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East Anglian Air Ambulance

## Research, Audit, Innovation & Development Group

**BREAKING BARRIERS 2024**

### **'INNOVATIONS IN PRE-HOSPITAL RESUSCITATION'**

Approved for six CPD hours by the  
Faculty of Pre-Hospital Care, RCSEd

**Friday 29 November 2024**

Downing College, Cambridge

Join the conversation online  
using **#RAIDconference**

Free Wi-Fi:  
UniofCam-Guest

## IMPROVED DESIGN, SAME GREAT CLINICAL OUTCOMES

The next generation AutoPulse Resuscitation System combines the proven clinical performance of the AutoPulse with an improved user experience for more effective patient care.



### MANAGE A CARDIAC ARREST EVENT MORE EFFECTIVELY THAN EVER BEFORE.

The AutoPulse NXT Resuscitation System lets providers quickly begin patient-customized, high-quality compressions that can continue through treatment and transport.

Multiple studies of patients in cardiac arrest have demonstrated improved blood flow with circumferential compressions compared to manual CPR alone.<sup>1,2,3</sup>

Controls on either side of the board allow providers to manage AutoPulse NXT from any direction, making it simple to begin compressions, particularly in tight spaces.



### Wider range of patients served

With AutoPulse NXT, providers can deliver automated compressions for a wider range of patients, including automatic sizing with the NXT band to provide customized compressions. The NXT band technology measures the patient to provide appropriate depth, reducing the need for pauses or manual adjustments.

### Integrated CPR feedback with X Series Advanced

Within seconds, the X Series® Advanced monitor/defibrillator recognizes the unique, patient-customized compressions performed by the AutoPulse NXT Resuscitation System and informs rescuers that high-quality CPR is being administered. This information is clearly visible on the X Series Advanced screen, allowing rescuers to focus on other critical lifesaving tasks.

## CONFERENCE AGENDA

Please note, we reserve the right to change the programme and timings ahead of the day.

### 8.30 - 9.00 Arrival and Registration

#### SESSION 1

The PHEM Research Landscape  
Facilitator Prof. Ed Barnard

9.00 - 9.10 Conference Opening  
Sarah Evans, EAAA Chair of Trustees

9.10 - 9.30 Challenges in Pre-Hospital Research  
Dr Rob Major

9.30 - 10.00 Roundup of Research in HEMS  
Dr Kate Lachowycz and Prof. Ed Barnard

10.00 - 10.30 Keynote Lecture  
Professor Lucy Chappell, CEO NIHR

### 10.30 - 11.00 Refreshment Break and Networking

#### SESSION 2

Out of Hospital Cardiac Arrest, The Future  
Facilitator Dr Paul Rees

11.00 - 11.30 ERICA-ARREST: Out of Hospital  
Cardiac Arrest REBOA Trial  
Dr Paul Rees

11.30 - 12.00 Essex Cardio-thoracic Centre RescQ Project  
Dr Tom Keeble and Dr Uzma Sajjad

**12.00 - 12.30** Association of Ambulance Chief Executives:  
The National Strategic Objective  
*CCP Liam Sagi*

**12.30 - 13.00** 'OnScene': Pre-Hospital ECMO Trial Update  
*Dr Xavier Moors*

**13.00 - 14.00** **Lunch Break**

### SESSION 3

Innovations in Trauma Care  
*Facilitator Dr Rob Major*

**14.00 - 14.30** Psychopathology in Pre-Hospital  
Emergency Medicine  
*University of East Anglia, Clinical Psychology*

**14.30 - 15.00** Pre-Hospital Emergency Anaesthesia:  
Past, Present, Future  
*Dr James Price*

**15.00 - 15.30** Extracorporeal-endovascular Strategies  
in Trauma Shock  
*Chris Bishop*

**15.30 - 15.50** **Refreshment Break and Networking**

### SESSION 4

What Next?  
*Facilitator Dr James Price*

**15.50 - 16.20** Drones in OoHCA - The Caelus Experience  
*Prof. Paul Gowens*

**16.20 - 17.05**

Question Time: The Future of Out of Hospital  
Cardiac Arrest Resuscitation

**Dr Paul Rees**

*HEMS Consultant  
& Interventional Cardiologist*

**Dr Thomas Keeble**

*Interventional Cardiologist & Chair of BCIS*

**CCP Liam Sagi**

*AACE National Strategic Lead for OHCA*

**Dr Xavier Moors**

*HEMS/ECPR Consultant  
& Anesthesiologist, LifeLiner2*

**Dr Rob Major**

*HEMS Consultant & Chair of RAID*

**17.05 - 17.15**

Conference Close

*Dr Rob Major*

### QUESTIONS

Do you have a question for one of our speakers?



