

ELSO NEWSLETTER

The official newsletter of the
Extracorporeal Life Support Organization

ECMO in COVID-19

From the President of ELSO

Matthew Paden, MD



As 2020 comes to a close, much has been said about the extraordinary times we are in. Our community continues to face the burden of an ongoing pandemic with courage, commitment, and relentlessly working toward improving the lives of our patients together. The ELSO community cares for the very sickest of these patients worldwide, and the commitment to their patients, families, wider communities, and mankind as a whole are inspiring to see. During this pandemic, nothing has been normal. If there is one thing that has been constant, it is change. "Improvise, adapt, overcome" has become a way of life.

Our annual meeting was no different. While we all wanted to be together in Hawaii, ELSO's first ever virtual meeting taught us many things and provided new appreciation for our ELSO family. We are a big family when barriers are removed: over 12,000 people participated in our Annual Meeting this year. In the past, if you didn't attend the conference, you missed out on all of the educational material. Another change for this year is that the over 100 hours of talks from the conference will be available on ELSO media channels in the next few months. A heartfelt congratulation to Kasia and her conference team, all of those at the ELSO office, our generous sponsors, the speakers and attendees that made this conference so successful.

Education is a core part of ELSO's mission, and our successful in person training courses have been put on hold during this pandemic. This allowed ELSO to announce ELSO Academy and ELSOed. ELSO has a virtual course scheduled for November 12-13 (see the ELSO website for details).

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While we settle in for what appears to be an additional wave of COVID-19 infections in many parts of the world, it would be easy to become despondent about the long hours and hard work that is yet to come. I would ask that each of us take a minute to reflect on both the great privilege we are given to care for these patients and the great responsibility that goes along with it. Be confident, brave, compassionate, and humble in the care you provide each of your patients and their families. Stay safe and healthy – the world needs you.

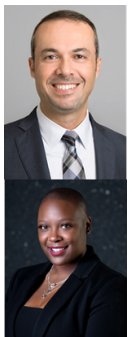
Matt Paden, MD
President, ELSO

Note from the Editor & Co-Editor, Omar Alibrahim, MD and Kennethia Banks

With a growing ELSO family, ELSO is continuing to enhance and improve our publications, communications, and means by which we keep our community informed.

We are excited to announce that we will be producing ELSO's first Annual Report this year. If you have suggestions for what you would like to see included, please contact us at newsletter@elso.org.

Thank you for being part of ELSO!



Annual Meeting

When the COVID-19 pandemic put in-person gatherings on pause, ELSO made the difficult choice to reformat its Annual Meeting. Gone was a trip to Hawaii and an annual reunion of the ECMO community. What came instead was an opportunity to innovate and inspire.

The 31st Annual ELSO Meeting took place virtually on September 25-26, 2020 in front of a global audience. In a year of many firsts, the Annual Meeting presented a chance to rewrite the script: no registration fee, a mixture of live and pre-recorded materials, and an ELSO Registry report published in *The Lancet*.



Dr. John Fraser opened the Annual Meeting with a poignant keynote address. Paying homage to the colleagues, friends, and family who have been entrenched in this pandemic, he highlighted the strength and compassion many have embraced. It served as a point of inspiration and reflection as the scientific program opened in full.

Many traditional sessions remained in the fold on day one: virtual heart & lung labs, sub-specialty breakout sessions, and robust question and answer sessions. The global ECMO community took center stage as the

first-ever Spanish language session was presented by LATAM colleagues.

Day two took off where Friday evening left off: a late-breaking report in *The Lancet*, highlighting ELSO Registry findings related to COVID-19. The report, which is detailed later in this newsletter, reinforced the critical role that ECMO plays in the COVID-19 era.

As the dust was still settling on the robust question & answer session, The Great Debates – an ELSO classic never to be missed – kicked up presenters' competitive juices. There were rivalry quips, GIFs galore, and Twitter receipts a few years in the making. There may be some scores left to be settled in next year's edition.

Looking towards the future, ELSO committee sessions marked a series of debuts. ELSO Academy, a one-stop shop for ECMO education, takes full flight in 2021 beginning with a fully virtual adult ECMO training course. Coming soon to the Registry are additional addenda and exciting new data updates. Full updates can be found in the Committee Roundup.



