilities at the Welshpool base. In addition, we will soon find ourselves using the new WAA Airbus H145 aircraft, with a larger cabin, quicker travel speeds, longer flight times without refuelling and ultimately future-proofing a 24-hour air operation (see page 19). These developments have been achieved through the generosity of the Welsh public and the achievements of the WAA.

The success of an organisation is often marked by its ability to expand. One of the findings from our First-Year Service Evaluation was the pan-Wales demand for EMRTS Cymru to expand into the WAA base at Caernarfon. I am delighted that EASC has authorised this development (see page 19).

At the end of April 2017, I will complete my tenure as EMRTS Cymru interim National Director in order to focus on my emergency medicine career and other strategic developments. However, I will continue my clinical work for the Service. Dr Ami Jones will take up the role at the beginning of May 2017, until a substantive appointment is made. Ami has demonstrated excellent clinical leadership and management skills during her time as the Dafen Base Lead and is an excellent choice.

Finally, I would like to take the opportunity to thank all EMRTS Cymru colleagues for their tireless commitment to the service. I would also like to thank WAA, our 'host' Health Board ABMU, EASC and Welsh Government for their support over the years.



Dr Dindi Gill
Interim National Director
(April 2015 – April 2017)

Our Mission



To provide advanced decision-making and critical care for life or limb-threatening emergencies that require transfer for time-critical treatment at an appropriate facility.



Our Vision

EMRTS Cymru has been developed in the belief that it will bring a series of benefits to Wales, as follows:

- EMRTS Cymru will deliver equity of access to pre-hospital critical care for the people of Wales.
- EMRTS Cymru will deliver health gains through early interventions (provided outside of normal paramedic practice by EMRTS Cymru) and direct transfer to specialist care centres. This should improve the functional outcomes of a patient and increase the number of 'unexpected survivors'.
- EMRTS Cymru will deliver downstream benefits for hospitals across Wales. More patients will be taken directly to the most appropriate centre with fewer requirements for secondary transfers which previously would have depleted hospitals of specialist personnel (such as anaesthetists) and created additional cost for the Welsh Ambulance Service.
- EMRTS Cymru will deliver clinical and skills sustainability in Wales. EMRTS will support consultant and Critical Care Practitioner (CCP) recruitment into Wales by offering opportunities with the Service as a part of the recruitment of appropriate NHS Wales positions. EMRTS Cymru will also support educational activities across NHS Wales.



Our Service

EMRTS Cymru is operational seven days a week between 08:00hrs and 20:00hrs from the Wales Air Ambulance Charity in Dafen and Welshpool.

Services offered include:

- Pre-hospital critical care for all age groups (i.e. any intervention/decision that is carried outside standard paramedic practice).
- Undertaking time-critical, life or limb-threatening adult and paediatric transfers from peripheral centres (inc. Emergency Departments, Medical Assessment Units, Intensive Care Units, Minor Injury Units) for patients requiring specialist intervention at the receiving hospital.

In addition, the Service provides an enhancement of neonatal and maternal pre-hospital critical care - both for home deliveries and deliveries in free-standing midwifery-led units (MLUs).

This includes:

- Transferring neonatal teams to distant time-critical cases by air.
- Supporting midwife units and home deliveries by stabilising neonates and women with life-threatening problems and transferring them to a consultant-led delivery unit.

Finally, the Service provides a multitude of roles at major incident or mass-casualty events and, for the first time in Wales, a strategic medical advisor is available 24/7. This advisor is known as a top cover consultant.

When the Wales Air Ambulance Charity helicopters are unable to fly due to poor weather conditions, EMRTS Cymru has access to a fleet of Rapid Response Vehicles (RRVs). Five Audi Q7s have been converted into state-of-the-art emergency response vehicles designed to enable the team to reach the scene of a medical emergency, by road, as fast as possible. These vehicles are stationed throughout Wales. Medical equipment has been designed to be interchangeable between the Charity's helicopters and the RRVs.

The Service ensures that 95% of the Welsh population will be able to access doctor-led care within 30 minutes by air and 46% of the Welsh population within 30 minutes by road.