You can submit these via our Slido app where you can also view questions submitted by other attendees and vote for the questions you like, bringing the most important topics to light.

**Choose whether to ask anonymously or add your name.**



Ask a question or join the discussion by scanning the QR code **or join at Slido.com and enter code: #1840510**

## A WELCOME FROM DR ROB MAJOR

FRCEM FIMC MA, DEPUTY MEDICAL DIRECTOR AT EAST ANGLIAN AIR AMBULANCE AND CHAIR OF THE RAID GROUP

It's my pleasure to welcome you to East Anglian Air Ambulance's Research Audit Innovation and Development (RAID) conference, 'Breaking Barriers'.

This conference, aimed at professionals interested in pre-hospital research and development, is themed around innovations in pre-hospital resuscitation.

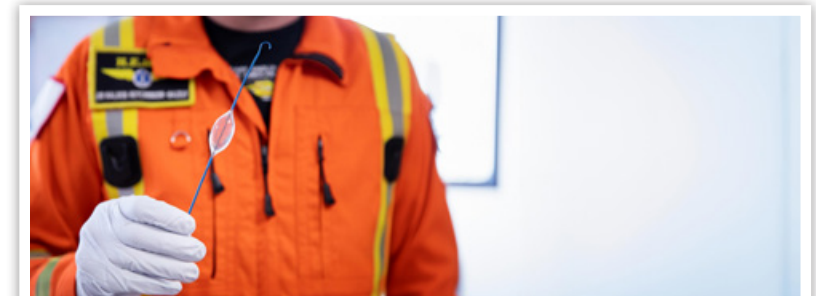
Pre-hospital research is challenging to finance, complex to undertake and infrequently provides enough evidence to drive innovation which can impact patient outcomes.

This conference has presenters who are subject matter experts, understand these challenges and have been innovators in their respective fields.

I hope this conference provides an opportunity to discuss data, the quality threshold for pre-hospital evidence and how research can be used to drive innovations that improve patient outcomes.



Dr Rob Major



East Anglian Air Ambulance

**Research, Audit, Innovation  
& Development Group**

**The RAID group was established in July 2020 with the vision of measurably improving patient outcomes by developing new treatments, equipment and skills through trials, extensive research, evaluation and by using the latest cutting-edge evidence in PHEM. The group also supports us to monitor and continually improve our service.**

We carry out original research and evaluation studies, collaborating across our network of other air ambulances, the NHS and universities to share knowledge.

The group is made up of EAAA doctors, critical care paramedics and senior data analysts, some of whom have senior academic qualifications and appointments. There are also guest members on the group for certain projects – such as the clinical director of neuro critical care at Addenbrooke's Hospital.

**Scan here to learn more and  
view our research:**

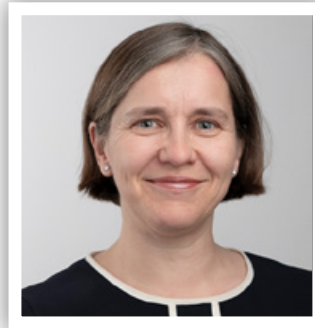


## MEET OUR SPEAKERS

### Professor Lucy Chappell

Chief Scientific Adviser to the Department of Health and Social Care and CEO of the NIHR, Professor Lucy Chappell has overall responsibility for DHSC research and development and for supporting the Department's analysis. Lucy is also Professor of Obstetrics at King's College London, Honorary Consultant Obstetrician at Guy's and St Thomas' NHS Foundation Trust, and President of the Blair Bell Research Society.

She is an NIHR Senior Investigator and a former NIHR Research Professor, and was previously a member of the NIHR HTA Clinical Evaluation and Trials Board.



