



AIR AMBULANCES UK™
SUPPORTING AIR AMBULANCE CHARITIES

ISSUE 33 SPRING 2021

airway

The magazine for the air ambulance community



PATIENT STORIES

'The most difficult flight of my life'

ACE NEW BASES

Behind the scenes
of the quest for
a new home

DOCBIKE

The charity determined
to cut motorbike
accidents

CLINICAL DATA

Unlocking
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NEW CEO FOR AAUK

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FROM THE EDITOR

Welcome to another packed issue of Airway. Well, fairly packed... actually, we noticed that we'd been trying to squeeze in a few too many words on some pages, which made it look a bit forbidding to read, so I hope the slightly lighter weight of words this issue will make it a bit more manageable for picking up and putting down over a brew every now and then.

Having said that, the issue is still packed with a great range of articles with something for everyone I hope. With no annual Awards of Excellence in 2020 because of you-know-what, we missed our usual opportunity to marvel at some of the amazing missions that members had flown over the year. So this issue, we've included a few patient stories, from the intense to the quirky, to help bridge that gap – see pages 12-16. It's something we'll look to do again in the next issue, so do send reports of any outstanding missions you've flown to info@airambulancesuk.org.

We take a closer look at the outstanding DocBike charity (p8), which has been working away at cutting deaths from motorcycle accidents for years. Its strategic use of its own research, national collaborations and careful messaging to the biking community has produced impressive results – and now they want to expand that further.

We look at the emergence of a number of new charity bases (pages 10-11), all coming to fruition at much the same time – concrete evidence of how the spate of Government grants available to air ambulance charities in recent years was invested. These impressive bases are setting up a number of AAUK members for many years to come.

Data may not seem the most thrilling of topics but of course it's not what you have but what you do with it that counts. This is evident in our article looking at how we may finally be able to use NHS data consistently and comprehensively to join with air ambulance charities' own data, thus completing the whole patient journey (pages 17-18).

There's lots more, including a look at the Institute of Pre-Hospital Care (p7), how one member is experiencing the rise in shooting and stabbing jobs (p6), and the latest news on whether we'll see paramedic rocketmen and women over the Lake District (p4).

I hope you enjoy the issue. Next one out in the Autumn.



Nick Campion,
Editor

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Cover photo - Provided by SCAA.

Forthcoming events

Events will be shown here when the Covid-19 situation allows.

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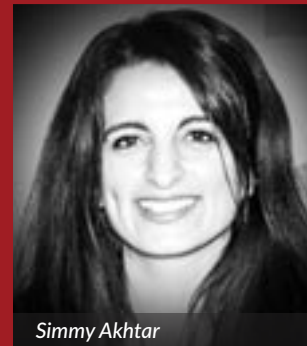
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NEW CEO FOR AAUK

Air Ambulances UK has appointed Simmy Akhtar as its new Chief Executive Officer. Simmy started work on 1 March 2021 and will build on the AAUK team's great work in 2020 during the Covid-19 pandemic.

Simmy brings a wealth of experience to the CEO role. She was Chief Officer of Healthwatch Stoke-on-Trent and Healthwatch Staffordshire where she championed the patient voice to support positive change in health and social care to meet their needs. She worked on high-level strategic issues with two independent Boards of Trustees and led two staff teams.

Simmy has held roles in the NHS and Local Authority environments, following which she practised as a solicitor in the private legal sector. She has held senior leadership roles in the charitable sector and is a former trustee of the Patients Association where she sat on the Finance Committee.



Simmy Akhtar

Simmy said "It is an honour to be appointed to this crucial role and to lead AAUK to further support the lifesaving work that air ambulances do daily. Air

Ambulance charities have been incredibly proactive to adapt during the pandemic, which further demonstrates their unique position in providing pre-hospital care and supporting the health sector. This is an exciting new era for the organisation, and I am elated to be joining the team to build on the excellent work to date."

Heather Benjamin, Chair of Air Ambulances UK, said "Simmy brings a wealth of experience in many areas including motivational leadership, strategy, governance, stakeholder engagement and income generation and we believe her professional experience and personal traits will support our important work going forward with all our stakeholders."

COULD GNAAS JETSUIT PROJECT TAKE OFF?

After much talk and expectation, Great North Air Ambulance Service (GNAAS) was finally able to test its ambitious paramedic jet suit towards the end of last year. The collaboration with Gravity Industries over the previous year involved the development of a safe, useable jetsuit that could help GNAAS navigate wild Lake District terrain so a first responder could reach and stabilise a casualty in minutes.

In the test flight at Langdale Pikes in the Lake District, Gravity Industries founder Richard Browning flew from the valley bottom to a simulated casualty site on The Band, near Bowfell. The flight took 90 seconds; by foot, it would have been an arduous 25-minute climb.

Andy Mawson, Director of Operations and paramedic at GNAAS, reflects: "At the time, we didn't know if this would work in practice so to see the jetsuit in action was awesome. People were hugely supportive of what they saw. There were a few questions raised but no-one made any points that we hadn't already considered in some detail over the last 18 months or so. This test was about proof of concept, which was certainly achieved; in fact, it surpassed all our expectations.

"It's easy to be sceptical about new technology. But we want to explore methods to address a specific problem, whether that's a patient that would benefit from a solo paramedic response whilst waiting for mountain rescue or saving crucial minutes before the

critical care team arrive by helicopter.

"There are obvious risks associated with the use of the jet suit, but by flying in a controlled manner, close to the ground, we mitigate those risks, similar perhaps to how a motorcycle paramedic will ride on an emergency call.

"From a charity point of view, it's important for people to realise we're not spending charity money on this process and we have a number of good options, such as a corporate partnership or media partnership, to fully fund the suit if we continue with this process and it does come into operation."

Andy stresses that this is never going to be right for every air ambulance service. GNAAS is focusing its trials on the Lake District, where there is a particularly high concentration of accidents and where the geography makes road, and to some extent air, access difficult. Andy concludes: "This is another piece in our industry's multi-agency, multi-vehicle jigsaw in which solo paramedics are a tried and tested method of care delivery. The amount of kit we can carry with the jet suit – 15kg – is as much as you would need for a solo response. We've still a way to go but there's no doubt this is an incredibly worthwhile exercise. It could end up saving lives."



Images supplied by GNAAS.

STAYING WARM IN A BLIZZARD

New AAUK member Blizzard Protection Systems Ltd and Dorset and Somerset Air Ambulance (DSAA) have launched the Air Ambulance Edition Blizzard blanket: a new version of the blanket developed to help save patients' lives in the air ambulance environment.

One of the DSAA clinical team's patient interventions, thermal management involves maintaining the patient's core body temperature, preventing hypothermia and any further heat loss, protecting them from the environment and providing active warming.

In pre-hospital care, heat loss occurs through several mechanisms and evidence suggests that critically ill and injured patients presenting with hypothermia are at high risk of death. Once the patient is hypothermic, it is difficult to reverse this in the pre-hospital environment.

Having seen the benefits that Blizzard's blankets provide to patients in the pre-hospital environment and as part of their ongoing efforts to improve patient care, members of DSAA's clinical team embarked on a personal project in their own time, to design a bespoke blanket in collaboration with engineers at Blizzard.

The year-long project involved numerous virtual meetings and extensive collaboration between DSAA's clinicians, pilots and Blizzard's engineers, to create a range of designs which were then trialled for their effectiveness. This culminated in the development of a new Blizzard blanket named 'The Air Ambulance Edition'.

Although DSAA will be the first air ambulance to use the bespoke blanket, it will also be available for distribution to



Blizzard's clients around the world.

The blanket retains Blizzard's unique Reflexcell material, which, says the company, provides the best insulation through its reflective air pocket construction. The blanket has been ergonomically designed so that it can be carried to the scene of an incident with a carry handle.

The foot end of the blanket can now be sealed with a hook and loop to create more heat and ensure there are no trailing parts for aviation safety. Four active heat pads with a hook and loop strip can be moved into any position to provide optimal warming and ensure complete hypothermia management for any size patient. The blanket provides protection from the harshest environments of cold air, rain or snow, so it can be used within any operating environment to which the air ambulance is tasked.