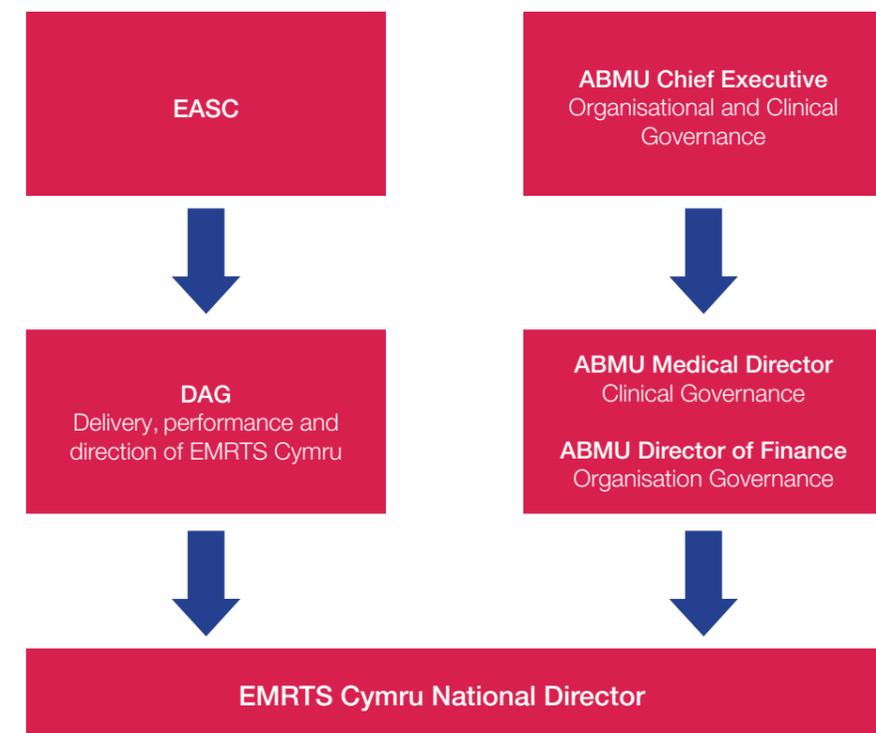
EMRTS Cymru is coordinated and tasked centrally via the Air Support Desk (ASD) which is based at the Welsh Ambulance Service headquarters in Cwmbran.



Governance Structure

EMRTS Cymru has developed a robust system of organisational and clinical governance. The Service is hosted by Abertawe Bro Morgannwg University Health Board (ABMU HB) and is commissioned by the Emergency Ambulance Services Committee (EASC). The organisational governance structure consists of an

EMRTS Delivery Assurance Group (DAG) which sits as a sub-committee of EASC. The DAG is responsible for the delivery, direction and performance of the Service. The EMRTS Cymru National Director is accountable to the DAG for the delivery and performance of the Service and to the ABMU HB Chief Executive for organisational and clinical governance.



Internal governance is led by the EMRTS Clinical and Operational Board, which is attended by senior EMRTS personnel and support services, and manages clinical and operational issues relating to the Service. This group has met on a bi-monthly basis. Furthermore an Airway Group (who evaluate the emergency anaesthetics provided by the Service), a Blood Group, a Transfer Group and an Equipment Group report to the Board.

Surgery, Neonate/Paediatric and Senior Pre-hospital Critical Care and Retrieval specialists. This group reports to the EMRTS Clinical and Operational Board and provides scrutiny of the clinical performance of the Service and independent peer review of significant adverse events. The governance processes have been effectively utilised to create an environment of transparency, learning and improvement.

The External Clinical Advisory Group (ECAG) consists of membership from Regional Trauma Networks, Anaesthesia/Critical Care, Emergency Medicine, Acute

For more detailed information about our in-depth governance, please visit www.emrts.cymru/governance

Section 2 Governance

EMRTS Cymru Financial Statement

EMRTS Cymru met its financial target in 2016/17 by delivering a modest surplus of £0.143m against its revenue funding allocation of £2.868m.

The surplus will be carried forward into 2017/18 to support the ongoing delivery of the service.