### Dr Xavier Moors

Dr Moors is a Paediatric Anesthesiologist, Lifeline 2 HEMS Physician and part of the delivery team of the Dutch 'OnScene' pre-hospital ECMO trial.



### Defence Professor of Emergency Medicine Dr Ed Barnard @Edbarn

Ed is an emergency physician with sub-specialty training in pre-hospital emergency medicine and academic emergency medicine. He has extensive experience in the EM, anaesthesia, and critical care management of major trauma, both pre-hospital and in-hospital across diverse civilian and military environments. Ed is a consultant in Pre-Hospital Emergency Medicine with EAAA and is part of the ERICA trial delivery group.

### Surgeon Commander Dr Paul Rees @DrPaulRees

Paul is an experienced consultant cardiologist at Barts Heart Centre. He has wide experience of deployed military care having operated remotely in submarines, providing frontline medical support on commando operations overseas, and as a consultant on the MERT in Afghanistan.

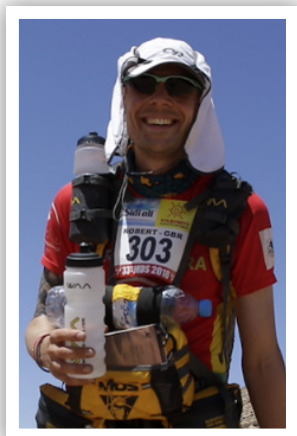


He co-founded the British Cardiac Intervention Society's cardiac arrest group. Paul is also a consultant in Pre-Hospital Emergency Medicine with East Anglian Air Ambulance and the chief investigator for the ERICA trial.

**Dr Rob Major**  
**@phemdm**

Rob is a Consultant in Emergency Medicine who has worked at Ipswich, Addenbrooke's, and Norfolk and Norwich Hospitals. He serves as Chair of the Research, Audit, Innovation, and Development (RAID) group and Deputy Medical Director at East Anglian Air Ambulance, where he also leads the training program.

Rob is an Associate Professor at the University of East Anglia and a member of the ERICA trial delivery group. He is also Chair of the Simulation group for the Fellowship of Immediate Care Exam at the Faculty of Pre-Hospital Care in Edinburgh and an Honorary Clinical Lecturer in Tactical Medicine at Queen Mary's University London.

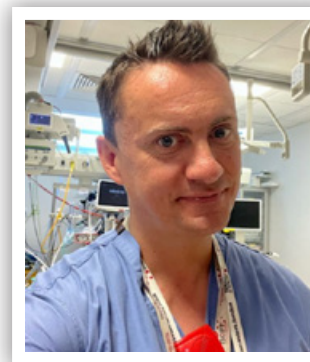


**Dr Thomas Keeble**  
**@DrKeeble**

Tom is an experienced Consultant Cardiologist at Essex Cardiothoracic Centre, Associate Professor at ARU School of Medicine and Co-Founder and Chair of the BCIS Out of Hospital Cardiac Arrest Group.



He is an expert in the management of heart problems including high blood pressure, palpitations (AF/arrhythmias), chest pain, valvular heart disease, high cholesterol and cardiovascular risk, heart attacks and angina. He specialises in heart artery stent implantation, both in stable patients with chest pain and heart attacks (blocked heart arteries).



**Mr Chris Bishop**  
**@pipes\_n\_pumps**

Chris is a Senior Clinical Research Fellow at Queen Mary University of London, UK, specialising in trauma resuscitation. His PhD focuses on veno-arterial extracorporeal membrane oxygenation (VA-ECMO) for cardiac dysfunction associated with major trauma haemorrhage.

With a background as a Lead Clinical Perfusionist, Chris has extensive experience in ECMO and mechanical circulatory support for critical care patients. He is passionate about clinical education and actively involved in pre-hospital endovascular resuscitation programs.

