



# NEWSLETTER

## Message from the President

Welcome to the August 2024 ELSO newsletter.

It has become almost habitual for me to highlight upcoming ELSO meetings in these newsletters. This one, however, writes itself.



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ELSO is celebrating its 35th anniversary next month in Detroit, MI. To those who say, "Detroit ... really?" shouldn't forget that the city is not the urban wasteland so often portrayed by Hollywood and has regained its erstwhile energy, confidence, and vim. More importantly, beautiful Ann Arbor - the home of Dr Bartlett and ELSO - is but a cab ride away.

ELSO began in 1989 across 15 centers, all of them in the USA. Thirty-five years later, ELSO has become a truly global organization, with 4 regional chapters and over 750 active member centers in every populated continent across the planet. ELSO sets the standard for international ECLS education and quality, monitors developments in technology and innovation, and regularly publishes guidelines, position statements, monographs, and textbooks. The ELSO Registry contains details of over 225,000 ECLS patients of all ages and continues to grow in numbers and refinement.

ELSO was set up by the indefatigable Dr. Bartlett, who remains heavily involved in leading the organization, attending all of the many Board and Steering Committee meetings and conferences. What ELSO has achieved from its modest beginnings is astonishing and is thanks to him; the staff at the ELSO office (led by Christine Stead and Peter Rycus); and all of you, the members who give freely of their time to upload patient data, teach, research, write, volunteer, and advance the field so that our patients can all benefit.

Come and celebrate our ELSO community together with the man who began it all 35 years ago.

See you in Michigan,

Graeme MacLaren, President, ELSO



## CONFERENCES



### 35th Annual ELSO Conference

**Location:** Huntington Place, Detroit, MI

**Dates:** September 28th - October 1st, 2024

**Ann Arbor 35th Anniversary Event:** October 2nd, 2024

**Registration Information:**

[https://web.cvent.com/event/dd3b3aaa-5f8b-4677-bc04-4c8339df04f8/summary\\_](https://web.cvent.com/event/dd3b3aaa-5f8b-4677-bc04-4c8339df04f8/summary_)



### 6th LATAM Conference

**Location:** Buenos Aires Argentina

**Dates:** November 14th - November 16th, 2024

**Registration Information:** <http://www.elsolatam2024.org>



### 11th Annual SWAAC ELSO Conference

**Location:** Conrad at Etihad Towers, Abu Dhabi, UAE

**Dates:** February 6th - February 8th, 2025

**Pre-Conference Workshop:** February 4th - February 5th, 2025

**Registration Information:** <https://swaacelso2025.com/>



### 13th Annual EuroELSO Conference

**Location:** Milan, Italy

**Dates:** April 23rd - April 26th, 2025

The latest information on ELSO & Collaborative Meetings can be found [here](#).



## COMMITTEE ROUNDUP

### ELSO Conference Committee

Preparations for the 35th Annual ELSO conference in Detroit are well underway. The Conference Committee has been hard at work, and we look forward to showcasing their efforts during this impactful four-day event.

We will be releasing the full agenda soon and are excited to share all of the expert speakers and panelists that will be joining us this year! We have been highlighting a variety of sessions across our social media- stay tuned for continued announcements!

If you have already registered but have not yet booked your hotel, please check out our hotel block at the Detroit Marriott at the Renaissance Center. The group rate is active until September 1st.

We look forward to welcoming you to Detroit and Ann Arbor this upcoming Fall. Please visit our [conference website](#) for further details on registering for all conference activities!

**35th Annual ELSO CONFERENCE**  
#ELSO2024

Representation From Around the World

Register at:  
<https://bit.ly/ELSO2024>

**INTRA-HOSPITAL ECMO**

Learn about Intra-Hospital ECMO, Options for Right Ventricle Support, and more from Dr. Jenelle Badulak at #ELSO2024

**Dr. Jenelle Badulak**  
University of Washington Medicine  
Washington, USA

September 28 - October 1, 2024  
DETROIT, MICHIGAN

Registration: <https://bit.ly/ELSO2024>

**MAKING ECMO WORK WHEN RESOURCES ARE SCARCE**

Hear about using ECMO When Resources are Scarce and more from Dr. Poonam Malhotra Kapoor at #ELSO2024

**Dr. Poonam Malhotra Kapoor**  
All India Institute of Medical Sciences  
South Delhi, India

September 28 - October 1, 2024  
DETROIT, MICHIGAN

Registration: <https://bit.ly/ELSO2024>

The latest information on ELSO & Collaborative Meetings can be found [here](#).