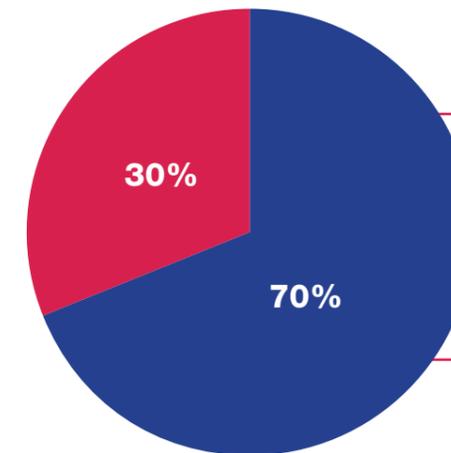
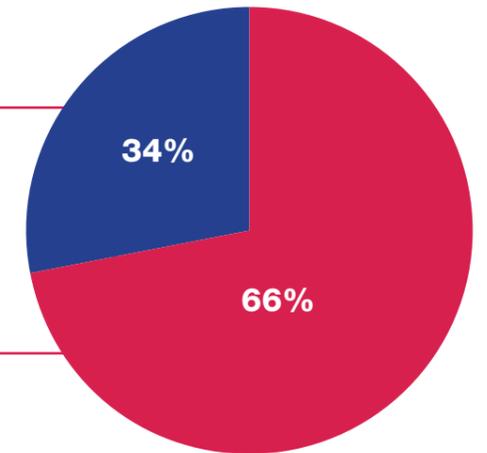
Section 3
Our Finances



Preliminary Annual Performance Data (01/04/16 – 31/03/17)

Total Patient Attendances - 1292

Air
Rapid Response Vehicle



Gender
Female
Male

Age Range
0-98

Median Age
46
years old

27%
of the patients attended
were paediatrics
(under 17 years of age)

Section 4 Additional Information

Mission Map



Incident Location By Health Board

Abertawe Bro Morgannwg	21%
Aneurin Bevan	12%
Betsi Cadwaladr	16%
Cardiff and Vale	6.5%
Cwm Taf	4.5%
Hywel Dda	19%
England	2%
Powys	19%

Cases Attended by Category

Category	
Road Traffic Collision	22%
Cardiac Arrest	16%
Other Trauma	21%
Other Medical	14%
Falls	13%
Transfer and Health Care Professional Admissions	10%
Chest Pain	3.5%
Maternity/Neonatal	0.5%

Patient Destinations

26% of all patients attended were left in the community, avoiding unnecessary hospital admissions. The remaining 74% were taken to hospitals within the following health boards:

Abertawe Bro Morgannwg	28%
English NHS Trusts	22%
Cardiff and Vale	21%
Hywel Dda	9%
Betsi Cadwaladr	8%
Aneurin Bevan	7%
Cwm Taf	4%
Powys	1%



142
Emergency
Anaesthetics

55
Blood Product
Transfusions



Success Stories

EMRTS Cymru First Year Service Evaluation

According to the EMRTS Cymru Service Evaluation First-Year Report, published in November 2016, the Service is having a positive impact on emergency healthcare in Wales.

The report was independently scrutinised by the Farr Institute at Swansea University. The full Service Evaluation will last three years and the First-Year Report offered an update following its first twelve months in operation (27 April 2015 – 26 April 2016).

As part of the evaluation, Swansea University is using its world-class anonymised databank to compare the Service's operational and patient recovery figures with data from 9 billion patient records worldwide. In addition, patients and relevant NHS Wales and emergency service representatives are asked for their opinion of the service.

The first-year results indicate that:

- by taking the emergency room to the patient, the Service has shortened the time it takes for somebody who is critically ill to receive consultant-led treatment.
- more people in Wales, in rural and urban areas, now have equal access to timely consultant-led treatment during an emergency incident, and can be immediately transported to specialist care at healthcare facilities across Wales and beyond.
- the Service has relieved some pressure on frontline NHS emergency services. It has significantly improved the time it takes for some patients to be taken for a CT scan or receive emergency surgery. In addition,

the Service has reduced timely and costly transfers between hospitals by taking patients directly to the appropriate specialist care.

- the Service has supported the development of skills and knowledge in critical care for NHS Wales employees, both during emergency incidents and by organising regular training opportunities.



