



NEWSLETTER

Editor: Omar Alibrahim, MD

Co-Editor: Kennethia Banks

Message from the President

"I didn't even know ECMO existed....but I am so thankful you all are here. Thank you."

This simple comment was made to me the other day from a mother whose child we are taking care of and usually I wouldn't have given it a second thought and moved on to my next task. However, the way she said it struck me. Complete bewilderment in the first part of the comment – that what we do everyday with artificial lungs actually exists and isn't in the realm of science fiction. Followed by a long pause and then true, honest, and humble gratitude in the second part for both the knowledge we have and the care we provide.

With what healthcare has gone through over the last few years, this small moment was a brief reminder of the good that all of us are doing at the bedside and how we can use our specialized skills and knowledge to help. It was also a reminder that a simple thank you from someone who matters (a patient or their family) provided me a whole lot more resilience and wellbeing than the ever-present burnout training modules we all are coerced into completing. So to echo this mother's comments – thank you all in the ELSO community for the care you provide every day. You are doing something unique and cutting edge. You are helping. You make a difference.

Turning to more organizational topics, I want to say how excited I was around the success of the ELSO conference. It was a truly amazing scientific program, and the ability to be together once again was wonderful. Congratulations to Cara Agerstrand, the conference committee, and the ELSO office for all of their hard work and giving us our most successful conference to date! We look forward to seeing all of you in Seattle next year. Worldwide conferences are also back up and running, and am very much looking forward to the Latin American ELSO conference in Lima, Peru in a few weeks.

I want to highlight that need for training and education is a constant request that we receive at ELSO, and that many of us also get approached for at our individual centers. Having a standardized curriculum is essential to providing safe and quality bedside care. When you get these requests, I would encourage you to direct people to take advantage of the education and training resources that ELSO offers, including ELSO Academy, the Adult ECMO practitioner certification, and the ELSO endorsed courses. Worldwide, many of you have tremendous local training programs, and we would encourage you to apply to have those courses ELSO endorsed. The highly successful launch of the new edition of the Red Book is another important resource, providing the worldwide standard for ECMO information and evidence. Congratulations to Graeme Maclaren and his team for this important work.

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I will end this note by pointing out that as a pediatric intensivist, "Winter is coming" has a meaning much more than just a Game of Thrones reference. It is our busy season. Volumes are picking up. There are no beds. Patients are sicker. Hours are longer. Everyone is working harder. Take time during all of that to remember what that mom said, and the difference you are making. That is what actually matters.

Matthew Paden, President, ELSO

Committee Roundup

Conference Committee

Over 1,300 people participated in ELSO's 33rd Annual Conference in person in Boston last month. It was a great event, with an excellent scientific program, but also the opportunity to talk together outside of the meetings. We were grateful to have such representation from our global community - many of whom made the effort to be with us in person.





Our keynote speakers gave the ELSO community much to consider: the challenge and needs in ECMO research and how best to work with the media in critical care medicine. A huge thank you to Derek Angus and Gideon Gil for stimulating discussion.

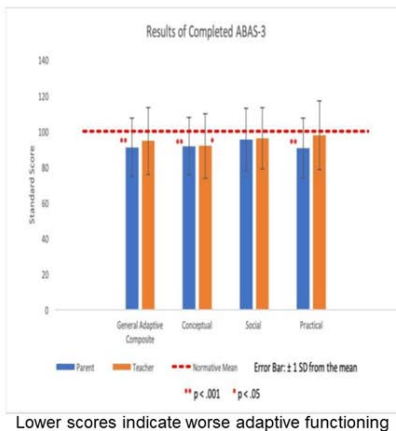
We are looking forward to the 34th Annual ELSO Conference, to be held in Seattle September 28 - October 1, 2023.