The blanket can be purchased direct from Blizzard by calling 01248 600666 or from

<https://www.blizzardsurvival.com/shop/>

DSAA will not benefit financially from sales of this product.

 Images supplied by Blizzard.



DR PHIL COWBURN AWARDED MBE

One of Great Western Air Ambulance's (GWAAC) founders and Critical Care Doctors, Dr Phil Cowburn, was awarded an MBE in the Queen's New Year Honours list.

He was recognised for his outstanding services to pre-hospital emergency care, most recently during the Covid-19 pandemic. Phil, who is also Acute Care Medical Director for South Western Ambulance Service NHS Foundation Trust, appeared alongside hundreds of unsung heroes of the coronavirus pandemic in the New Year Honours list for 2021.

He said: "I am truly humbled by this recognition. To me this is not really a personal accolade, it is a celebration of the great teams I work with. None of the great achievements could have succeeded without the superb group of colleagues I have the pleasure of working alongside."

Phil has been involved in pre-hospital care for over 20 years. He was fundamental in setting up GWAAC in 2007.



Dr Phil Cowburn

ADDRESSING THE CHALLENGE OF SHOOTINGS AND STABBINGS

When it comes to treating shootings and stabbings, speed is of the essence – and a helicopter gets consultant-level care to scene fast. With evidence from air ambulance services which serve many UK cities showing that the numbers of stabbings and shootings attended is on the increase, Airway spoke to Midlands Air Ambulance Charity (MAAC) about what they have seen in their patch, which includes Birmingham.



Ian Roberts

"There are several reasons for the increase," says Ian Roberts, who was until recently Air Operations Manager at MAAC. "Gang-related violence has increased, which often results in two incidents within a couple of hours of each other – first the attack, then the retaliation; self-inflicted shooting wounds have also increased and colleagues around the country report the same thing. What we are seeing is it's often older people who have access to old weapons

such as shotguns. And regrettably, 2020 was also the year that two ambulance staff were stabbed – the first time it's happened on this patch.

"Ten years ago, these incidents were barely on the radar and if it did happen, it tended to be spur of the moment, whereas these days there are far more pre-meditated attacks. In gang-related stabbings, there is also a trend towards very deliberate patterns of injury to inflict maximum damage to areas that are hard to treat and will leave permanent scarring and disability."

The medical response to incidents such as these has developed enormously over recent years with the establishment of Major Trauma Centres and huge improvement in trauma training being critical elements of that change. At the same time, trauma kit on ambulances, air ambulances and critical care cars was improved. Ian adds: "We're definitely carrying far more kit that's needed for these

incidents, such as combat dressings, haemostatic dressings to pack a cavity, combat tourniquets and so on. We're seeing thoracotomies being done more and more as it's the only way to stop internal bleeding sometimes. Training on thoracotomies is updated annually at MAAC and even though it's becoming more common we have to be aware that it's a really major, graphic intervention that most people would never expect to see so we need to take care of both members of the public and our own staff afterwards.

"Blood products have been used much more in recent years too. We've led on the RePHILL trial to see if this is an effective intervention and wait with interest to see the results, which at an early stage do suggest bringing blood products to an appropriate incident scene is worthwhile for the patient."

After every case of this nature, MAAC's governance team reviews the case to ensure Standard Operating Procedures were followed and to see what can be learnt, both in terms of human and procedural factors. They also spot if any trends are emerging that should be acted upon. "It's the marginal gains that lead to constant refinement and improvement," says Ian.

He adds: "We also share major trauma information with local trauma networks via the West Midlands Trauma Network and we hold regular meetings to review the whole patient journey to see what could be learnt. We review data from TARN and work collaboratively via AAUK with other services. In normal times we attend lots of conferences to ensure we're on top of the very latest

research and we develop our staff continually to ensure that when it comes to shooting and stabbing incidents, we're as well prepared and knowledgeable as we can possibly be.

"Additionally, we are now providing training to the public on how to stop a catastrophic bleed, and distributing our bleed control kits, as bystander intervention before we even arrive on scene can be lifesaving."



Stabbing and Shooting Incidents Attended by MAAC (Air Ops and CCC)						
	Calendar Years					
	2016	2017	2018*	2019*	2020	Grand Total
Shooting Incidents Attended	1	3	4	9	34	28
Stabbing Incidents Attended	22	63	86	108	124	413
Total Stabbing and Shooting Incidents attended (Air Ops and CCC)	33	66	90	114	138	441
Total incidents attended (Air Ops and CCC)	1108	1399	2280	3064	3065	10996
Stabbing and Shooting Incidents Attended as % of total	3%	5%	4%	4%	5%	4%
*Critical Care Cars introduced (Oldbury in June 2018 and Worcester in August 2019)						
Points to note:						
It is not possible to separate Stabbing and Shootings with criminal intent from those which were self-harm incidents						
Incidents attended have increased between 2016 and 2020 due to the introduction of additional resources (i.e. the two critical care cars)						
However overall shooting and stabbing incidents as a proportion of total incidents have not changed to any significance						

 Images supplied by MAAC.

FOCUS ON: THE INSTITUTE OF PRE-HOSPITAL CARE



The Institute of Pre-Hospital Care (IoPHC) was founded in 2013 with a mission to drive excellence in pre-hospital care standards and practice through education, innovation and research; and by fostering collaboration across medical disciplines and institutions dedicated to improving outcomes for people afflicted by critical injury and illness.

Now, with its third cohort of the MSc in Pre-Hospital Medicine being recruited to start in September 2021, its hugely popular Intercolated BSc in Pre-Hospital Medicine in its seventh year, and its Pre-Hospital Care Course proving ever popular, it was high time Airway turned its attention to this unique institution for the first time.

The Institute is a department within London's Air Ambulance (LAA), sharing its clinical and organisational leadership teams; drawing on its case studies to inform priorities; and collaborating to develop new clinical interventions, conduct research and educate the next generation of pre-hospital care experts. Looking back to the beginning, Bryony Dunne, Head of Institute Delivery, explains: "There had been lots of talk and deliberation about creating a body like this for some time but when the GMC recognised Pre-Hospital Emergency Medicine as a medical sub-specialty, that was the right moment to act and the Institute was

established. We developed the Intercolated BSc in Pre-Hospital Medicine at the same time as the nation was being buoyed by the London Olympics and we really adopted the 'Inspire a Generation' theme of the Olympics and applied it to Pre-Hospital Medicine.

"It was the first BSc in Pre-Hospital Medicine in the world. We partnered – and continue to partner – Barts and The London School of Medicine at Queen Mary University of London to deliver the course. We take around 20 students a year – half from Barts and The London and half from other medical schools around the country.

"After the initial success of the BSc, people were quickly asking us about running an MSc. We launched that in September 2019 and made a conscious decision to ensure it was completely focused on pre-hospital medicine and would be taught in face-to-face teaching

pods. We wrote our own anatomy workbooks and did all we could to ensure the learning would prepare established clinicians for the challenges of the advanced practice of pre-hospital medicine. It really is a holistic, realistic, practice-based Masters degree."

The Institute also runs its popular Pre-Hospital Care Course, a seven-day course run three times per year, and open to new recruits to London's Air Ambulance, affiliated air ambulances in the UK and abroad. Bryony continues: "It's an incredibly popular course and we get people from all over the world – Netherlands, Northern Ireland, Italy, Canada, Austria, Germany to name just a few – even New Zealand have sent people over. We select who

comes on the course very carefully so the whole group benefits from and learns from each other as well as from us."

The popularity of all the courses at the Institute is in no small part down to the quality of the faculty. Students know they will be taught by respected and renowned experts in their field who have been on the frontline of pre-hospital medicine for some time.

So what's next? Bryony adds: "For the coming year our focus is on looking at our impact and influence. Longer-term we're aware we've been very London-centric to date and there's a lot of national and international interest, so we want to explore ways to become even more relevant and active both nationally and internationally – but without compromising on the high quality that

people come here for.