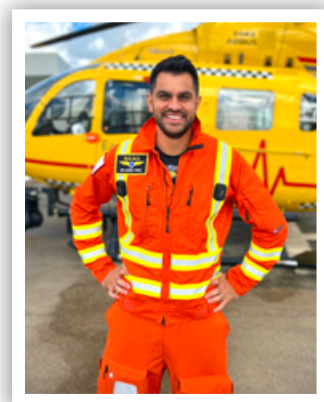
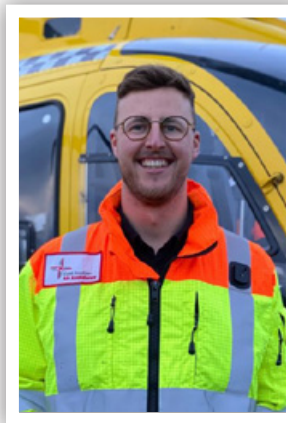
Chris' research interests span extracorporeal-endovascular resuscitation strategies in shock, cardiac arrest, and traumatic injury, aiming to bring these techniques beyond the traditional hospital setting.

**CCP Liam Sagi**  
**@liamsagi1**

Liam is an Advanced Paramedic in Critical Care where he works at EEAST and EAAA as well as volunteering his time with the BASICS charity Suffolk Accident Rescue Service.

Liam joined the Association of Ambulance Chief Executives in 2023 as part of a project on OHCA and health inequalities and now leads on this area of work across the sector. He is passionate about improving survival from OHCA in the UK and reducing the associated inequalities.

Liam also has an interest in the management of pre-hospital traumatic brain injury.



**Dr James Price**

James is a Consultant in Adult and Paediatric Emergency Medicine at Cambridge University Hospitals NHS Foundation Trust. He is the RAID Senior Academic Clinical Fellow, with a research interest in the pre-hospital management of acute traumatic brain injury. He is the Chief Investigator for the BRAIN-FIRST study at EAAA.

**SPECIAL THANKS**



**We would like to express our sincere gratitude for the generous support of our headline sponsors:**



ZOLL is focused on improving patient outcomes and advancing resuscitation. Our products and solutions encompass multiple facets of resuscitation and work as a system to help improve survival rates from sudden cardiac arrest.

[www.zoll.com/uk](http://www.zoll.com/uk)



## GET INVOLVED

WITH EAST ANGLIAN AIR AMBULANCE

East Anglian Air Ambulance (EAAA) saves lives by delivering highly skilled doctors and critical care paramedics by air or road, 24/7 to seriously ill or injured people in the region 365 days-a-year. We are a life-saving charity that is only kept airborne thanks to our incredible supporters. In June 2021, EAAA became the first helicopter emergency medical service in the East of England to fly 24/7.

We are committed to delivering outstanding care, quality, and value to the community. We thrive on challenges, looking for innovative ways to grow and improve the service further through an open culture of continuous improvement, by scrutinising our actions, sharing knowledge, and learning from past events.

Our motivation comes from a determination and a passion to provide the best possible outcomes to our patients.

*Together we save lives*



Scan here  
to learn  
about us.



Scan here  
to get  
involved.



## LEARN SPEAR AND POCUS

WITH EAST ANGLIAN AIR AMBULANCE

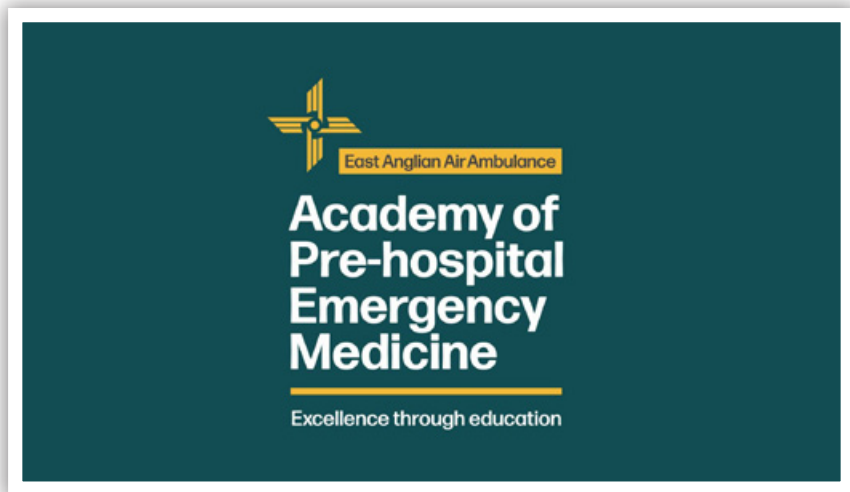
East Anglian Air Ambulance's Academy of Pre-Hospital Emergency Medicine provides an academic platform from which we can share our expert and specialist knowledge with others.