In a year where so much has changed, ELSO turned the pages on a successful Annual Meeting by officially recognizing its new President, Dr. Matthew Paden, and its President-Elect, Dr. Daniel Brodie. Drs. Paden and Brodie paid homage to the successful leadership of Dr. Mark Ogino, who now assumes the role of Past-President of ELSO.

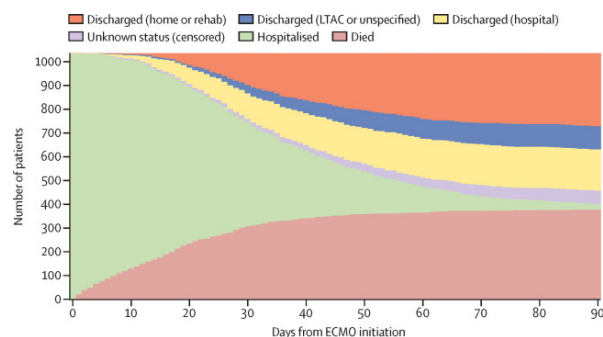
In all, over 12,000 participants viewed content during the live broadcast and the weeks following. Its sessions reached new audiences, inspired social media conversations, and brought ELSO's industry-leading content to all corners.

While the 31st edition of the Annual Meeting has now come to a close, all content – in total over 100 hours – will be released on ELSO media channels over the next few months.

COVID-19 REPORT IN THE LANCET

ANN ARBOR, MI – Sept. 25, 2020 – The Extracorporeal Life Support Organization (ELSO) announced today publication in The Lancet of registry findings examining the treatment of COVID-19 patients with extracorporeal membrane oxygenation (ECMO) support. The results show that for ECMO-supported patients with COVID-19, estimated in-hospital mortality 90 days after ECMO and mortality rates in those with a final disposition of death or discharge were under 40 percent.

The Lancet study utilized the international ELSO registry to characterize the epidemiology, hospital course, and outcomes of 1,035 ECMO-supported patients with confirmed COVID-19 from 213 hospitals across 36 countries. The generalizable estimate of ECMO mortality and improved mortality rate findings support existing recommendations to consider ECMO in refractory COVID-19-related respiratory failure when performed in experienced centers.



During the COVID-19 pandemic, critical care teams have employed ECMO technology to provide support to the heart and lungs of COVID-19 patients who have developed acute respiratory or cardiac failure. ECMO is a treatment that pumps blood outside the body and then returns the oxygen-rich blood into the body, giving these organs time to rest and heal. When performed by highly skilled and trained critical care teams, ECMO is an option for the sickest COVID-19 patients.

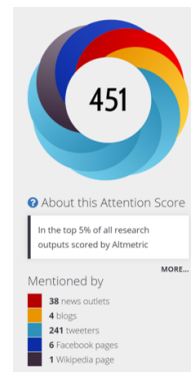
"At the beginning of the COVID-19 pandemic, the role of ECMO was unknown. In response the international ELSO community began collecting and sharing real-time high-quality data through the ELSO Registry." said Ryan Barbaro, MD, Chair of ELSO's Registry Committee and lead author of the study. "The results of this study are a witness of those efforts and the findings support recommendations to consider ECMO when lung protective ventilation fails."

Among the 1,035 eligible ECMO-supported patients with COVID-19, with 67 (6 percent) remaining hospitalized at the end of the study period, the estimated cumulative incidence of in-hospital mortality 90 days after the initiation of ECMO was 37.4 percent. The mortality rate was 39 percent (380/968) among those with a final disposition of death or hospital discharge.

The results support current recommendations that centers experienced in ECMO should consider its use in refractory COVID-19-related respiratory failure.

ELSO wants to thank all of our contributing centers that continue to contribute to the ELSO registry, especially those that changed practice to enter data in real time for COVID-19 patients.

- Please find a link to the publication [here](#).
- A video press release from ELSO is available [here](#).
- For other media coverage of this publication, please visit ELSO's COVID-19 page [here](#).
- Altmetric score for the paper can be found [here](#).





ELSO Membership Meeting - November 19

ELSO is excited to call for a meeting for our member centers on November 19, 2020 at **7 PM ET**. An invitation will be sent on November 13, 2020 via email.

ELSO is hosting 12 informational sessions about the upcoming membership meeting, so please feel free to drop in to any one of them, ask questions, join the conversation on why we are holding a membership meeting on November 19th.