"Even further into the future, we want to be seen as continuing to lead the way in pre-hospital emergency medicine education. To do that we will need to continue to grow and develop the faculty and continue to learn from those practising pre-hospital medicine the world over."

If you're interested in the MSc in Pre-Hospital Medicine, go to <https://www.qmul.ac.uk/postgraduate/taught/coursefinder/courses/prehospital-medicine-msc/> or for more information on other courses email IoPHC@londonsairambulance.co.uk

 Images supplied by IoPHC/LAA.



ENGAGE, EDUCATE, PREVENT:

DOCBIKE'S MISSION TO SAVE MOTORCYCLISTS' LIVES

Any air ambulance clinician who has worked through a summer season will tell you that motorcyclists do not fare well when involved in a high-speed collision. The forces involved when a motorcyclist crashes at speed are so great that regardless of the skill of the crew, or how much blood is carried, many motorcyclists die at the scene. So if we really want to save the lives of motorcyclists, preventing them from crashing in the first place is a far more effective strategy. Every year, around 19,000 motorcyclists are injured in the UK (RoSPA 2017) and every week, on average, six motorcyclists will be killed and 94 seriously injured (DfT 2015).

This was something identified by Dr Ian Mew, a consultant in anaesthetics & critical care medicine, doctor at Dorset & Somerset Air Ambulance, and former Director of Major Trauma at Dorset County Hospital. In 2013, in collaboration with PC Chris Smith from Dorset Police, he took action and shortly afterwards DocBike was created. The DocBike charity's principal aim is to help prevent motorcycle accidents happening in the first place through biker education. The doctors and critical care paramedics that ride the DocBike motorbikes and help educate other bikers are also tasked to incidents alongside their ambulance service and air ambulance service colleagues.

Unsafe riding

In 2016, the DocBike project was awarded the Trauma Audit & Research Network (TARN) prize for the best use of its data. This was the first time that TARN data had been used for injury prevention purposes, but when cross-referenced with police collision investigations, it allowed them to identify which motorcyclists were most likely to be killed or critically injured on the Dorset roads.

Their research showed that 81% of motorcyclists who were killed or critically injured wouldn't have been involved in a collision at all had they been riding safely – proof that engaging with motorcyclists before they crash could make a huge difference to their survival.

"The evidence base and research form the cornerstones of everything that we do within the DocBike charity," explains Ian Mew. "We've match-funded a PhD student with Bournemouth University to look not only at how we can best prevent motorcyclists from being involved in a crash, but whether our engagement is effective in preventing harm. If it's not, we'll change what we're doing. If it is, we'll share our work internationally to help others to learn from our experiences and help keep motorcyclists safe around the world."

Targeted engagement

"If I ask a fellow biker if he wants to come on a bike safety course, he'll invariably say 'no', explaining that he's been riding for 20 years and knows how to ride a bike," explains Ian. "So we give them something that they do want – a course on how to keep your mate alive if he comes off his bike."

BikerDown is a free course run across the UK and created by Jim Sanderson from Kent Fire & Rescue Service. With an air ambulance clinician teaching the module on how to keep someone alive, people really want to attend – including those motorcyclists in the 'at-risk' profile, ie those bikers most likely to be killed or critically injured in the future.



Dr Ian Mew and PC Chris Smith

The course runs over one evening and comprises three modules:

1. How to manage the scene of an incident, call for help and keep yourself and others safe.
2. What you can realistically do to help keep someone alive until the ambulance arrives.
3. How you can make yourself more visible and avoid being knocked off your own bike in the future.

It's in this last session where bikers start to appreciate that there are things they can do to reduce the risk of them being in a serious collision; they are then willing to do a further course which will improve their awareness and make them a more skilful rider.

The DocBike charity avoids using the word 'safety' as this causes people to disengage. However, everyone wants to be considered a more skilful rider and using positive language like this seems to lead to a much better uptake.

Credibility

Ian says that at events, it is the high profile nature of the bike, combined with being an air ambulance clinician, that draws the public to come and speak to him, allowing Ian and colleagues to engage and help prevent them from being involved in a crash in the future.

Actually responding to sick or injured individuals only accounts for about 2% of the work done on the DocBike. While, this may not be the main focus, it is critical for the credibility of the charity amongst its target audience that those delivering the information are bikers, know bikes and the pleasure they bring to people. And in the case of these doctors, they not only take pleasure from bikes and the biking lifestyle but they help save lives using them. It's hard to think of a much more credible source of information for the biking community.



National collaboration

To achieve their goal of eradicating all motorcycle deaths and significantly reducing motorcycle-related serious injuries, the DocBike charity has developed working relationships with a number of national partners. Using DocBike's research, their experience of engagement and their knowledge from attending the scene of many motorcycle crashes, DocBike and national partners have been able to help shape a collaborative response to direct injury prevention for motorcyclists in the UK for the future. DocBike is the only injury prevention charity in the world dedicated solely to the reduction of harm in motorcyclists and their work has been very much appreciated.

An example of how well this works, Ian explains, is how DocBike can feed evidence and research back in at a ground level to remove risks to motorcyclists from our society. "If our research shows that motorcyclists are unaware that the greatest risk posed to them is a car waiting to turn right across their path, we can feed this back to the Driver Vehicle & Standards Agency, with whom we sit on the National Motorcycle Working Group, to make sure this forms part of the motorcycle test in the future. Bikers will then have to demonstrate an awareness of this risk and how to mitigate against it in order to pass their test, but more importantly this will significantly reduce the chances of them being killed from this type of collision for the rest of their motorcycling life."

Sharing their work and encouraging other organisations to participate in injury prevention also forms a large part of the work of the charity. "Presenting at events such as the National Major Trauma Networks conference is just as important as talking to motorcyclists at the roadside," explains Ian.

"Injury prevention makes sense on so many levels. It reduces costs to society, demands on the NHS and emergency services, and reduces pain and suffering whilst helping to keep families together. It has to be the way forward, but is so vastly under-represented compared to the

response to an incident once someone has been hurt. We have to redress this imbalance if we are to make any progress as a modern, educated and informed nation."

For more information on DocBike, including how your air ambulance charity can get involved, go to www.DocBike.org or email info@DocBike.org

 Images supplied by DocBike.

An Air Ambulance Charity CEO's view

Bill Sivewright, CEO, Dorset & Somerset Air Ambulance, says: "One concern that charities often have is that if they are associated with another charity, it might have a negative impact on fundraising. To date, allowing DocBike clinicians to associate their injury prevention activities with Dorset & Somerset Air Ambulance hasn't cost us a penny, nor has it diverted any potential income away from us as a charity. In fact if anything it has helped to further raise our profile and give our clinicians a powerful ability to engage with those members of the public whose lives they are trying to prevent from coming to harm in the future."

"By actively supporting injury prevention, we save even more lives than we would simply by picking up the pieces after a crash. Allowing our clinicians to engage in injury prevention activity has been very well received in our community, as a clear demonstration that DSAA are interested in saving lives wherever we can."



BASE TREBLE

In recent years, there has been a wave of new air ambulance bases being planned, being built or already opened. What's behind this sudden abundance of projects and how is it changing how air ambulance services operate? We spoke to three AAUK members: EAAA, EHAAT and LNAA.

"What has enabled a lot of the recent base builds is Government grants," says Patrick Peal, Chief Executive of East Anglian Air Ambulance (EAAA). "Charities find it hard to put money aside and to run capital campaigns, so the Government grants have been a rare opportunity to take a major step like this."