## Education Committee/ELSO Academy

### 2025 Course Dates

We are in the process of rolling out our 2025 ELSO Simulation Center Education activities on ELSO Academy. You can expect a variety of Adult Simulation, Neo/Peds Simulation, and Cannulation courses throughout the year. Please keep an eye on the ELSO Website as well as ELSO Academy to see course dates as they are released and sign-up!

### Available 2024 Courses

#### **ELSO Extracorporeal Membranous Oxygenation (ECMO) Neo/Peds Simulation Course**

**Dates:** October 17th - 18th, 2024 (Session 1) October 19th - 20th, 2024 (Session 2)

**Location:** ELSO Headquarters

**Address:** 3001 Miller Road Ann Arbor, MI, USA

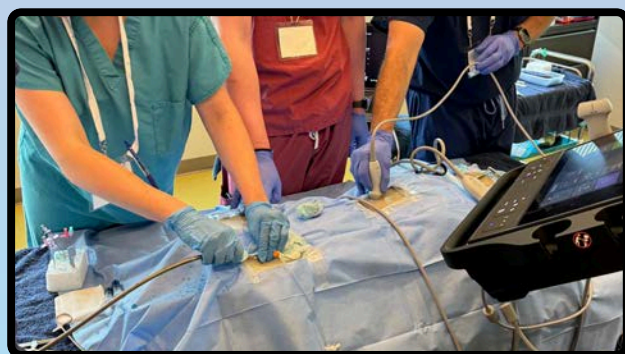
#### **ELSO Extracorporeal Membranous Oxygenation (ECMO) Adult Simulation Course**

**Dates:** November 7th-8th, 2024 (Session 1) November 9th-10th, 2024 (Session 2)

**Location:** ELSO Headquarters

**Address:** 3001 Miller Road Ann Arbor, MI, USA

All non-ELSO courses/events can be found [HERE](#).



*Images from June 2024 Cannulation Course*

### ELSO Foundations.

We are thrilled to announce that the Neonatal and Pediatric Foundations Course will soon be accessible as a self-paced course, similar to the Adult ECMO Training Course. Please stay tuned for future announcements regarding the release of this course!



## Quality Committee - Award of Excellence



We extend our congratulations to the new recipients of the Platinum, Gold, and Silver Awards!

The award winners will be celebrated at the 35th Anniversary ELSO Conference in September 2024 at the Detroit Institute of Arts, recognized as the top art museum in the US for the third consecutive year. This designation commences on 1/1/25 and concludes on 12/31/27. Plaques will be sent in early December, and any requests for additional plaques must be submitted by October 1st.

A sincere thank you to all the centers that participated in site visits this year! Our teams were delighted to visit the thoughtful and collaborative ECMO programs that submitted applications this year!

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## Publications Committee

ELSO has a growing list of publications available.

- New guidelines - always free and available to our community (Guidelines are [here](#))
- The ELSO Red Book - 6th Edition
- ECMO Specialist Training Manual - 4th Edition (5th Edition in development)
- ECPR and Resuscitative ECMO
- Post-Cardiotomy ECLS and other Temporary Mechanical Circulatory Supports in Adult Patients, with Roberto Lorusso as Senior Editor and a robust team of international authors.
- Neonatal and Pediatric ECMO Simulation Scenarios - developed in partnership with IPSS
- A Korean translation of the ELSO Red Book - 5th Edition
- Spanish translations of the ELSO Red Book - 4th Edition and ECMO Specialist Training Manual - 4th Edition

Visit our website for the full list of publications available [HERE](#).



## Registry Committee

Thank you to everyone contributing data to the ELSO Registry and using the quality dashboard for improving your work at your center. ELSO is investing in a new platform for quality benchmarking that we will be sharing more information about soon. Stay tuned....

Please update your center details to reflect any changes in your team, including their roles.

## Data Use Agreements

All center signed Data Use Agreements can be found within the manage center details, located under the manage tab for all ELSO center administrators. If you have not submitted your center's Data Use Agreement, please do so as soon as possible.

