

ELSO NEWSLETTER

Message from the President

Matthew Paden, MD

2021 brings a new year, new possibilities, and opportunities to work together. ELSO is committed to our collegial network of centers, individuals, corporate partners, patients, and families.



We are excited to be releasing more opportunities in education and certification this year for practitioners. We also appreciate the opportunity to train practitioners virtually. Thank you to the over 400 participants in our virtual training, and more to come.

Last year ELSO focused on reorganizing to enable a focus on areas we believe are increasingly important. Quality and Research are new committees in our organization. We welcome, and need, your involvement.

Thank you for making ELSO better every single year. Thank you for helping us make it even better.

Matt Paden, MD
President, ELSO

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This issue of ELSO's Newsletter is our first one since ELSO's first Annual Report. If you missed the Annual Report, please find it [here](#).

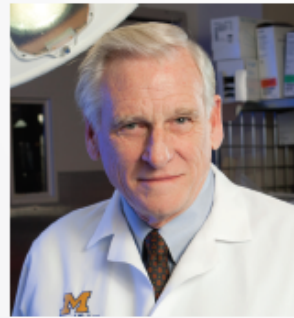
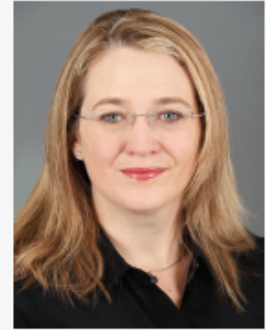
We continue to learn about COVID-19 and we will provide updates as we go forward. Our organization also continues to evolve, thanks to all of you for your interest in ELSO.

Editor, Omar Alibrahim, MD
Co-Editor, Kennethia Banks



Steering Committee & Board of Directors

ELSO Board of Directors

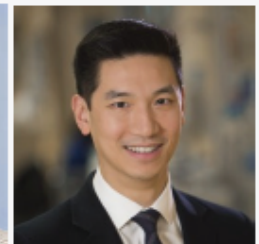
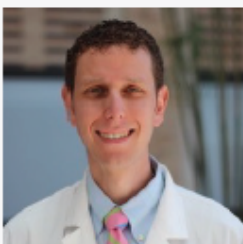
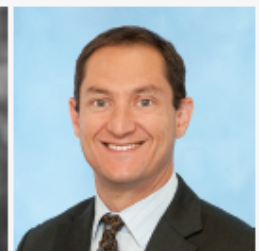


ELSO's Board of Directors for 2020 - 2022

Top Row: Matthew Paden, President; Mark Ogino, Past-President; Daniel Brodie, President - Elect; Peta Alexander, Treasurer

Bottom Row: Graeme MacLaren, Global Representative; Robert Bartlett, Founder, Emeritus Board Member

ELSO Steering Committee



Top Row: Cara Agerstrand, Conference; Ryan Barbaro, Registry; Bishop Zachary, Education; Justin Sleasman, Perfusion Liaison; Jonathan Haft, Technology & Innovation.

Bottom Row: Darryl Abrams, At Large; Lakshmi Raman, Publications; Jenelle Badulak, Nominations & Membership; Bradley Kuch, RT Liaison; Eddie Fan, Research