For most AAUK members, Government grants have not been sufficient to cover the whole capital cost but have proved enough to kickstart a campaign. Lincs & Notts Air Ambulance (LNAA) were fortunate enough to secure two Government grants that covered over half the cost, then a perfectly-timed legacy which took that figure to over 90%. *"It's been really important to us not to dip into our reserves," says Karen Jobling, Chief Executive, "especially with current uncertainty related to Covid."*

Once the idea of a new base has been decided upon, the next question is location. For EAAA, LNAA and also Essex & Herts Air Ambulance (EHAAT), there was a remarkably similar and serendipitous pattern. EAAA looked at many spaces in Norwich and the north of Norfolk in consultation with the ambulance service and other air ambulance services to ensure the right coverage and that all needs – such as access to the road network for Rapid Response Vehicles (RRVs) – were met. Patrick Peal picks up the story: *"It was a frustrating period as nothing ticked the boxes as well as the place we were in. Then we just had another conversation with the leaseholders and since our first conversation about building on this land – which was met with a firm 'no' – there had been a change of strategy and they were happy now to allow it. Not only was this the perfect location but it was also the location that would allow us to be a 24/7 service and get all our staff together under one roof."*

Karen Jobling tells a similar story, searching all over Lincs and Notts but without finding the ideal location that would enable them to stay central in their patch, meet the needs of all stakeholders and hit their budget. On the verge of signing on at another plot of land, suddenly a conversation started out of the blue with the owners of a space just 200m away from where the aircraft is based now. This space is perfect and is where the new base now sits.

EHAAT also scoured their patch but ended up back at their existing North Weald site, whose advantages included: it is an established airfield which assists in the planning process; it is set



away from residential areas; it has good motorway access for RRVs; and it is geographically central.

All three organisations see their new bases as central to their development over coming years – as well as bringing the long-term security of owning their own building instead of leasing it. EHAAT will retain its second airbase at Earls Colne but its new airbase at North Weald will not only accommodate its helicopter and RRVs and Herts fundraising team, but will also include specific areas for training, mentoring, patient liaison, and cross-training with other emergency services.

Going green

The opportunity to build from scratch allows air ambulance charities to consider the base's green credentials as part of the build, not as an add-on. EHAAT's building includes charging points for electric cars, bicycle parking for staff and photovoltaic panels on the roof to generate electricity. The building has been well insulated to retain heat and reduce noise pollution. It has a sustainable rainwater system and it will make as much use as possible of natural light – for example, transparent roofing panels in the hangar – to save on electricity.

EAAA are going with high-level insulation, underfloor heating and a breathing building, where air quality is constantly monitored for CO₂ levels, with adjustments made to keep the air fresh and CO₂ low, which should help stop people feeling sleepy in typically low-energy parts of the day.



EAAA

For LNAA, the new base was the only way to move on to the next stage of their journey, which would involve operating 24/7 and being a CQC-approved independent healthcare provider. Karen Jobling explains: *“Like many air ambulances, we’ve transitioned enormously over a short space of time and our new facilities are necessary to meet the new standard at which we’re operating. Our portacabins have served us well but we can’t wait to bring our charity staff, aircraft and aircrew all under one roof.”*

“We gathered views from all parties as well as taking expert advice regarding the facilities and how the building should be designed. We wanted to know from our own team what works and what doesn’t work at the moment and we talked to other air ambulances who have gone through the same process.”

“We made the central part of the office glass so anyone entering

the building can immediately see through the office and to the helipad, so the helicopter – our reason for being here – is ever present. We also angled the roof deliberately to evoke the wings of an aircraft: this area used to be used by the RAF, so this is our way of paying homage to the aviation heritage of the site.”

Like LNAA, the new EAAA facilities are a critical part of its going to full 24/7 service this summer. The new base will bring all Norfolk-based staff under one roof, will offer better facilities for the community to visit and see what the charity does, will provide a better quality of working environment and improved training facilities. Patrick Peal explains some other factors involved in the design of the new base: *“The twelve-hour night-time shift was an interesting challenge: how do you make sure someone is on top of their game at 3am, ready to launch as quickly as possible, when their body is just crying out to be asleep? We did a huge amount of research and have ended up with some very innovative facilities, with recliners and sleeping pods to allow crew to take naps, as well as full overnight accommodation for clinicians who are doing a series of night shifts.”*

“We’ve also built an immersive, interactive training room with full projection on three interactive walls, high-performance audio and aircon that can create temperatures between 0 and 30 degrees. This will allow us to create any number of at-scene training scenarios with the right visuals, sounds and temperature, and really put crews under realistic pressure.”

So, what advice would those who are coming to the end of the new base journey offer to those who are considering it? Patrick Peal says, *“Our air ambulance colleagues from other services were incredibly helpful so it’s definitely worth speaking to others – but also take expert advice from top-notch professionals. Expect to come across all kinds of complexities you might not have expected – and that your architects probably haven’t come across before – like having to work with the CQC and also the police regarding your drug store, and so on.”*

“This was my first and last design and build project!” Karen Jobling adds. “Our experience would suggest that when it comes to the right location, you don’t know until you ask, so be bold. Speak to other air ambulances who have already done it. Start fundraising early – and don’t try and do it in a pandemic!”



LNAA



FROM THE FRONT LINE

Through the Air Ambulance Awards of Excellence, AAUK is usually able to share with members a selection of the extraordinary missions that take place across the country every year. With no Awards in 2020, this opportunity was greatly missed, so over the next five pages we share three patient stories – and an unexpected landing.

'THE MOST DIFFICULT FLIGHT OF MY LIFE'



Scotland's winter weather threw its worst at Scotland's Charity Air Ambulance (SCAA) as it faced a race against time to airlift a critically ill cardiac patient to vital advanced hospital care within a tight life or death timeframe.

Snow showers, poor visibility and the ever-present threat of icing challenged the pilot on what he described as 'the most difficult flight of my life', while paramedics faced the immense task of repeatedly saving the life of their patient who arrested seven times in the helicopter during the epic journey.

Later that evening, the patient was sitting up in his hospital bed having undergone cardiac surgery and unaware of SCAA's crew's determined commitment to save his life.

Their outstanding teamwork, trust in each other, communication, expertise and camaraderie resulted in an amazing life-saving mission.

Here's the full story...

When a visitor to a remote area of rural Highland Perthshire suffered a heart attack during wintry weather, his best chance of survival was to get to a specialist cardiac care hospital fast.

A land ambulance from Crieff made the long journey to reach the patient and stabilised him before setting out on the nearly two-hour drive to hospital in Dundee in worsening winter road conditions.

With time against them, the ambulance crew requested air support; SCAA was deployed and arranged to rendezvous with them at an approved landing site at Lochearnhead and airlift the patient the rest of the way.

"We'd come through some heavy weather getting there but nothing to suggest it was going to get any worse," explained experienced SCAA pilot Captain Shaun Rose. "We had to skirt round some snow showers and expected a similar challenging journey down to Dundee."

Land and air ambulance crews worked together to transfer the patient to the helicopter but no sooner was he comfortably settled in than he suffered his first cardiac arrest.

Paramedics used the aircraft defibrillator to shock his heart back to a steady rhythm and - happy that the patient was



stabilised but also knowing that time was crucial - the helicopter lifted and started through the harsh winter weather toward the critical cardiac hospital centre at Ninewells in the quickest possible time.

"Although he was sitting up and talking to us, the patient's condition did give cause for concern and we set out all the appropriate cardiac life-saving and resuscitation kit we might need ready to act quickly," explained SCAA lead paramedic John Pritchard, who was on crew for that mission with paramedic colleague Richard Garside. The paramedics' foresight was to prove prophetic as their patient was to arrest a further six times in flight.

Fortunately, pilot Shaun had over 8,000 flying hours and 10,000 missions behind him as he called on his significant experience to safely conduct the flight in challenging weather conditions.

The crew continued to resuscitate their repeatedly arresting patient, carrying out CPR, airway management and ventilating.

Every time the patient came round, he vomited and then re-arrested again minutes later.

"We were so focused on our patient. Although we were well aware of the challenges Shaun was facing, we had plenty going on ourselves," said John. "The communication between us was brilliant."

Eventually they flew above the River Tay and Shaun followed the river to Dundee and Ninewells Hospital. Thanks to the expert in-flight care from the paramedics, the patient was not only alive but also well oxygenated and suffered no brain function issues as a result of his repeated arrests. He was rushed to the catheter lab for treatment and has since made a full recovery.