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## Research Committee

### ELSO Research Grant Applications

Research Grant applications are now open and can be accessed [here](#). All applications must be received by September 30th, 2024. Notifications will be announced around December 1, 2024. Applicants may apply for one of two levels of award: awards with a maximum total budget of \$5,000 or a maximum of \$10,000, depending on the scope of work the research involves. Most grants are not anticipated to require the maximum amount in either category and all budgets should be justified by the investigators and will be reviewed by the ELSO Grants Subcommittee. Please note that applicants for the \$5,000 option will have increased odds of acceptance given the limited number of grants to be awarded.

### Research Committee Initiatives

Research initiatives are forming now! Please contact [research@elso.org](mailto:research@elso.org) for any suggestions you might have for the committee.



## **FELSO Award Nominations**

The nomination period for this year's FELSO Awards has ended and applications are currently under review. Thank you to everyone who nominated the ECMOlogist in their life!

This award is an amazing opportunity to honor someone who has a lifetime of achievement in delivering ECMO care to patients, educating about ECMO, researching ECMO, developing ECMO technology or contributing to ELSO's mission. Stay tuned for announcements for next year's award cycle!

## **ELSO Communities - Real-Time Support & Collaboration on WhatsApp**

WhatsApp communities have taken off! Several have ~1,000 participants. The participation and real-time collaboration are exceeding expectations. If you have a question or need advice, please join one of the discussions. Help comes from so many people. Please also contribute your own practices and advice to help your ELSO colleagues.

To join a community visit the ELSO [website](#). You will be required to download WhatsApp on your phone. Communities are designed to be a support for our members that want to connect, collaborate, and support each other on a topic.



## SURVEY ALLEY

### **Sedation Practices in Adult VV ECMO Patients**

This is a brief survey for attending physicians regarding sedation practices for adult ICU patients requiring VV ECMO for severe ARDS.

This survey aims to characterize current analgesia and sedation practices to better understand practice variability and identify areas for future research.

It is expected to take less than 10 minutes to complete.

IRB (Cooper University Hospital) representatives determined that it does not classify as human research and therefore does not require IRB review.

Primary survey contact: Chris Noel [Noel-Christopher@CooperHealth.edu](mailto:Noel-Christopher@CooperHealth.edu)

Please take a moment to complete the survey here:

<https://redcap.cooperhealth.edu/redcap/surveys/?s=MCEJXW7KF9MMPRYA>

### **Data Submission Practices in ECMO**

This survey aims to collect information about data submission structure, strategy, challenges, and solutions that programs have identified in practice. The goal is to develop an understanding of how to better support programs and identify how much support they need for data collection and submission.

Primary survey contact: Weiting Chen [weitingchen@mednet.ucla.edu](mailto:weitingchen@mednet.ucla.edu)

Please take a moment to complete the survey here:

[https://uclahs.az1.qualtrics.com/jfe/form/SV\\_08p8EQXVOImiQya](https://uclahs.az1.qualtrics.com/jfe/form/SV_08p8EQXVOImiQya)





## SURVEY ALLEY

### **An Optimal Connection Site of the CCRT Device in Adult ECMO Patients**

We are Emory University graduate students, and the purpose of our Capstone project is to identify the optimal attachment location of continuous renal replacement therapy (CRRT) in adult extracorporeal membrane oxygenation (ECMO) patients by collecting anonymous REDCap survey results about attachment and return locations of the CRRT device and the complications associated with site location. This research project is significant as it identifies the optimal location for CRRT attachment with the fewest complications in adult ECMO patients. There is no national policy or guideline for CRRT connection to ECMO based on the safest connection site with the fewest complications for adult patients (18 years or older). This study aims to report the safest CRRT location in adult ECMO patients and improve patient safety.

Primary survey contact: Aubrey Olson [olsona1024@gmail.com](mailto:olsona1024@gmail.com)

Please take a moment to complete the survey here:

<https://redcap.emory.edu/surveys/?s=FDRNHNNKRALXTHWA>



## BEDSIDE WITH BARTLETT

SPECIAL EDITION BY GILES PEEK, MD  
EDITED BY GRAEME MACLAREN, MBBS



**Robert Bartlett, MD**

Founder, Board of Directors Emeritus  
ELSO Professor Emeritus of Surgery University of Michigan