Not Pictured: Tracy Morrison, Quality; Guillermo Herrera, Coordinator Liaison



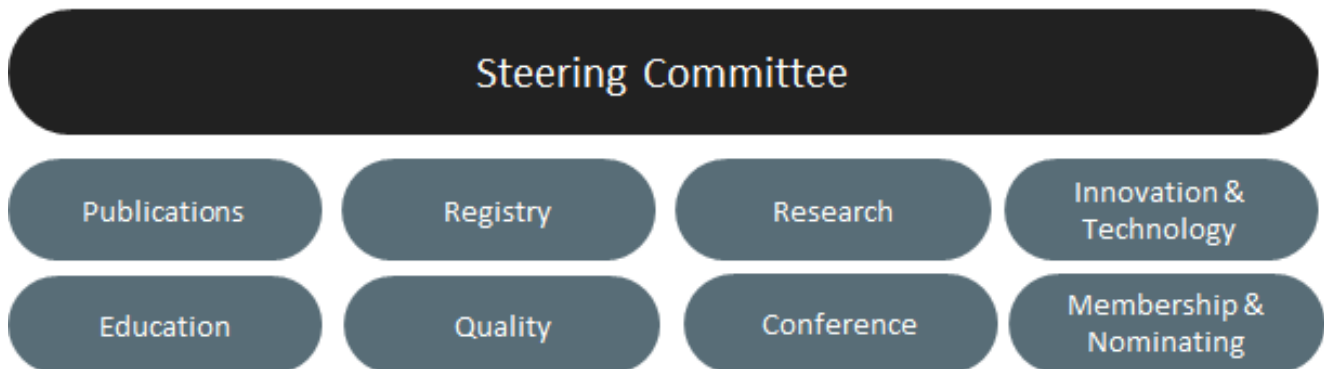
New Committees

New Steering Committee Structure

With help from all of our members, ELSO has reorganized and we are pleased to announce three new committees forming now: Research, Quality, and Publications. Membership & Nominating Committee was previously a subcommittee.

If you would like to be involved in a committee, please contact us. We are looking for members that represent the entire multidisciplinary ECMO team and our colleagues globally.

We look forward to our collective work in these areas in the years ahead! Thank you for your participation and help with everything we do.





CALL FOR NOMINATIONS

ELSO is opening our call for nominations for leadership roles. If you are a member of an active ELSO Center, you can nominate candidates for consideration. Candidates need to agree to be nominated and then submit a resume to nominations@elso.org.

Please see ELSO's updated [bylaws](#) and [charter](#) for requirements for candidates and terms.

The following positions are available for nomination:

Board Role - 2 Year Term, 2022 - 2023

Global Representative - Officer Position, Term 2022 - 2023

Steering Committee - 3 Year Term, 2022 - 2024

Education Chair

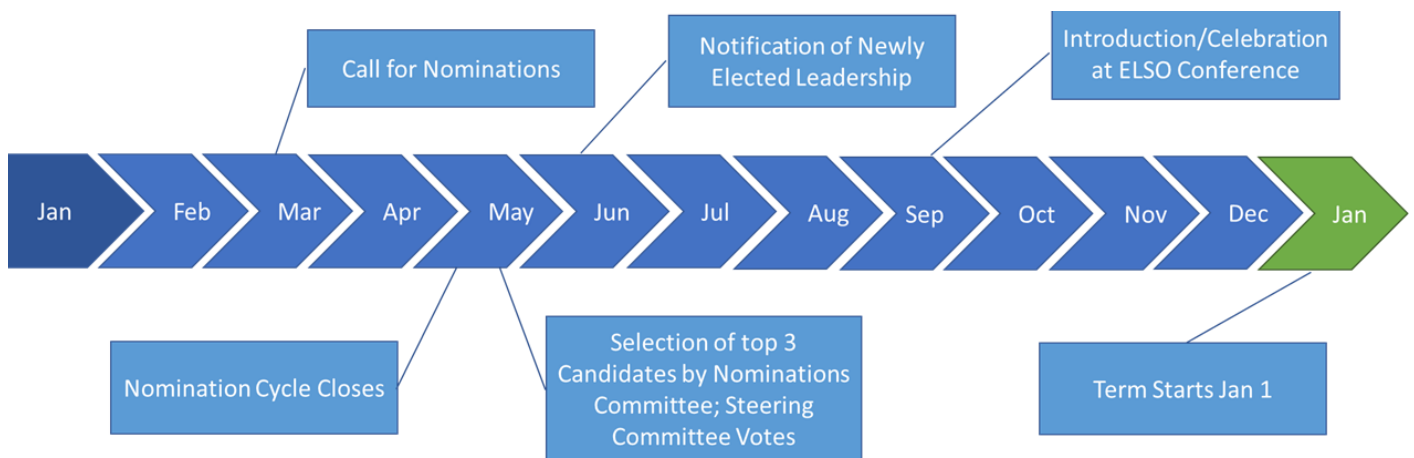
Innovation & Technology Chair

Publications Chair

Coordinator

ELSO has made a change in our calendar based on a desire from Steering Committee members to have a better transition period, which this new timeline allows.