His lifesaving team needed some well-earned downtime before leaving the hospital. Physically and mentally drained, they shared their thoughts. *"It was without a doubt the most difficult flight of my career," said Shaun. "And I've faced many, many challenging situations in the air. Afterwards, we just slapped each other on the back, had a hug and then collapsed with a cup of tea. The conditions meant the paramedics were working on a constantly shifting and tilting platform. They were amazing - real pros."*

All agree, however, that the positive outcome made it all worthwhile.

"It's doubtful the patient would have made it if he had to travel by land ambulance," said John. "It would have taken too long and they would have had to stop every time he arrested."

SCAA's crew also credit the work of everyone else involved in the chain of survival that day. They included the initial ambulance crew from Crieff, the police officer who helped at



Duncan Stevenson

the Lochearnhead landing site, the Air Traffic Control and ambulance control team who helped look at different options to ease their journey, and the ground and theatre staff at Ninewells who took over patient care.

Patient Duncan Stevenson said: *"I don't remember much apart from coming-to occasionally and experiencing the helicopter and team getting buffeted by the extreme weather. I was in hospital for three days and had a stent inserted in the problematic artery. I was sitting up in bed later that first evening piecing together what had happened and thanking my lucky stars that SCAA was there for me."*

"I owe SCAA my life. I don't think I would have made it without them. When no-one else can reach you - they hopefully can. I'm testament to that and their commitment to saving lives even in the most challenging circumstances."

IN AN ENGLISH COUNTRY GARDEN

On 27 August 2020 at 1400, in lashing rain and high winds, the pilot of Hampshire and Isle of Wight Air Ambulance (HIOWAA) needed to get to ground quickly and safely. As the storm proceeded and visibility grew worse, pilot Colin Martin safely landed the helicopter and his medical crew of two, HEMS paramedic Sophia Rozario and Dr Fran Dolman, in an unplanned, controlled landing on the south lawn of country house, Broadlands.

From the lawn, they were escorted into the House by Lady Mountbatten and family, who provided refreshments and refuge until 1700, when the storm subsided and the helicopter could take off once more.

Sophia Rozario said, *"I don't think any of us had realised where we had landed until the rotor blades had stopped. It was lovely to*

receive such a warm welcome from Countess Mountbatten and her family, especially after such an impromptu arrival."

Richard Jordan-Baker, a Director of Broadlands, said: *"It was certainly a dramatic scene as the yellow and green helicopter came into view through the lashing rain and swirling gale. Pilot Colin Martin's skill and calm professionalism came into play as he dropped onto the lawn at the first opportunity of a flat, treeless space with some shelter from the wind. It was a great pleasure for us all to meet the crew and learn more about what they do."*



BACK FROM THE BRINK

In the evening of Friday 7 February 2020, Neil Sands was at home with his wife, Ruth, and children Dawn and Daniel. Out of nowhere, Neil suffered a cardiac arrest while watching television downstairs. Ruth, who was working in the office upstairs at the time, tells the story:

Around 10pm the door suddenly flung open with my daughter stood in the doorway: *'Daddy's not breathing properly, and I can't wake him up.'* I ran downstairs. Sat in his normal chair, he was making a gargling noise every 20 to 30 seconds, looking waxy and grey with his mouth wide open.

I slapped him around the face, shook his shoulders and shouted his name. I ran into the kitchen and dialled 999. *'Is the patient conscious and breathing?'* *'No, he's not.'* *'You're going to have to do CPR on him'*, she said. *'Get him on the floor'*, she told me. I don't know how much he weighs but it's considerably more than me. As I threw him down his head hit the floor. *'Goodness, I've given him a brain injury as well.'*

As I picked him up from the chair, I discovered that he'd wet himself. I've read enough true crime books to know that people who're dying can often wet themselves because their muscles relax. I knew this wasn't good.

The call taker told me to shout one, two, three, four in the rhythm that I was doing CPR so she could hear how fast I was going. Do you remember the Vinnie Jones advert about how to give CPR? The one where he sings Stayin' Alive. I had that playing in my head.

I was doing CPR for 10 minutes. It was absolutely exhausting. I've never done anything so physically demanding in my life. I tend to cope quite well in a crisis; things need to be done and I just get on with it. But this was pure adrenaline. We later found that his heart had stopped for 20 minutes in total.

The community responder, Dave, arrived first. He took over CPR and told me to go upstairs to be with the children. Dr Ewan and HEMS Paramedic, Julian, from the HIOWAA Critical Care Team arrived and got to work on Neil.

I was going up and down the stairs to see what was



happening with Neil and to check on my children. They got the defibrillator out and we could hear them shouting *'Clear!'*. I was told they did three rounds of that before he properly came back to life.

Before leaving for Queen Alexandra Hospital (QA), they put Neil on a ventilator to stabilise him. We got to QA and went straight up to the cardiac unit where they took him in for an angiogram to assess the damage. The crew showed me to an empty waiting room. With the adrenaline fading, I started to cry. Dr Ewan appeared - he was lovely. So calm and chatty. *'When we put the ventilator in, Neil gagged and obviously found it uncomfortable, which is a good sign'*, he told me.

Neil remained in a coma for a week. I played him a recording of my son and daughter featuring in the BBC adaption of a Christmas Carol in 2019. And that's what woke him up. It was just wonderful.

We learned that while his heart had stopped for 20 minutes, his brain hadn't been getting enough oxygen, so he suffered some brain damage. When he woke up, he didn't know where he was. He didn't even know who I was, which was very weird. We had to teach him lots of things from scratch, like telling the time and how to use a spoon.

Neil was moved from ICU up to the Cardiac Unit, where he stayed for three weeks, and had an implantable cardioverter-defibrillator (ICD) put in to restart his heart in case he had another cardiac arrest. A couple of days after his ICD he moved to the brain rehab ward. They wanted to make sure he could cope with everyday tasks - and they even allowed him to go down to the Chapel and play the organ several times a day.

A week before the first lockdown, Neil came home. He's doing really well. He's on a plethora of drugs and has a scar from his ICD, but his memory is pretty much back to normal. Whenever he falls asleep on the sofa, however, we all get a little bit nervy.

We are incredibly thankful and count our blessings for Neil's recovery. Thank you to everyone. From the 999 call taker to the Air Ambulance crew, nurses and first responder. He wouldn't be alive today if it wasn't for you all.





TRACTOR DISASTER

Gary Sorrell from Cold Norton in Essex was using a large ride-on roller to flatten the grass in his garden when it became stuck in soft ground. Gary then used a vintage tractor that he owns to pull the roller out - when disaster struck.

He explains: *"The tractor revved, moved forward and came up into a wheelie. It then flipped over backwards, landing on top of me. There was no time to react. It was pinning me to the floor, the engine was still running and fuel was leaking out all over the floor. I thought if this goes up, I've had it."*

"Being a vintage tractor, there was no roll cage, so it went completely flat to the ground, with the steering wheel embedded in the turf. Miraculously that part didn't hit me as it came down. My wife and daughter somehow managed to pivot the tractor out of the way."

"When I heard the air ambulance was coming it was music to my ears as I was feeling dreadful, howling in pain. I didn't realise just how quickly the air ambulance could get there, but also that they have a pre-hospital care doctor and a critical care paramedic on board so the level of care they can give you is greater than a land ambulance on its own."

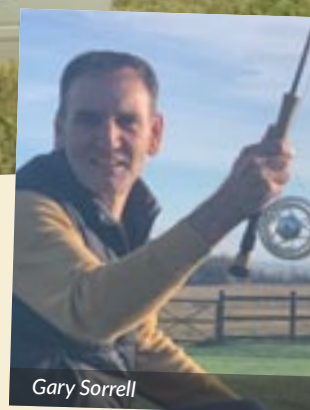
The Essex & Herts Air Ambulance (EHAAT) helicopter was able to land in a neighbouring field and the critical care team immediately set out to help Gary.

"They worked on me for about an hour. I had chest injuries, my lung had collapsed and I had broken my collar bone. There were also two broken vertebrae in my back."

The team immobilised Gary to protect his neck and back, and splinted his pelvis. They administered painkiller Fentanyl, which made it easier for Gary to breathe. The team were then able to take him by air to The Royal London Hospital,

the nearest major trauma centre.