**Giles Peek, MD, FLSO**

Professor of Surgery  
University of Florida Health

### Case Study

A 78 kg, 32 year old man with severe pneumonia of unknown cause is referred for ECMO. He is in a small community hospital and is too sick to move. You send out the mobile ECMO team. The new attending is keen to go and cannulate and you think he is ready so you send him out. The ventilator settings are 42/12 cmH<sub>2</sub>O, FiO<sub>2</sub> 100% giving an ABG of pH 7.19, PaO<sub>2</sub> 46 and PaCO<sub>2</sub> 68, SpO<sub>2</sub> 74%. He is oliguric, CVP 18, BP 110/45, T38.5, HR125. He is paralyzed, pupils are equal and reactive, he is receiving Norepinephrine 0.1 mcg/kg/min, epinephrine 0.3mcg/kg/min, but no other pressors. You discuss the case with your team and agree that he needs to be cannulated, although he is on some pressors you both feel that VV will be appropriate as it is a primary respiratory illness and everything should improve once the ventilator pressure is weaned down. The team cannulates with a 25Fr drainage cannula in the femoral vein with the tip positioned in the low right atrium and an 18Fr return cannula in the RIJV. Flow is started, and stabilized at 5.2 L/min at 3700 rpm, the venous saturation is 55%, the return cannula is bright red. The PIP is weaned down to 30 cmH<sub>2</sub>O, the CVP drops to 15 and the blood pressure increases to 130 systolic but the SpO<sub>2</sub> drops to 65%, despite FsO<sub>2</sub> of 100%! Your colleague phones and is concerned that the decision to go VV was wrong, that there is massive recirculation, and that the membrane has failed. What is going on? What do you recommend?



## BEDSIDE WITH BARTLETT

This patient has a high cardiac output, either from the sepsis, from the inotropes, or both. Reducing the airway pressure has allowed it to increase even more. The venous saturation of 55% excludes significant recirculation, the bright red blood in the return line excludes membrane failure and can be confirmed with a post-oxy blood gas. If the cardiac output greatly exceeds the VV ECMO flow, the patient will not increase their saturation on ECMO. The ECMO flow of 66 ml/kg/min is adequate, but if the cardiac output is double the ECMO flow you are not capturing enough blood to oxygenate the patient. The RPM could be increased slightly to assess if more flow could be obtained, but with the inlet saturation at 55% the membrane will exceed its capacity before the manufacturers rated flow (which is calculated with an inlet saturation between 60 and 75%). The main issue is the high cardiac output. Advise him to wean the inotropes to lower levels, starting with the epinephrine. The cardiac output should fall and the saturation will improve.

He reduces the epinephrine to 0.05mcg/kg/min over 10 minutes and weans the norepinephrine down to 0.03 mcg/kg/min. The SpO<sub>2</sub> settles at 85%, the post cannulation Hb is 8g/dl. He asks for a unit of PRBCs and one to take on the return trip and starts packaging the patient, pleased with his calm troubleshooting.



## ELSO CHAPTER UPDATES: ECMO AROUND THE WORLD

### SWAAC ELSO UPDATES

Save the date for the next SWAAC ELSO annual meeting which will be held in Abu Dhabi, UAE on February 6-8, 2025.



SWAAC ELSO Chapter has completed translating the patient and family section on the ELSO Website into the different SWAAC languages which is now available on the ELSO website.

All social media networks for SWAAC ELSO have been unified to improve communication with the community. Please follow us on X, Instagram, and LinkedIn



Huda Alfoudri, MD, SWAAC ELSO Chair

### APELSO Updates

The AP ELSO Chapter is busy planning the 2025 Conference, which will take place in China. Location to be finalized soon.

More details will be coming to allow adequate time for planning and robust participation.

Shingo Ichiba, MD, PhD, APELSO Chair





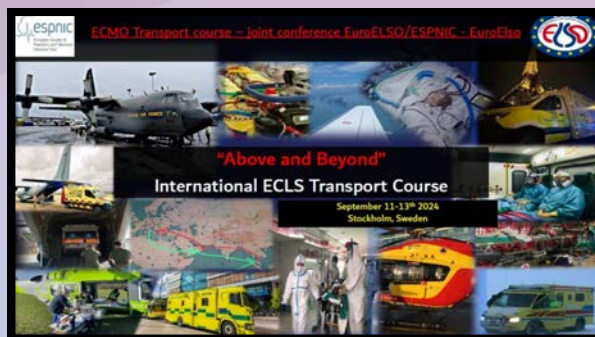
## EUROELSO Updates

We are excited to be offering an international course on Neonatal and Pediatric ECLS Transport, which was developed in collaboration between EuroELSO, ESPNIC, and ECMO Centre Karolinska, Stockholm, Sweden.