Updated Nominations, Election, and Term Calendar



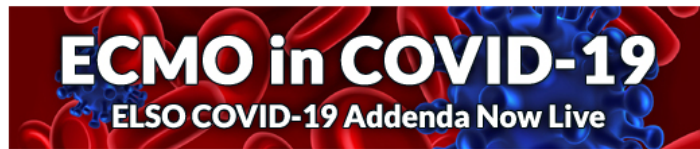


COVID-19 UPDATE

As the COVID-19 pandemic continues, ELSO continues its work in updating guidelines, maintaining our COVID-19 [dashboard](#), contributing to the growing scientific understanding of this disease and how best to manage patients, as well as incorporating what we are learning into our education and training programs.

Updated ELSO Guidelines for ECMO in COVID-19 Patients

ELSO published updated guidelines for ECMO in COVID-19 patients in ASAIO. This is still in pre-publication format, and available online. Please find the guidelines [here](#) and on ELSO's COVID-19 page on our website.



The ELSO Registry COVID-19 dashboard currently shows over 5,500 COVID-19 patients that have been treated with ECMO, globally. The ELSO Registry provides a global database that can be used for research. To request data from the registry, use our data request form.

COVID-19 Cases on ECMO in the ELSO Registry

Total COVID-19 Cases	COVID-19 Suspected or Confirmed 5643	COVID-19 Confirmed Cases 5624
Total counts of COVID-19 confirmed patients and count of COVID-19 suspected but not confirmed by testing.		
Patients who initiated ECMO at least 90 days ago	COVID-19 Confirmed 4342	COVID-19 In-hospital Mortality 49%

COVID-19 ECMO counts by ELSO Chapter

North America	3667
Europe	1266
Asia Pacific	71
Latin America	226
SWAAC	413

COVID-19 Critical Care Consortium

Several sub-studies have formed. If you are interested in joining, please visit the site [here](#). With ~5,000 patients and counting, more research is possible.

EuroELSO Survey: ELSO's European chapter continues to collect ECMO cases in COVID-19. The latest survey results can be found [here](#).

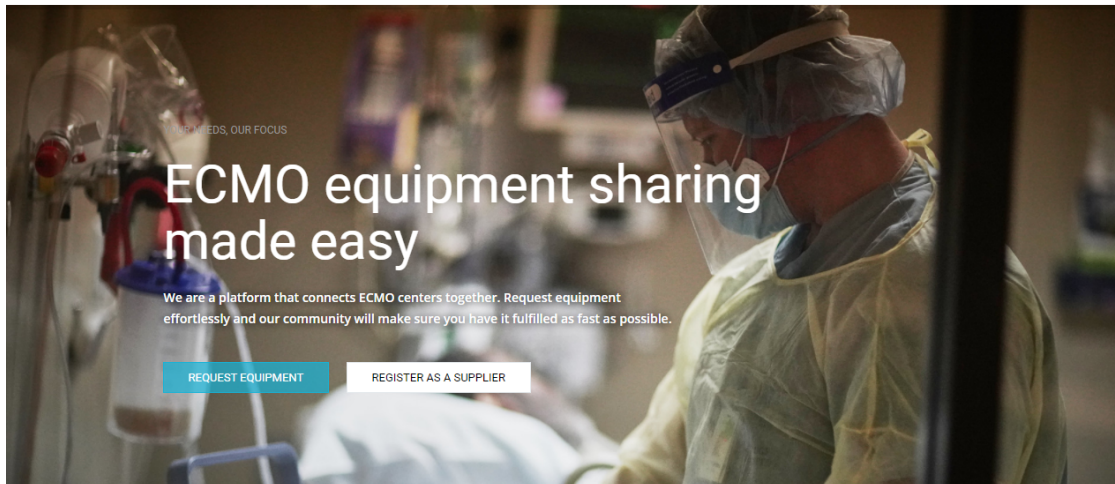
ANNOUNCEMENTS

ELSO Supplies Exchange Released

During the pandemic, ELSO became aware of ECMO supply issues that our member centers were experiencing. We developed an equipment supplies exchange to help solve that problem for our centers. We are pleased to announce that the site is now active for ELSO centers. This is an exchange to help solve equipment issues in a crisis; it is not designed to replace your normal supply management processes. We encourage centers to register with the exchange if you are interested in participating. Go to supplies.else.org to register.