The evaluation also recommended that EMRTS Cymru should be introduced into the Wales Air Ambulance Charity operation in Caernarfon.

Evidence of long-term patient health benefits will be presented fully in the year-two and year-three evaluations, however, the report offered international evidence suggesting advanced emergency care at the scene of an incident or at a peripheral hospital improves the chances, and speed, of patient recovery.

A New Transfer Aircraft for Wales (Helimed 67)

In September 2016, the Wales Air Ambulance Charity introduced a new fourth aircraft to its fleet (Helimed 67). It is available to undertake adult inter-hospital transfers that do not fall within EMRTS Cymru activation criteria and where air transfer is preferred (i.e. when the transfer will take much longer by road). In addition, the aircraft will support existing paediatric and neonatal teams in the work that they undertake. The service is being piloted until the end of March 2019 and will measure the demand for, and long-term feasibility of, a dedicated transfer aircraft. The Charity is funding the aircraft, pilots and Critical Care Practitioners, the medical equipment and the infrastructure at Cardiff Heliport required to operate the service. It will also fund all transfers undertaken during this period.

For more information, visit www.emrts.cymru/patienttransfers



Medics Recognised at National Air Ambulance Awards

EMRTS Cymru medics Dr Bob Tipping and Critical Care Practitioner Rhyan Curtin have received national recognition for a life-saving mission. They were presented with the Special Incident Award at the national Air Ambulance Awards of Excellence in London in November 2016. They received the accolade in recognition of a challenging case they attended in 2015 on board a Wales Air Ambulance Charity helicopter. They were called to an industrial site in rural Wales where a patient suffered severe injuries to both legs, lost a significant amount of blood and suffered a cardiac arrest. In difficult conditions, the team gave the patient a blood transfusion and also a blood product called Lyoplas, which helps with blood clotting. In addition, they administered an anaesthetic to make the patient more comfortable. In poor weather conditions, the patient was flown to specialist care and, after numerous operations, is now recovering at home.

For up-to-date news about EMRTS Cymru, visit www.emrts.cymru/news

Case Studies

Jess and Joe's Story

A couple from Chester who were both treated by EMRTS Cymru medics after suffering serious injuries have got married.

Twenty-six-year-old Jess Mann and twenty-eight-year-old Joe Mann were hit by a car while travelling through Machynlleth on their way to join Joe's family for a holiday in Pembrokeshire. Jess was driving when another car hit the car in front and span across the road, hitting their car. Two Wales Air Ambulance Charity helicopters were dispatched, the first of which arrived within sixteen minutes. On board were EMRTS Cymru medics Dr Stuart Gill, Dr Jennifer Dinsdale and Critical Care Practitioner John Adams. Also involved was Welsh Ambulance Service helicopter paramedic Ian Thomas.

Jess had a badly broken femur. She was given ketamine as procedural sedation to make her comfortable during extrication from the car and to allow for the application of a traction splint to her broken leg. She was also given tranexamic acid to help prevent any worsening of suspected internal bleeding.

Joe had strong analgesia (fentanyl), tranexamic acid, and a pelvic binder applied. An ultrasound assessment showed possible fluid in his lower abdomen.

They were taken, in separate helicopters, directly to a hospital offering specialist care. The couple are recovering well and celebrated their big day in January 2017.

Trevor's Story

A cardiac arrest victim has thanked the EMRTS medics who saved his life. Flintshire factory worker Trevor Fletcher was in a coma and unable to breathe by himself,

before EMRTS Cymru's Dr John Glen and fellow medics managed to revive him.

Trevor was given first aid and CPR by a work colleague and then by Welsh Ambulance Service paramedics. The Wales Air Ambulance Charity helicopter took only fifteen minutes to travel from its base in Welshpool to the scene in Deeside. EMRTS Cymru medics were able to stabilise Trevor by controlling his breathing through intubation and administering a general anaesthetic.

The EMRTS medics on board the helicopter flew Trevor direct to a hospital that offered specialist cardiac care. Trevor, who is now back at his job as a cleaner for Toyota Manufacturing UK, was saved thanks to outstanding teamwork between emergency care providers.