Featured Abstract Winner - Anjali Sadhwani

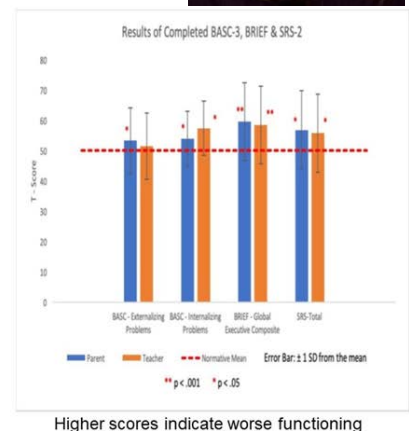
With 300 abstract submissions, this year's abstracts were the most competitive ever at ELSO! Congratulations to all of those selected to present at the conference. Abstracts were published in ASAIO Journal.



Anjali's abstract featured the results of a long-term prospective study in childhood survivors of cardiac ECMO. The results may be useful in informing family counseling and demonstrate the importance of early neurodevelopmental assessment and implementation of services.



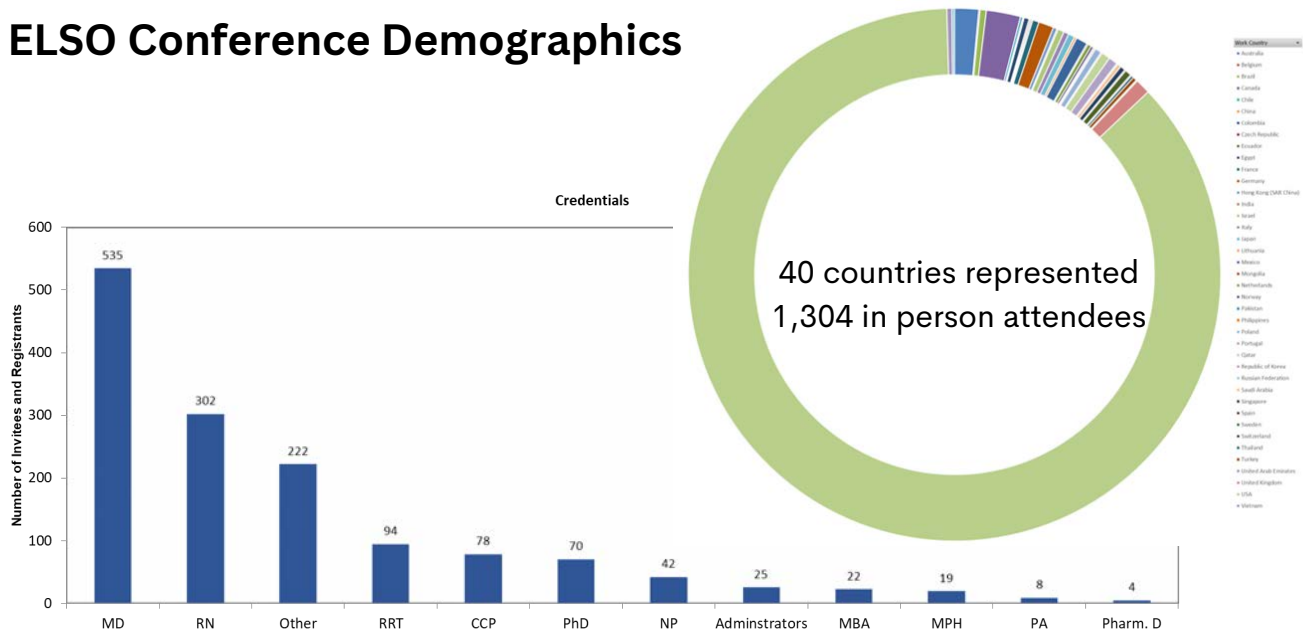
Lower scores indicate worse adaptive functioning



Higher scores indicate worse functioning

Neurodevelopmental outcomes of Cardiac ECMO survivors

ELSO Conference Demographics



Upcoming Meetings

Event: 33rd Annual ELSO Conference – Virtual Program for 3x CME – Available thru January 2023