[PLATFORM REQUESTS](#) [TUTORIALS](#) [NEW SUPPLIER REGISTRATION](#) [SUPPLIERS LOGIN](#) [MODERATOR LOGIN](#) [FAQ](#) [CONTACT](#)



This service is currently available in the US. ELSO will expand global participation as we work with local and regional logistics partners.



Committee Roundup

Conference Committee

ELSO is planning a virtual conference for 2021. Save the dates: September 29 - October 1, 2021. Registration information will be available in the coming months. Watch for updates on our website, email, and social media.

We enjoyed over 10,000 participants in 2020. We look forward to continued growth in our global community.

Registry Committee

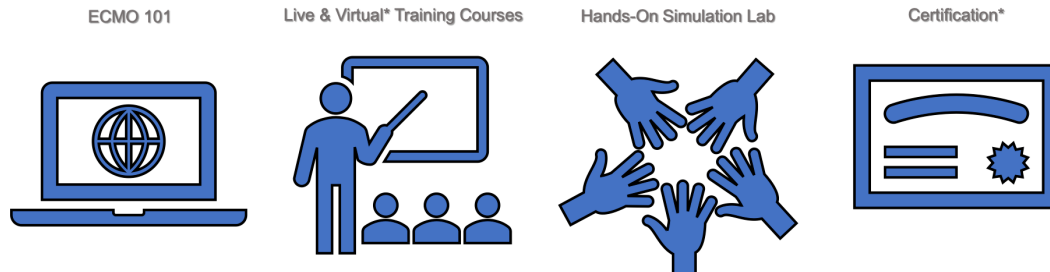
Recently the deadline for data entry has changed. ELSO recognized that using a January freeze made the preceding years' numbers look artificially low in the annual reports because not everyone had completed the prior years' cases in January. Our hope is that with the April freeze the reports will reflect the entirety of the prior year cases. With the October freeze we will once again update the prior years' reports as well to get a more complete data set.

The COVID-19 pandemic has taught us the value of timely data entry as our live dashboard demonstrates. In response ELSO has shifted the deadlines according to a new schedule which can be found [here](#).

ELSO has increased our deadlines to four times a year in order to have a more complete dataset for analyses.

Education Committee

ELSO Academy



2021 is a big year for education! With growing and new programs starting globally, there has been significant interest in ECMO education and training. ELSO has several new education programs that are part of ELSO Academy – your education journey with ELSO.

Virtual Training

ELSO has conducted several virtual training courses throughout the pandemic and we will continue. This format allows faculty from all over the world to come together to teach students globally, while also providing more direct access for questions, nuance, and excellent discussions regarding managing difficult situations that can arise. Our next Adult ECMO Management course is April 15 – 16, 2021. This will be the last opportunity until November 2021.

Online Course

ELSO will release an online course that is self-paced. This course is the culmination of years of work. We are excited to be able to offer this course later this year. Completion of this course or our virtual training courses qualifies an ECMO practitioner to take the individual certification exam.

ELSO Individual Certification Exam

We are in the final stages of validating our certification exam, which will be released later this year. This certification will be the global standard for ECMO.

On-Site Training Opportunities

We are tracking timing of when this is safe to conduct on-site simulation and cannulation training, as well as endorsing courses. Keep track [here](#).



Innovation & Technology Committee

Biomedical Advanced Research and Development Authority (BARDA) released an RFI for anticoagulation in ECMO therapy. ELSO will be submitting a response to the RFI. We encourage our industry partners and other organizations to submit a response in this important area of research and development.

Responses are due May 4, 2021 by 11:00 AM ET to DRIVEContracting@hhs.gov.