Jan's Story

A horse rider who was in a coma for ten days after a horrific fall has praised the EMRTS Cymru medics and hospital surgeons who saved her life.

Jan had suffered a severe flail chest – a life-threatening condition where a segment of the rib cage breaks off and becomes detached from the rest of the chest wall – and a perforated lung, and was struggling to breathe.

The EMRTS Cymru medics on board the Wales Air Ambulance Charity helicopter who treated Jan were Dr Kate Stephens and Critical Care Practitioner Chris Connor.

They gave Jan a blood transfusion and a series of powerful painkillers, then put a tube into her airway so she could be placed on a ventilator. The crew also gave Jan an anaesthetic, as putting her to sleep reduced the risk of agitation and made the process of transfer to hospital by air more comfortable.

The flight to hospital took twenty minutes, a journey that would have taken twice as long by road.

Although she remained in hospital for several weeks, the 64-year-old from Llanharan is now back in work.

The above cases demonstrate the equity and health gain that EMRTS is striving to provide. They also highlight the interventions offered by EMRTS that are not available in standard paramedic practice.

Looking to the Future

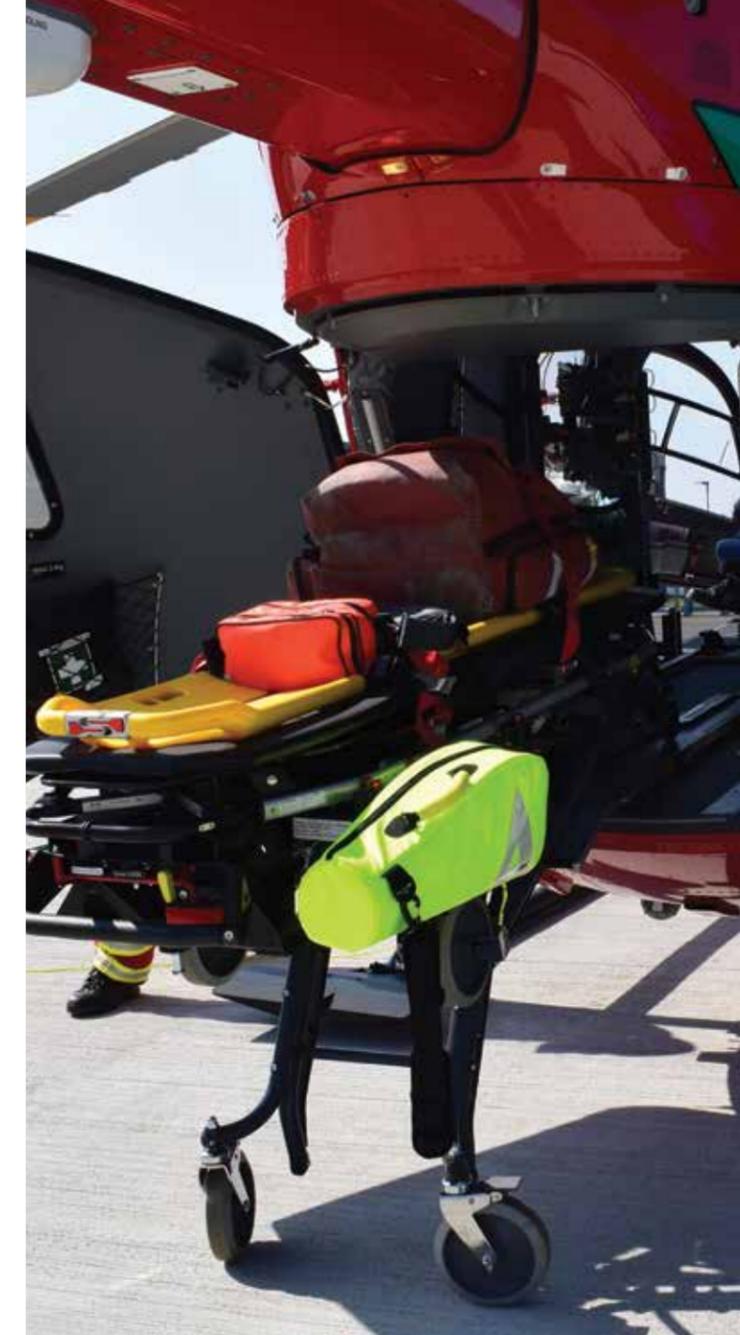
EMRTS Expansion in North Wales

As part of the implementation of EMRTS Cymru across Wales, the next phase will see the Service become operational in the Wales Air Ambulance Charity base in Caernarfon, North West Wales. The first phase of EMRTS Cymru started in 2015, delivered through the Charity's Dafen (Llanelli) and Welshpool bases. The expansion into Caernarfon will enhance access to timely pre-hospital critical care, particularly in this region of Wales (including parts of Powys and Ceredigion). The Service in Caernarfon is expected to become operational in autumn 2017.

For more information, visit www.emrts.cymru/emrts-in-north-wales

New Aircraft to Enhance 'Flying A&E' Service

During 2017, three brand new custom-built helicopters are expected to touch down at Wales Air Ambulance's (WAA) airbases in Dafen, Welshpool and Caernarfon. The new arrivals replace the EC135 models which were introduced to South Wales in 2009. They will significantly enhance operations and the capability of the EMRTS Cymru medics who fly on board.



WAA is the third HEMS (helicopter emergency medical service) operation in the UK to use the H145 aircraft. When all three new aircraft are operational the WAA fleet, which is operated on behalf of the Charity by Babcock Mission Critical Services Onshore, will be the largest in the UK.

The aircraft is equipped with advanced night-flying capability, a larger cabin and more powerful engines, meaning there is extra room for treatments and the helicopters can fly longer without refuelling.

Our Partner – Wales Air Ambulance Charity

What is the difference between EMRTS Cymru and the Wales Air Ambulance Charity?