Informational Sessions

12 sessions will be held on Mondays and Fridays, 6 AM ET and 3 PM ET

Friday, October 30

Monday, November 2

Friday, November 6

Monday, November 9

Friday, November 13

Monday, November 16

Location

6 AM ET meetings zoom link is [here](#).

3 PM ET meeting zoom link is [here](#).

Call for Nominations!

The ELSO Steering Committee is seeking nominations for the upcoming election cycle from individuals who have expertise in extracorporeal life support and are interested in helping serve ELSO members and shape the future of ELSO.

Candidates must be individual members of ELSO and participate in a leadership role at an active ELSO center to be eligible for nomination.

The following Steering Committee position is available for the 2020 election cycle:

- Conference Chair

Each position is for a 3-year term.

Please ensure the candidate is in agreement with the nomination and send the candidate's name and brief biosketch to nominations@elso.org and cc the nominee. Note A CV is not a biosketch. In the bio please focus on the candidate's relationship with ECMO and participation in ELSO. Self-nominations are welcome. All nominations will be reviewed by the ELSO Membership & Nominations and Executive committees.

All nominations must be received by November 16, 2020.



Committee Roundup

Conference Committee

ELSO's first virtual conference was a wonderful success! We were so happy to have so many people be able to join. Our speakers did a lot more work beforehand to make this happen - and we greatly appreciate their effort!

Next month we begin planning for 2021. If you have suggestions for us, please share them with conference@elso.org.

As a reminder, recorded sessions will be available on ELSO's website for members soon! There are some benefits to having recorded content - and this is one of them.

Registry Committee

COVID-19 Dashboard Changes

ELSO has changed the display of our COVID-19 Dashboard such that data tables structured in our Lancet publication are available to see with real-time data. Outcomes on the dashboard is also shared in real-time highlighting in-hospital mortality at 90 days after the start of ECMO treatment.

ELSO is conducting audits with our member centers. If you would like to volunteer your center, please let us know! Data audits are important in improving the quality of data in our registry.

Education and Logistics Committee

NEW Online ECMO Course & Last Virtual Training Course for 2020

ELSO is developing a new online ECMO course that will be self-directed and globally available in March 2021.

ELSO is offering a virtual training course in adult ECMO on November 12 - 13, 2020! To register, please use this [link](#).

Adult ECMO Certification Exam

ELSO's new individual ECMO certification exam will be available in early 2021!

ELSO Academy - Your Education Journey with ELSO

Start on your journey with us! We are excited to be your partner for education and training.

ELSO Academy

ECMO 101



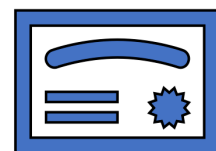
Live & Virtual* Training Courses



Hands-On Simulation Lab



Certification*





Device & Technology Committee

ELSO Equipment Survey Completion

ELSO has been very excited about the many centers that have participated in the ELSO Equipment Survey. We would love to get closer to 400 centers participating, so if you have not sent your response in yet, please do. Survey can be found [here](#). Survey closes November 5, 2020.

Survey results will allow us to better understand where there are supply issues. This understanding makes advocacy for our medical centers more possible. Thank you for your help!

ELSO Equipment Clearinghouse

ELSO is beta testing a new capability to help share resources during times when resources become disrupted. A big thank you to Justin Sleasman for leading the beta testing of this effort and our team of colleagues participating.

Communications Committee

ELSO is currently working on the **Sixth Edition of The Red Book**. We anticipate the publication will be released in early 2022.

ELSO has had several requests for translations of The Red Book and Training Manual to additional languages. We are proceeding with several of these, including Korean and a vocal translation in Spanish.

Award of Excellence

For centers interested in apply for the Award of Excellence, the applications admissions period for 2021 is now open! In addition, please find our guidance document on how to have the best chance of success here (noted as Award Evaluation & Improvement Tool): <https://www.elseo.org/AwardofExcellence/Resources.aspx>

Guidelines & Protocol Committee

Grant Awards

Grants will be awarded soon.

ELSO Guideline Updates

Four more guidelines are in production: adult and pediatric ECPR, adult respiratory and CDH.

Bedside with Bartlett

*Robert Bartlett, MD
Founder, ELSO
Professor Emeritus of Surgery, University of Michigan*



Dr. Robert Bartlett, Professor Emeritus of Surgery at the University of Michigan, is considered by many to be the "Father" of ECMO. He has nearly 50 years of experience in acute care settings. He has served as Director of the Surgical Intensive Care Unit, Program Director of the Surgical Critical Care Fellowship and Director of the Extracorporeal Life Support Program at the University of Michigan Medical Center. He was previously on the faculty at the University of California, Irvine.