The RFI can be found [here](#).

Publications Committee

ELSO's first monograph will be released in the next few months. The working title is "ECPR and Resuscitative ECMO: A Detailed Look at Emergent Extracorporeal Life Support", with editors Zach Shinar and Jenelle Badulak.

The Publications Committee has developed a matrix for all ELSO publications that describes the categories, criteria, and review process. Please contact us with any questions at publications@elso.org.

ELSO Guideline Updates

Recently published ELSO guidelines include: adult and pediatric ECPR, adult respiratory Congenital Diaphragmatic Hernia (CDH), and adult cardiac ECMO. Guidelines in development include an updated mobile ECMO transport and ECMO circuitry.

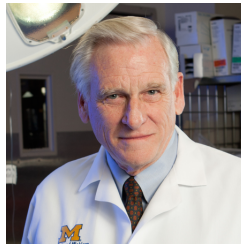
Quality Committee

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](#) (Award Evaluation & Improvement Tool).

Research Committee

Grant applications will be available soon.

Bedside with Bartlett



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

Case Description

Patient management in a COVID-19 patient: A 42 y.o. female with ARDS is placed onto VV ECMO. Last blood gas before cannulation: 7.24/60/42/-5 on pressure-control ventilation with a PIP of 45, PEEP of 15, rate of 25, FiO₂ of 1. The patient is paralyzed and on vasopressor drugs. How should management during the first several days proceed?

Answer:

The high ventilator settings and 100% oxygen are the most damaging to the patient. As soon as the patient is established on extracorporeal support, the ventilator should be turned down to rest settings (pressure 20/10, FiO₂ 0.3, rate 10 or less). The ECMO flow should be adjusted to maintain arterial saturation 80-90%. CO₂ should be controlled by the sweep gas to approximately 40 mmHg. Since the CO₂ is 60, this should be done gradually over a few hours to avoid sudden decrease in PaCO₂ which can cause intracranial bleeding. As soon as the patient is stabilized, the paralysis can be removed and sedation maintained with drugs like propofol or dexmedetomidine. Avoid the use of benzodiazepines, which have a long lasting effect and are difficult to wean. The patient should not have significant pain so narcotics or other analgesics are not necessary. This will result in the patient waking up which offers the opportunity for a thorough neurologic exam. After that the patient is maintained under mild sedation with a RAS score -1 or -2. Blood flow and hemoglobin are maintained to assure complete oxygenation because the lungs will probably become totally consolidated within a few hours of time and remain totally consolidated for a week or more. For this patient this means flow rates around 4 L/min and hemoglobin of 12 or higher.

After a day or two, management of the airway via extubation or tracheostomy should be considered.



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.

The Project GENERATE (GEospatial aNalysis of ExtRacorporeal membrane oxygenATIion in Europe) was initiated on behalf of EuroELSO, European chapter of the Extracorporeal Life Support Organization (ELSO) in collaboration with the Department of Geography at the University of Edinburgh and Paracelsus Medical University Nuremberg, Germany. The project aims to map the spatial distribution of ECLS centers in European countries and to provide a comprehensive analysis of the availability of ECLS, for adult and pediatric, cardiac and respiratory support in Europe.

<https://www.euroelso.net/education-research-and-update/project-generate/>

If you have any questions about the survey, please contact Stuart Gillon at stuart.gillon@nhslothian.scot.nhs.uk or Justyna Swol at jswol@icloud.com. This survey has been approved by the Steering Committee of EuroELSO. Your response is greatly appreciated. Thank you on behalf of EuroELSO Steering Committee

ELSO and STS will be partnering on a survey to be released soon. Please look for announcements on email, social media, and our website.

Webinars & Conferences

EuroELSO Anticoagulation Monitoring in Neonates and Children Webinar-March 30, 2021, 16 CEST. Click [here](#) to register.

ELSO Adult ECMO Training Course (Virtual) - April 15 - 16, 2021. Click [here](#) to register.

EuroELSO Annual Meeting - May 5 - 7, 2021. Click [here](#) to register.



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.



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