Location: Virtual

Dates: September 14, 2022 – January 31, 2023

Please visit our Conference Site here: <https://cvent.me/m7xbVy>

Event: ELSO LATAM Congress 2022

Location: Lima, Peru

Dates: November 10, 2022 – November 12, 2022

Event: SWAAC ELSO 2023

Location: Punjab, India

Dates: March 11–12, 2023

Event: EURO-ELSO 2023

Location: Lisbon, Portugal

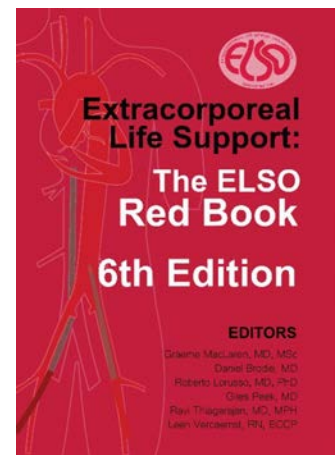
Dates: April 26–29, 2023

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

Publications Committee

The ELSO Red Book 6th Edition was officially launched at our 33rd Annual Conference last month. We hope you are as excited as we are to read the latest thinking from ELSO. More than 230 authors contributed to this edition, our largest and most diverse authors yet. New chapters and content, including emerging infectious disease, crisis management, and cannulation.

The book is currently available for purchase via the publications page on the [website](#).





Committee Roundup

ELSO will soon have two new Monographs available:

- Neonatal and Pediatric Simulation Scenarios by Lyndsay Johnston, Lillian Su, and Catherine Allan.
- 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.

The ECPR and Resuscitative ECMO monograph, edited by Zach Shinar and Jenelle Badulak, is available on ELSO's Publications page: www.elseo.org/publications.

Nominations & Membership Committee

The ELSO Steering Committee Chair meet and greet was a success with lots of new ideas and new recruited membership.

If ELSO members are interested in joining a committee, to check out the website descriptions of each committee and contact ELSO indicating which committee you are interested in so we can connect you with the chair.

In the pipeline:

- Shifting to an online platform for committee membership new member application, seeking to enhance diversity in URIM, specialty, profession, career stage, citizenship
- Establishment of clinical and program administrative "communities" to enable individual ELSO members to connect in real time to get help with questions and issues, to accentuate mentorship of newer programs by older platinum/gold programs
- Next year's conference: more structured networking opportunities to connect people (directors, coordinators, newer/older COE programs, clinical interests, junior/senior career stage, etc)

Perfusion Updates

AmSECT Meeting will be March 24-26, 2023 in Orlando, Florida International Conference

International Conference - AmSECT

AmSECT National Headquarters 330 N Wabash Ave, Suite 2000 Chicago, IL 60611

PHONE 312.321.5156 FAX 312.673.6656

amsect@amsect.org and www.amsect.org

Registry Committee

News from the Registry Committee

So many wonderful things happening with the Registry!

First, ELSO wants to thank all participants who came to the Meet & Greet with the Registry Committee at the 2022 Annual Meeting in Boston, and expressed interest in participating. The Registry Subcommittees (Quality, Scientific Oversight, Development) are all thriving. Anyone interested in joining any of these subcommittees can email Joseph Tonna at jtonna@elso.org. All are soliciting membership.

We also had a great conversation between the US Food and Drug Administration and invited Industry partners. ELSO moderated a discussion with questions on how there could be improved use of the ELSO Registry to support device approval and post approval monitoring. This is an area of active interest for all parties and ELSO was happy to help facilitate this conversation.

Additionally, we have added COVID-19 data to the ArborMetrix platform going forward. We hope this will be an ongoing resource to our member centers.

Finally, we want to express our gratitude for the continued participation and effort of centers across the world with entering data. The ELSO Registry exists because of your effort!

The Award of Excellence Committee

The Award Committee is continuing to celebrate the January 2023 Awardees for the Award for Excellence in Life Support! The award ceremony was fantastic included a picture with Dr. Bartlett which is always appreciated by everyone. The website is now open for applications to be awarded January 1, 2024.