Case Description

A 6 month old postemie has RSV with severe lung dysfunction. She all the indications for ECMO. Someone new to the system suggests using the femoral vessels for venous drainage and using venovenous access. Another suggestion is to use a double lumen venovenous catheter which might fit in the jugular vein. What is the best approach?

Answer:

In children less than the age of 2 (I would say less than the age of 6), the femoral vessels should not be used at all. The risk of damaging the artery and vein is significant and is unnecessary because all the support can be fully obtained through the neck vessels. This child could be supported on venovenous access and it is reasonable to try to insert a double lumen catheter in the right internal jugular vein. However, venoarterial access using the jugular vein and right carotid artery is very safe, well tested, and is certainly the simplest way to support this child for a long run. Data from tens of thousands of cases show there is no increased risk for intracranial ischemia, bleeding, or clotting. When using the carotid, there is ample cross circulation through the neck, through the face, and through the Circle of Willis. I would advocate supporting this child with VA access via the neck vessels.

Do you have a suggestion for a future Bedside Report? Please send a note to newsletter@elso.org.



Research Corner

Below are surveys that have been submitted by ELSO Member Centers. If you have a survey that you would like to share on our next newsletter, please email newsletter@elso.org.

ECLS Rescue Center Survey

The Alberta Children's Hospital is a large tertiary, free-standing, non-cardiac surgical centre in Calgary, Alberta, Canada. We established a formal Rescue ECLS program in 2011. Our program offers VA, VV and eCPR to any inpatient in our hospital. All patients who are cannulated are transported to our partner ECLS center. WE would like to know if there are any programs that are similar within ELSO. The following survey will only take a few minutes to complete. Your time and participation is great appreciated

Dr Jaime Blackwood, PICU, Medical Director ACH ECLS program
Tanya Spence, Clinical Nurse Specialist, ECLS Coordinator

ECLS Center Survey

https://survey.ucalgary.ca/jfe/form/SV_1R1AbKMiiBYNt1H

Nutritional Support for Infants & Children on ECMO

We are interested in learning more about the feeding practices for infants and children who are on VA ECMO. As we work towards standardizing our protocols, we would love to hear from other centers. The published information on this topic provides a background, but we would really like to hear about the most current feeding practices.

Dr. Kozik and our cardiac team at Norton Children's Hospital have collaborated on the survey and would love to get as many response as possible. Thank you in advance.

<https://www.surveymonkey.com/r/XBQVGZQ>



ELSO & ECMO Training

ELSO Adult ECMO Training Course (Virtual)

There is still time to sign up for our virtual Adult ECMO Training Course. This two-day, virtual course mimics our traditional didactic learning experience. Featuring world-renowned ECMO experts, this live course will train newcomers and experienced providers in foundational concepts. It is designed for all specialties, including physicians, nurses, respiratory therapists, and perfusionists.

We remain committed to providing high-quality ECMO education. While social distancing limits our ability to train in-person, we will continue to feature virtual learning experiences. There may be future regional training opportunities will be announced subject to local public health regulation. For more information, please see our website, or contact ECMOtraining@elso.org.

In Person Courses on Hold

In an effort to allow healthcare organizations and professionals time to focus on preparing and caring for patients with COVID-19, the Extracorporeal Life Support Organization has suspended all on-site educational offerings, which includes offering surveyor services for endorsement of new education programs. ELSO will plan to reevaluate the safety of continuation of these services in March 2021.

We recognize the need for high quality, specialized training is still needed now more than ever. We have made virtual offerings available, over the coming months, to allow access to ECMO patient management training content.

Please feel free to reach out to us with your questions at ecmotraining@elso.org if you need further training guidance.

Please visit our website for the latest updates:

<https://www.elso.org/Education/ELSOandELSOEndorsedCoursesWorkshops.aspx>



The Extracorporeal Life Support Organization

Our Mission

To provide support to institutions delivering extracorporeal life support through continuing education, guidelines development, original research, publications and maintenance of a comprehensive registry of patient data.

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.

Our Vision

ELSO will be the premier organization providing education, training, research, and data management for the advancement of extracorporeal life support throughout the world.

Keep In Touch



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The Extracorporeal Life Support Organization, Incorporated

Ann Arbor, Michigan

www.elseo.org

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