After nine days in hospital Gary was discharged to continue his recovery at home. He adds: *"The EHAAT team were absolutely brilliant. They were very caring and it was really impressive to see the way the air ambulance crew worked with the land ambulance crew. Without them all working together, I don't think I would have come out of this as well as I have done. I'd like to sincerely thank everyone involved."*



Gary Sorrell



COLLEAGUES TO THE RESCUE

One evening, Dr Patricia Mills, who has been flying with East Anglian Air Ambulance (EAAA) for four years, was out walking her labrador, Ralph. Within minutes, she was involved in a road traffic accident which rendered her in desperate need of the air ambulance's life-saving skills.

Dr Mills and Ralph were heading to one of their favourite routes along a narrow country road they had walked countless times before. They were walking on the right-hand side of the road and stopped on a verge when they heard a vehicle.

Exactly what happened next is difficult for Dr Mills to remember, but she and Ralph were hit by a van. Dr Mills blacked out temporarily, but regained consciousness and quickly knew that she was not in a good way.

She said: *"I could feel from the way I was breathing that my ribs were definitely broken, and I was in quite a lot of pain. It was hard to move, and I wasn't sure what had happened to Ralph at first. The driver of the van stopped and then someone else came by and stopped to help. I was more worried about Ralph than myself at this point! He came to lie by my side but was crying and couldn't stand."*

"As they called 999 I remember saying 'tell them I'm major trauma positive', as I was really concerned that one of my broken ribs would have punctured one of my organs, something I have seen first-hand in so many of our patients. I knew what the risks were if I didn't get the right help quickly. I was in a lot of pain and really starting to shiver, so I knew I was starting to go into shock and the fear of the situation was really setting in."

Within minutes, the Anglia Two crew of critical care paramedic Liam Sagi and Dr Chris Chadwick and pilots Paul Smith and Jonny Bushell were tasked, not knowing it was one of their colleagues in need of their help. However, being quite a remote area, Liam joked on the flight: *"I think Mills lives round here, perhaps she'll see us land and come and help."*

It was quite a shock for Liam - and the rest of the crew - to discover she was the patient. Despite her injuries, Dr Mills was

talking and joking with the team at first, embarrassed that her colleagues would have to remove her clothes in order to fully examine her. However, she admits: *"I've never been so pleased to see Liam in all my life!"*

While the critical care team were assessing her, she gave the kind passers-by instructions to take Ralph to her vets. Fortunately, he came away from the accident without any broken bones, but suffered nerve damage in one leg, which causes him to limp. He also refuses to walk anywhere near that road now.

Dr Mills was assessed, administered advanced pain relief and flown to Addenbrooke's Hospital, where she spent 10 days in intensive care. She had broken all the ribs on her left side and suffered a flail segment on the left, a potentially life-threatening condition, as well as several broken ribs on the right, a broken sternum and two broken vertebrae in her lower back. Luckily, she did not have any major damage to her internal organs as she feared, although there was a small bleed on her spleen, liver and bowel. She also had a lot of heavy bruising.

Dr Mills continued: *"My chest wall was literally in pieces. I had to have titanium plates fitted over my left ribs to fuse them back together, or they may never have healed, but I was incredibly lucky that my injuries weren't worse. I have some backache and nerve damage around my ribs, but on the whole I recovered quite quickly and went back to work as an intensive care consultant at West Suffolk Hospital after 12 weeks. After just four months, in June, I started flying with EAAA again."*

"I think my injuries weren't worse because I was actually in really good shape at the time, as I was training to run a half marathon for EAAA! That training may have saved me. I've always thought that working for EAAA was an immense privilege, but now I appreciate what we do even more. Being a patient hasn't put me off at all - if anything, I'm even keener to go and help other people now I've been on the other side of the incredible care we provide."

"Working on the air ambulance is incredibly challenging and rewarding; no two days are the same and you never know what you will be tasked to. However, it is incredibly rare to be tasked to someone you know. It is even rarer for a member of the crew to become a patient themselves. I feel incredibly lucky to have benefited from this amazing lifeline. I knew I was in the very best hands."



 Images supplied by EHAAT, EAAA, HIOWAA, SCAA.

Many thanks to those members who shared their stories. We will feature more in the next issue of Airway: please send yours to info@airambulancesuk.org

RELEASING THE POWER OF CLINICAL DATA



Professor Keith Willett, then Director for Acute Episodes of Care NHS England, addressed the Association of Air Ambulances' (the predecessor to AAUK) Conference in 2014. He congratulated the Association and its members on the significant recent improvements made. He said, *"You have come a long way in five years. Far more cohesive, a far better national front, and enormous public respect."*

However, he also challenged all air ambulance charities by highlighting the need for more statistical evidence of clinical outcomes from our sector. He added, *"I need to know what it is that you are doing right. So far, you've let me down on evidence."*

Professor Willett's robust intervention that day stuck with many people, and the sector began to look very seriously at how it could boost its use of data to improve patient outcomes and demonstrate its value. The Association oversaw the start of a regime of data collection from members, while individual charities forged their own paths too. Much has changed. Listening on that day was Patrick Peal, then newly appointed as

Chief Executive of East Anglian Air Ambulance (EAAA). He says: *"He was right: patient information was very limited. I was not alone among Chief Executives determined to take up the challenge. The big change for us was the launch of HEMSBase, developed by a couple of doctors who produced an outstanding piece of software that gives us the ability to track interactions with the patient from the 999 call right to the handover. Information can be incredibly detailed and it's being enhanced all the time – for example, we now directly upload scans to HEMSBase automatically. It's an invaluable tool."*

While EAAA and other air ambulance services (either through HEMSBase or a similar system) have access to this fantastic information, there's a huge piece of the jigsaw still missing: all the information the NHS has on the patient. It's only with that information that air ambulance services can really see if outcomes have improved as a result of a HEMS intervention.

As a general rule, air ambulance charities approach individual trusts to ask to share their data currently. This works better for some than others: some trusts are more willing to help, some are not; some are more efficient, some less; but all of them are

"AAUK was able to instigate a breakthrough by initiating contact with NHS Digital at the highest level"

just incredibly busy and these requests are not top of their priority lists. However, AAUK was able to instigate a breakthrough by initiating contact with NHS Digital at the highest level, thereby opening the door for innovators to follow through. One of the chief innovators was EAAA. Patrick Peal says: *“Working alongside AAUK, I have managed to speak to the right people at NHS Digital regarding accessing patient data. After discussions, EAAA has recently signed a data-sharing framework contract which begins the process of us being able to go to NHS Digital to ask for access to data. It has to be a specific data set for very specific research purposes and for a certain period of time – and it’s absolutely right that these controls are in place.”*

“It’s a hugely significant development for us. By connecting HEMSBase data with NHS HES (Hospital Episode Statistics) data, we will have the end-to-end data we’ve wanted for years.”

Why might the data be so valuable? Dr Rob Major, Training and Education Lead at EAAA, explains: *“At the moment, we don’t often find out if patients had the injuries or conditions we thought they had, how our treatment affected them, what treatment they had next, if they went home, if they died, and so on. To have access to all this information really helps our teams in many ways – not least it’s great for morale when you hear that you diagnosed and treated effectively and a patient recovers well.”*

“With this information, we find out if diagnoses are accurate or if we need new diagnostic techniques. How can we improve the treatment we give? Is there a new diagnostic test we can use? How do co-morbidities affect treatment choices? Are we taking patients to the right hospital? Do our advanced procedures, such as anaesthetising the patient, have good outcomes? Does the number of intubation attempts affect the patient’s ultimate recovery? The current RePHill Trial will need NHS Outcome Data. There are so many variables to explore. Basically we’re looking for any way in

“It’s a hugely significant development for us. By connecting HEMSBase data with NHS HES (Hospital Episode Statistics) data, we will have the end-to-end data we’ve wanted for years.”

Patrick Peal

which we can improve.”

Of course air ambulance services have a very short decision-making chain and can make changes fast, so this access to new information can trigger a very fast response. By contrast, the NHS is a huge organisation where innovation takes time – and money, which is not always there. The nimble air ambulance sector is in the happy position of being able to move practice forward for the whole sector.