Some improvements have been made to the application, so please download the Award Evaluation and Improvement Tool or the Pathway to Excellence Readiness Tool before you fill out the application online. The award application period is 10/15/22 through 3/1/23. No changes have been made to the cost of either application. Great to see everybody in Boston and we look forward to the award ceremony in Seattle!



ELSO Academy

The ELSO – Adult ECMO Certification (E-AEC) Exam

ELSO has outlined standardized educational criteria and launched an online application process via ELSO Academy for ECMO clinicians who have demonstrated satisfactory completion of criteria listed on our website. This journey is designed to be inclusive of the entire ECMO interprofessional team. Certification is valid for three years; upon which time a renewal can be pursued to maintain certification.

This exam is comprised of National Board of Medical Examiner (NBME)–style questions aimed at helping health professionals, across the continuum of care, enhance and demonstrate their clinical knowledge. ELSO undertook a multi-stage implementation process to ensure we can bring forward a solid knowledge assessment tool for the ECMO community. Our exam development process included several rounds of psychometric analysis, on both expert and novice level ECMO clinicians. For additional information, please visit:

<https://www.else.org/Education/certificationexam.aspx>

ELSO Foundations:

ELSO Foundations: Adult ECMO Training Course is a self-paced ECMO course consisting of 53 modules, covering over 80 learning objectives which are anchored in the foundational concepts that will allow practitioners to develop, strengthen, and refine clinical skills related to ECMO patient care skills. ELSO is pleased to announce the **Spanish translation** is available now!

Registration: <https://www.else.org/ecmo-education/else-ecmo-academy.aspx>

Expanding Global Access

ELSO Endorsed Courses

Congratulations to our newest endorsed sites: ECMO Center Karolinska, Karolinska University Hospital – Stockholm, Sweden and Al-Adan Hospital Kuwait, Kuwait City, Kuwait.

For more information and to apply, please look [here](#).



Train the Trainer (TTT)

Learn how to design your courses to meet ELSO standards. More TTT courses will be announced soon for 2023. ~40 trainers attended the course in Barcelona. It was a huge success, and a big thank you to Jordi Riera for hosting, and Rodrigo Diaz for refining the curriculum.



Upcoming ELSO In-Person Training Courses

We will be announcing more new courses soon. Don't miss anything by checking [here](#).

In Person Simulation Course

Event: ELSO Adult Simulation Courses (two sessions)

Dates: November 2-3, 2022 & November 4-5, 2022

Location: Ann Arbor Marriott Ypsilanti at Eagle Crest

Address: 1275 S Huron St, Ypsilanti, MI 48197, near Ann Arbor



This course is designed for learners who have completed the ELSO Virtual ECMO Training Course or for practitioners with a strong foundational knowledge of ECMO patient care. Using patient case scenarios, VA and VV ECMO concepts are further explored. In the setting of small groups, students will have an opportunity for hands on learning and troubleshooting of clinical cases. This is a great opportunity to apply what was discussed in the multi-day lecture series. This course is structured for multidisciplinary learning at various stages of experience. Two one and a half day sessions are available for up to 60 learners each.



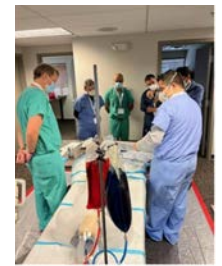
Event: ECMO Adult Cannulation Workshop

Date: November 2, 2022 & November 4, 2022

Location: Ann Arbor Marriott Ypsilanti at Eagle Crest

Address: 1275 S Huron St, Ypsilanti, MI 48197, near Ann Arbor

More cannulation workshops are being planned for 2023.





Coordinator's Corner

It was so nice to again see so many familiar faces in person and to make so many new connections within our community at this year's ELSO Conference in Boston. We had a number of leaders from ECMO programs across the country express interest in helping to build new models of connectivity and collaboration. Looking forward to the New Year, we will look to evaluate effectiveness and how we can continue to grow Coordinator Symposiums while also looking for platforms to maintain day-to-day connectivity.

A huge thank you to all who have stepped up to lead these efforts.