Our services are delivered via an important partnership. Wales Air Ambulance is a charitable trust which relies entirely on the generosity and support of the Welsh public to help keep the helicopters flying. The Charity does not receive direct funding from the government and does not qualify for National Lottery funding.

EMRTS Cymru (Welsh Flying Medics), a part of NHS Wales and supported by Welsh Government, supplies a highly-trained NHS Critical Care team comprised of:

- Consultants - from an emergency medicine, anaesthesia and intensive care background.
- Critical Care Practitioners - including nurses and paramedics.

This partnership between the NHS and the Third Sector demonstrates the benefits of cross-sector models, and the important role charities can play in the provision of healthcare.

Who is the Wales Air Ambulance Charity?

Launched on St David's Day 2001, the Wales Air Ambulance Charity is the official air ambulance service for Wales. It is on standby every single day of the year, ready to help anyone in Wales during their most difficult hour. All missions are tasked in Wales, via the Charity-funded Air Support Desk, across the devolved NHS Wales structure.

The Charity relies entirely on donations to raise £6.5 million each year. This funds the infrastructure and facilities for all three bases in Welshpool, Llanelli and Caernarfon. It also covers the cost of the pilots, engineers and some medical kit.

The Charity funds the helicopters and holds the aviation contract with Babcock Mission Critical Services Ltd.

Income generation ranges from community fundraising and corporate support, to a national retail and trading operation as well as a Lifesaving Lottery.

The Charity's Mission

It is the Charity's mission to aid the relief of sickness and injury, and the protection of human life, by the provision of a HEMS/air ambulance service across Wales.

The Charity's Vision

The Charity's vision is to provide a 24-hour air ambulance operation and continually strive for an outstanding air ambulance service available to everyone in Wales.

Children's Wales Air Ambulance

The Charity operates the Children's Wales Air Ambulance, airlifting some of Wales' youngest patients. EMRTS Cymru medics, and NHS Wales specialists, on board the Wales Air Ambulance care for paediatric and neonate patients on transfers to children's hospitals, as well as providing vital air cover on emergency 999 missions.

The Charity's Future

The Charity's vision is to develop a 24-hour operation and continually advance the service. The Wales Air Ambulance strategy includes plans to:

- Extend the hours of service and develop night flying capabilities.
- Enhance clinical skills and consultant-led support for the aircrews.
- Develop the Charity's dedicated Air Support Desk.

For more information about the Wales Air Ambulance Charity, visit:

www.walesairambulance.com



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