Take advantage of this unique opportunity to learn from and train with the world experts in neonatal and pediatric ECLS transport.

Registration information can be found [here](#).



## LATAM ELSO Updates

The 6th LAELSO Congress is scheduled to be held in Buenos Aires November 14 to 16, 2024. Hope to see you there!



## ELSO OFFICE UPDATES FROM ANN ARBOR

### ELSO Summer Administrative Interns

#### **Jenelle DeBaeke:**

My time as an Administrative Intern with the ELSO team has been incredibly enriching on both a personal and professional level. Coming from a background in kinesiology and movement science, the ability to learn more about ECMO and dive into the administrative side of this organization has expanded my perspective and deepened my connection to the health sciences.

Working alongside the inspiring and supportive leaders at ELSO's headquarters in Ann Arbor has been invaluable. What has made this experience truly special is the positive work culture and the unique privilege to learn directly from both the CEO and the Executive Director—something not many interns can claim. A heartfelt thank you to Christine Stead, Peter Rycus, Lauren Gardner, Alex Fox, and Victoria Turner, who together have made this internship experience unforgettable!

From exploring ECMO and observing cannulation courses to assisting in conference planning, these diverse experiences will accompany me throughout my career. I look forward to volunteering at the conference this fall, seeing our efforts in action, and reconnecting with this amazing team!



#### **Grace Andrix:**

I learned more than I ever imagined was possible as an Administrative Intern at ELSO. My experience with the ELSO team this summer has been profoundly rewarding, allowing me to explore the ECMO field from a perspective and on a scale that was entirely new to me.

This summer, I had the opportunity to work on impactful projects that I am confident will leave a significant mark in ECMO and ELSO history. Being part of an organization and leadership so dedicated to its mission was truly meaningful. This unwavering commitment to excellence and innovation inspired me daily and guided me towards a new perspective on healthcare administration and a deeper appreciation for the broader impacts of my future work.

Overall, this internship has been an enriching journey, and I can confidently say that I am leaving ELSO with valuable experiences that I will carry with me throughout my career.



## CHIEF EXECUTIVE OFFICER REMARKS

I wish we could share the planning energy, hard work, and enthusiasm on so many initiatives that are taking place right now. So many people are making things happen that are not quite ready to be announced yet. But - they are coming soon! We will be able to share a few of them with you during the ELSO Conference in Detroit and our team cannot wait.

Several initiatives are investments in the future of the organization, based on feedback from our members. Other initiatives are dreams we have had for a long time that we will be making available soon.

As a global nonprofit, we have a unique opportunity to be globally inclusive in our work and address our challenges in a regionally-relevant and universal approach. In everything we do, we consider how the work is ultimately done: one patient at a time. Our aim is to make ELSO a reliable resource for each person taking care of patients anywhere in the world.

I look forward to sharing these exciting initiatives, services, and announcements with you in a variety of ways, starting at the ELSO Conference in Detroit.

Until then, I hope that as Summer comes to a close in the Northern Hemisphere, you have had a chance to enjoy it and make new memories with family and friends. In the Southern Hemisphere, Spring is on its way - what a nice season of renewal.

I hope to see many of you in Detroit next month.

Christine Stead, CEO

Photo: Lake Michigan, August 2024



# The Extracorporeal Life Support Organization

## Our Mission

Providing global leadership in extracorporeal life support through innovation, advocacy, and advancing knowledge.

## Our Vision

ELSO will be the premier organization for the advancement of extracorporeal life support throughout the world.

## Guiding Principles

### Innovation

Seeking to identify and promote advances for the application of extracorporeal therapies.

### Expertise

Bringing together world leaders in the care of critically ill patients for collaboration to advance quality of care through education and publication.

### Clinical Support

Maintaining a comprehensive registry of data to assist in reducing morbidity and improving survival of patients requiring extracorporeal therapies.

### Community

Fostering communication and collaboration among professionals who apply advanced technologies in the treatment of refractory organ failure.



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For editorial concerns related to this newsletter, please contact [newsletter@elso.org](mailto:newsletter@elso.org).

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