The next coordinator's symposiums is currently scheduled to take place on December 14th. This Symposium will highlight topics that are important to a large number of centers in the current environment. Symposiums will be co-moderated by two members of the committee and will offer panelists the opportunity to present short topic-based informational presentations. Following the panel presentations, there will be a open forum for group Q&A and discussion. This Symposium is scheduled to be 90 minutes in duration.

Date: December 14, 2022, 4p PST / 7p EST

Title: Identifying Creative Operational & Staffing Models During a Period of Scarce Resources

Moderators: Wei Ting Chen & Guillermo Herrera

Panelists: TBD

Research Alley

Therapeutic Hypothermia Practices in Neonates with HIE receiving ECMO Support

There is no current consensus on whether neonates should receive therapeutic hypothermia (TH) who suffer perinatal hypoxemic ischemic encephalopathy or later onset hypoxic-ischemic brain injury as a result of or associated with cardiorespiratory failure or arrest, and require ECMO. We aim to better understand the practice of TH in neonatal ECMO by surveying the care provided by ECMO programs across the world.

This project has received IRB approval through Boston Children's Hospital. All data will be presented as aggregated, de-identified data only.

This activity should take less than 10 minutes to complete and is geared towards ECMO medical directors only.

Survey link is: https://redcap.tch.harvard.edu/redcap_edc/surveys/?s=YFYWEEYE4R

Thank you so much in advance for your assistance!

Authors: • Bradley De Souza, MB BCh BAO • Eleonore Valencia, MD • Anne Hansen, MD • Ravi Thiagarajan, MD • Monica Kleinman, MD "

Bedside with Bartlett



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

Vascular access in newborn infants

A 3 kilogram newborn with a left sided diaphragmatic hernia is hypoxic and hypercarbia after birth. The oxygenation index is 40 and the decision is made to go on ECMO support. Veno arterial access through the neck vessels is standard practice, as is veno venous access with a double lumen cannula through the jugular vein. Someone suggests recent research showing success with venovenous access via the femoral vein and jugular vein. What is the best vascular access?

Veno arterial access (jugular to carotid) has been the standard vascular access for any newborn respiratory or cardiac failure for 40 years. Venovenous access with a double lumen cannula via the jugular vein has been standard practice for respiratory failure for 25 years.

Vascular access using the femoral vessels in infants was studied extensively many years ago. Although it is technically feasible, the difficulty of access and potential complications caused us to recommend against it. This idea has been studied again recently, with a small series of cases demonstrating that veno venous support can be done with the femoral vein and jugular vein. However, the risk of damage to the femoral and retroperitoneal vessels is significant and this does not exist with access via the neck.

The reason that jugular to carotid is successful is that those are the largest extrathoracic vessels in newborns and infants. Ligating the carotid sounds dangerous but carotid flow is quickly established via collaterals when the carotid is ligated low in the neck. Simply avoiding the carotid is not a reason to use venovenous access. Femoral vessels are large enough for routine cannulation when children are walking, around age 4 or 20kg. My advice is that all extrathoracic vascular access in children up to age 4 should be via neck vessels, usually VA via the jugular to carotid. (Double lumen VV has more cannula complications than VA). In children from 4 to adolescence neck vessels are fine, but femoral access is possible.

Diaphragmatic hernia runs are long and double lumen cannulas need frequent tending and positioning. VA access is the best option.

Jonathan Rosen's ECMO Experience

Rare is the photo of a formerly critically ill patient finishing a triathlon with his physician. Enter Jon Rosen, lifelong healthcare worker and his physician, Adam Green, an avid runner. And yet, here they are, completing the Atlantic City Triathlon together.

Jon has served as a healthcare worker his entire life. He contracted COVID-19 early on during the pandemic in his role as a night nursing supervisor in April of 2020. He was admitted to Cooper University Hospital, where he would spend 58 days in the ICU there; 24 of which were on ECMO.