Patrick Peal continues: *“In the last year, EAAA has set up a Research and Innovation Development Group where clinicians are charged with improving what we do for patients. This is the group that decides where to focus our efforts regarding research and it will be instrumental in our approach to NHS HES data.”*



Patrick Peal

“I believe we’re the first to be working in this way with NHS Digital, although I know a number of colleagues around the country have reached their own arrangements with different parts of the NHS. I would really like to encourage any other air ambulance service to work with AAUK on using this newly-forged route though, as it seems so rich in opportunity.”

“In fact, the more sharing and research on the data, the better outcomes for all of us. This will raise our collective standards as a sector.”

The outcomes from research could also affect every single element of the air ambulance offer, with findings potentially dictating changes to training, equipment carried, interventions made, even the helicopters and their interiors.

It is not just the fact that data can be accessed on an individual patient level that is important (this is already done in a slightly less formalised way by many air ambulance services through patient liaison staff) but also the access to what one might term ‘big data’.

With enough data, you can look at trends whilst allowing for variables. TARN (Trauma Audit & Research Network) data has been invaluable at just that level for trauma cases and has allowed individual organisations or units to see how close or far away they are, in terms of major trauma survival, from the median and why that might be. Patrick Peal adds: *“At the big data level, TARN showed us that as an organisation, EAAA were enabling 4-5 more people per 1,000 to survive major trauma. This was a dramatic result – and in fact people asked us to re-run it in case there had been an error – and we wouldn’t have known it without the TARN data. It therefore became clear that advanced PHEM (Pre-Hospital Emergency Medicine) treatments resulted in notably better outcomes.”*

“For medical emergencies rather than trauma, it is the HES figures that are the holy grail, a huge dataset that will help us see how much of a difference we are making – and how we can do more.”

“I think we’ve already put Professor Willett’s challenge behind us now and are seen as a valuable asset by ambulance services but this is now about working with colleagues across the sector to ensure we all continue to learn, adapt, develop, and improve patient outcomes using every single tool at our disposal.”



Images supplied by EAAA, AAUK.

NEWS IN BRIEF

As easy as ABCC

Midlands Air Ambulance Charity (MAAC) has been crowned Outstanding Charity of the Year at this year's Asian Business Chamber of Commerce Awards (ABCC); the charity also went on to win Overall ABCC Business of the Year. The charity was also shortlisted for the Adaptability and Innovation Award at the Black Country Chamber of Commerce Business Heroes Awards.

Operational lead

Great Western Air Ambulance Charity (GWAAC) has appointed a Head of Operations to enhance leadership at the charity in light of the growing and more complex demands on their lifesaving service. Nick Tindal brings with him a wealth of experience in operational management and aviation. Nick's most recent post was Commanding Officer at RNAS Yeovilton, the largest military helicopter base in Europe.

Bob boost

Air Ambulance Kent Surrey Sussex (KSS) has been chosen by GB Bobsleigh's number one team as part of #TeamGivingBack, a campaign for the 20/21 season which helps to raise awareness and to raise funds for seven UK charities. KSS was chosen by Olympian Greg Cackett, who first became aware of KSS when family friends were involved in a serious accident twelve years ago.

Production reduction

Production at one of Britain's leading ambulance suppliers to the NHS has been hit by Brexit supply problems in Ireland. The Wilker Group was forced to shut down its operation in Clara, County Offaly, laying off about 80 workers for three weeks. Wilker has a second manufacturing facility in Sandbach, Cheshire.

Do you have any news you'd like to share in Airway? Then email emma.carter@airambulancesuk.org to be considered for the next issue.

NHS TURNS TO GOODSAM FOR COVID VOLUNTEERS

Technology pioneered by a specialist emergency doctor working for Air Ambulance Kent Surrey Sussex (KSS) is playing a critical role in the UK's response to the Coronavirus pandemic.

GoodSAM, co-founded by Mark Wilson, Professor of Brain Injury at Imperial College Healthcare NHS Trust and an Emeritus Doctor at KSS, has enabled the recruitment of over 750,000 volunteers for the NHS, connecting those in need with those who can help across communities throughout the UK.

Launched in 2013, the GoodSAM platform was originally designed to radically change the response to cardiac arrest, alerting CPR-trained volunteers to attend nearby cardiac arrests while an ambulance is en route, making it possible to begin earlier CPR and defibrillation and helping to save lives.

This time, though, GoodSAM has been adopted by the NHS in partnership with the Royal Voluntary Service to crowdsource Volunteer Responders. Within the first 48 hours, 750,000 people had signed up to be volunteers, with 4,000 successful registrations per second at the peak. On average, GoodSAM now deploys 10 checked volunteers every minute to support the NHS in its Covid-19 response.



Mark Wilson

Mark said: "With 1.5 million vulnerable people in isolation here in the UK during the Coronavirus pandemic – and even more who fall into the highly at-risk category – when we were approached by the NHS to help with this we of course said yes.

"GoodSAM is now effectively the world's largest Computer Aided Dispatch system, bigger than Uber and Deliveroo combined in the UK."

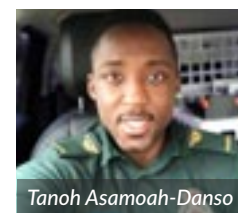


REVERSE MENTORING AT EEST

Staff at the East of England Ambulance Service (EEST) are mentoring senior leaders as part of an innovative project designed to provide a vital insight into the challenges they face so that improvements can be made.

The reverse mentoring initiative has been spearheaded by the Trust's BME (Black and Minority Ethnic) network to maximise opportunities for development and improve staff retention. Its first phase saw six members of the Trust's Board paired up with operational colleagues to hear more about their experiences of working for EEST.

Each pair met virtually once a month, with the senior leaders taking forward actions following each session based on their discussions. More staff will be given the chance to take part when the scheme is rolled out more widely later this year.



Tanoh Asamoah-Danso

Nicola Scrivings, Trust Chair, took part in three sessions alongside Senior Paramedic Tanoh Asamoah-Danso, and said: "Tanoh has helped me enormously. We have discussed everything from inequality to recruitment and retention, along with his ideas for ways we could attract a more diverse workforce. I have already taken away actions from our meetings so that we can make some positive changes which reflect the views of our staff on the ground."

KSS RESEARCHES SUDDEN LOSS OF CONSCIOUSNESS

Research from Air Ambulance Kent Surrey Sussex (KSS), in partnership with the University of Surrey, has shown the benefits of dispatching HEMS to patients with a sudden, unexplained loss of consciousness (LOC) of medical origin and a high prevalence of acute neurological pathology. The study also highlights how HEMS dispatchers in dialogue with ambulance personnel are able to select patients requiring HEMS-specific interventions and, based on its findings, identifies opportunities to improve triage for these patients.

Sudden LOC in the pre-hospital setting in the absence of cardiac arrest and seizure activity presents a challenge from a dispatcher's perspective: the aetiology is varied, with many causes being transient and mostly self-limiting.

However, other causes are potentially life-threatening, with patients requiring the expertise of HEMS. HEMS involvement has been shown to shorten scene times for critically ill patients and expedite transport times to hospital.

The research has been published by BMC Emergency Medicine and can be accessed at <https://bmccemergmed.biomedcentral.com/articles/10.1186/s12873-020-00388-x>



BECOMING OUR OWN PRESCRIBERS

By Aysha Mendes, Editor, JPP

A new year is here—an end to the challenges of 2020, and a fresh start for us all. But why doesn't it feel that way? As we find ourselves in a second wave of Covid-19 and a third lockdown, I think it's safe to say, most of us are 'over it' and ready to move on, but alas, despite the vaccine rollout having begun, it is not yet time.

Past the novelty and resilience we discovered early on in the pandemic, many of us are now worn thin. While some, particularly those on the frontlines of Covid-19, are more rushed off their feet than ever, many of us are either defaulting to a sedentary lifestyle or seeking out more creative ways to look after our minds, bodies and emotions without relying on our usual 'go-to's. Working out at home, going for solo walks, meditating – perhaps for the first time – and exploring hobbies we may never have realised we had are some of the little gifts some are finding during Covid-19.