To date, we have trained many of our own clinicians and critical care doctors and paramedics from other HEMS organisations and the NHS, as well as international clinicians in a range of innovative procedures and pre-hospital interventions.

We have partnered with the University of East Anglia and The ATACC Group to deliver a range of exciting courses which we're delighted to invite you to attend.

Find out how you can book one of our upcoming courses.

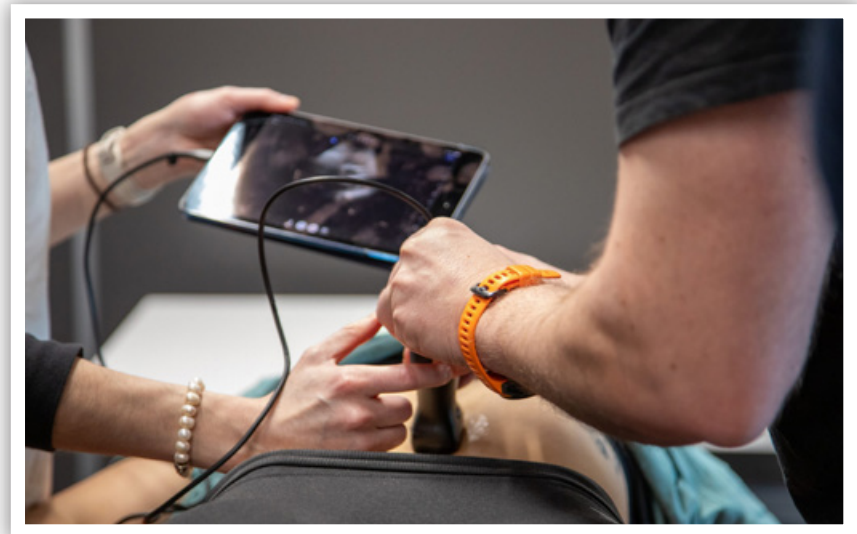




### **PRE-HOSPITAL EMERGENCY MEDICINE FOR HEALTHCARE PROFESSIONALS**

The Pre-Hospital Emergency Medicine (PHEM) for Healthcare Professionals modules are delivered by the University of East Anglia (UEA) in partnership with East Anglian Air Ambulance. This clinically-focused learning experience will equip you with the foundational knowledge, skills and behaviours necessary for a career in advanced PHEM.

**Post Grad Certificate in  
Pre-Hospital Emergency Medicine  
- East Anglian Air Ambulance**



### **THE POCUS COURSE** NEXT COURSE: 29 APRIL 2025 | £450

Our Point of Care Ultrasound (POCUS) Course is used by Emergency Medicine, Intensive Care, Anaesthetics and Pre-hospital specialists to add valuable information to a clinical assessment. Our POCUS course is unique in that we teach you the basics of scanning and then how to apply it to pre-hospital cases.

**Scan here to learn more and book:**





**THE SPEAR COURSE**  
NEXT COURSE: 30 APRIL 2025 | £500

Our Specialist Percutaneous Emergency Aortic Resuscitation (SPEAR) Course represents an important first step on the ladder of endovascular resuscitation and is aimed at advanced resuscitation teams interested in growing their emergency vascular access skills. The course is accredited by leading UK faculty, EVTAM Society (Endovascular Resuscitation and Trauma Management).

**Scan here to learn more and book:**



**WANT TO GIVE US  
SOME FEEDBACK?**

We hope you enjoy today's event and would love to hear your thoughts. Please scan the QR code below to give us some feedback!



**RAID 'Breaking Barriers' 2024  
Conference Feedback**

Let us know what you thought!





## THANK YOU FOR JOINING US

Please do get in touch if you have any questions or would like further information on any of our future plans, operations and events.

We look forward to seeing you again soon.

### **East Anglian Air Ambulance**

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*Together we save lives*