A recent episode of BBC One's *The Truth About...* focused on 'Improving your mental health', referring to the 'new' and 'innovative' practice of social prescribing. While social prescribing has definitely been 'trending', it is by no means new. In March 1973, clearly far ahead of his time, Sir Roger Bannister wrote a letter to the *Lancet*, reflected on whether doctors should sooner offer 'blunt advice which is free' than to prescribe drugs to lower blood lipid levels. He wrote: 'perhaps, instead of reaching for the prescription pad we should help to swing our patients over to a more positive view of health so that they change their lifestyle to include sufficient exercise' (Bannister, 1973).

At this moment of the pandemic, we're being called to tap into our internal resources to rescue ourselves from our external circumstances. To ensure our bodies, minds and spirits are cared for, it seems we need 'doctor's orders' in the form of social prescriptions to remind us to spend time with loved ones, exercise, eat nourishing foods, slow down, put our

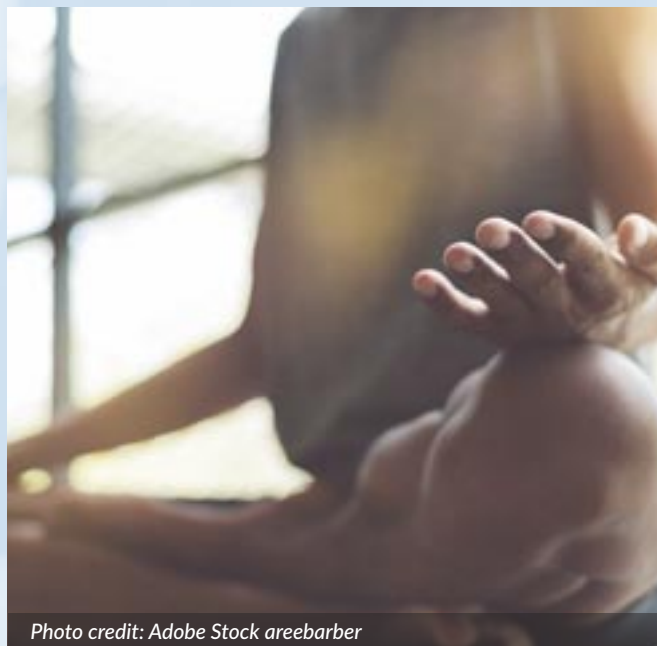


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phones away, and actively engage in activities we enjoy—and, importantly, to ask ourselves what those activities are in the first place.

Share your experiences with the JPP at jpp@markallengroup.com and access your subscription discount exclusively for AAA members at <https://www.magsubscriptions.com/aaa25>

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UNDERSTANDING HEART ATTACKS

Three ambulance services – West Midlands, South Western and the Welsh Ambulance Service – are working with researchers on a study to establish the best way to diagnose people having a heart attack.

The research is being funded by the British Heart Foundation and conducted by researchers at Kingston University and St George's, University of London, Swansea University and the University of Leeds to identify if there are additional times when ambulance crews should perform an ECG.

Research paramedic Josh Miller said: "Data already shows that in about a third of cases, when a patient is having a heart attack, they haven't had an ECG done by the ambulance crew because the patient didn't show any of the classic signs – chest pain or pain in the arm, neck, and jaw, or feelings of sickness, light-headedness or shortness of breath.

"Earlier studies show that this is more common in older people and particularly women. Because of this, the study will look to see if there are other atypical signs that ambulance staff should be looking out for.

"This is important because if an ECG was done on these patients they would get the specialist treatment they need more quickly, which might result in the crew bypassing the local hospital and going straight to a specialist centre, which means more patients will survive."

SAVING MINUTES SAVES LIVES



Putting patient and crew safety first is paramount in the continued evolution of Leonardo's HEMS platforms. The twin-engine AW169 and the light twin AW109, including the latest iteration the Trekker, continue to adapt to the needs and requirements of the marketplace.

Getting to an incident quickly not only saves minutes, it can save lives. With the AW109's rapid start, quickest take-off and 150kts cruise speed, it ensures the fastest delivery of life-saving care and transport of patients to major trauma centres. The AW109 can deliver specialist clinical care to critically ill patients faster than any other helicopter type, says Leonardo.

The latest evolution of this helicopter, the Trekker, incorporates these timesaving capabilities as well as introducing new capabilities to the HEMS market with a skidded-undercarriage configuration and a brand new lightweight HEMS interior, which was certified in 2020.

The helicopter is due to start operations in the European HEMS market. Last summer, the aircraft was chosen to support EMS operations from Rouen Hospital in France and will be operated by S.A.F. Hélicoptères. In the United States, Life Link III recently signed a contract for an AW169 and an AW109 Trekker for air medical transport missions.

In support of in-service and new customers undertaking clinical service missions all-year round and in all weather, the upcoming Phase 7 standard for the AW169 will also feature



new aerodynamics and a performance package increase. Phase 7 will become the new standard with certification anticipated in 2021. New developments will also include skids as a further undercarriage option, adding to fixed and retractable landing gear.

A further update to the platform will be the introduction of a Full Ice Protection System, which is currently under development. This will uniquely enable the AW169 to operate in the most challenging icing conditions - a capability not currently available in the UK HEMS sector.

The AW169 is future-proofed, including as standard Localizer Performance with Vertical Guidance GPS, a precise navigational aid, to enhance safe approaches and landings during low visibility.

The AW169 cabin places the patient at the centre, granting the clinical team 360-degree access and the possibility of using all available space for the patient's care and comfort. In addition, there is the housing of medical supplies and equipment, such as an incubator, twin stretchers or perhaps specialist clinicians or family members. The uniquely spacious cabin and smooth vibration qualities also support in-flight clinical interventions, such as RSI with a seat at the head of the patient.

Images supplied by Leonardo.

INTERIOR FOCUS



Specialist Aviation Services (SAS) is proud to have been able to support its many charity partners during the Covid-19 pandemic. The past 12 months has seen many developments in their aircraft operation and platform modification to support the transfer and treatment of Covid Patients – and now the company is taking this to the next stage with a renewed focus on tailored, adaptable, lighter interiors.

During Covid, a customised combination of procedures, modifications and bespoke SAS interiors fitted to the AW169 has enabled operations to continue with confidence on this highly capable platform.

The appointment of James Kingdon as the Head of Design has come at the start of SAS's development of a new interior design, which will incorporate the latest clinical requirements and be bespoke to SAS customers' needs. Feedback from the HEMS community has been central to the development of the latest design, with SAS recognising that the rapidly changing clinical environment needs supporting equipment that can keep up with clinical innovations.



The adaptability of the aircraft's interior is important for SAS's clinical partners, who require the flexibility to integrate new medical developments in equipment and clinical practice. In collaboration with Leonardo, the AW169 EMS User Group is a chance for the AW169 community to share ideas for innovation in the future. These sessions - and regular discussions with their customers - repeatedly demonstrate the importance of interiors when it comes to how the aircraft is operated now and in the future.

The new SAS interior will be lighter - so increasing payload, as well as adaptable to changing clinical equipment, able to be reconfigured at short notice, use clever space-saving storage, and able to be fitted to a range of aircraft. Covid-19 has focused the team on biosecurity for the patients and crew and SAS will continue to develop easy-clean technology, antibacterial/viral coatings, interior aircraft barriers and aircraft ventilation improvements.

SAS provide bespoke design services for many aircraft types, including NVIS systems and lighting, avionics and aircraft structures. All SAS modifications can be fitted by the completions team located at the SAS maintenance facilities at Gloucestershire Airport.

It is an exciting time for James Kingdon and the team, who will continue to consult with the HEMS community over the coming months as they seek further contributions to the creative process behind the aircraft interior development project. If you wish to discuss your individual design and completion needs, then please contact James at enquiries@specialist-aviation.com.

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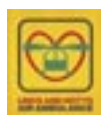
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