Jon has many people to thank for making the photo below possible: the medical team at Cooper University Hospital; his wife, June and their active and never-wavering group of friends and family; and his own determination to stay positive and push for his recovery. SCCM recently recognized Jon's aptly named "Love Army" for the team at Cooper with the ICU Heroes Award. Read more about that honor here: <https://www.sccm.org/Blog/April-2022/SCCM-ICU-Heroes-The-Love-Army>

Adam Green's enthusiastic support and help during Jon's care and afterward are equally admirable. Jon is grateful for his opportunity to do more for the ECMO and critical care communities. He continues to train and work on his own health. Next up: an Ironman competition!



Photo credit and more about Jon's story:
<https://www.delmosports.com/blog/meet-delmo-athlete-jon-rosen>

ECMO AROUND THE WORLD

LA ELSO Updates

We are ready for the 5th Latam ELSO Conference! We have a very attractive scientific program, as well as engaging pre-conference workshops. Likewise, we emphasize that Peru has ancestral historical places to visit taking advantage of the attendance to the conference. We invite you to register.

<http://www.congresoelsoperu.crystal-research.com.pe/>

We are happy to announce the first course in Latin America endorsed by the new ELSO education platform: Monterrey Mx Comprehensive ECMO Course. This course meets requirements for Step 1 and Step 2 criteria for E-AEC. Using the theoretical part in a digital platform and patient case scenarios, VA and VV ECMO concepts are further explored. In the settings of small groups, participants have an opportunity for hands on learning and troubleshooting of clinical cases. This course is structured for multidisciplinary learning at various stage of experience. Link to course information: www.ecmoeducacion.mx



SWAAC ELSO Updates



APELSO Updates

This month we would like to give you all an update on the APELSO Registry provided by Dr Pauline Ng (Hong Kong).

The APELSO Registry Workgroup was formed at the end of November 2021 with the vision of Professor John Fraser and Dr Jacky Suen to create a tailor-made solution that addresses hurdles in ECMO data collection and management, specific to the Asia-Pacific region. The aim is to increase participation from Asia-Pacific populations in the main ELSO Registry, so that comparisons across geographical regions and ethnicities, as well as examination of global inequalities of ECMO resources and outcomes, could be more robust. The working group has identified two main areas of focus: Complexities in data governance and sharing regulations; and, Under-resourced research infrastructure, especially in developing countries.

The working group, led by Pauline Yeung Ng, now has nine representatives from across Singapore, Hong Kong, Japan, Thailand, South Korea and Indonesia, and are currently working on novel solutions to expedite the data entry process. My thanks to Pauline Yeung Ng, clinical assistant professor at the Critical Care Medicine Unit of The University of Hong Kong, for her role in establishing and leading the working group.

While slightly adjacent to the ECLS focus of this group, we would also like to extend an invitation to you to attend a hybrid event we are hosting with Professor Kathryn Maitland MBBS, FRCPCH, PhD, FMEDSci, OBE, Imperial College London.

Professor Maitland will be in Australia next month for a suite of engagements hosting by the Critical Care Research Group. On Tues Nov 15, Professor Maitland will be a keynote address on the challenges of conducting controlled trials in low resource settings, a subject we are all very passionate about.

Professor Maitland's keynote will be live at the following times:

Tues Nov 15. 1.30am (London)
 Tues Nov 15. 9.30am (Hong Kong)
 Tues Nov 15. 11.30am (Brisbane)
 Wed Nov 14 8.30pm (New York)

[Register here](#) to receive video conferencing link.



International research:
What can Australia learn from LMICs?

Professor Kathryn Maitland OBE
 MBBS, FRCPCH, PhD, FMEDSci
 Professor of Paediatric Tropical Infectious Diseases
 Division of Medicine, Imperial College London, KENYA

KEYNOTE: The Challenges of Conducting Controlled Trials in Low Resources Settings

11.30am-12.15pm AEST
Tuesday November 15, 2022



International research:
What can Australia learn from LMICs?

The COVID-19 pandemic brought us closer as colleagues and peers, yet researching across countries and continents still has serious limitations.

KEYNOTE and PANEL DISCUSSION EVENT
11.30am - 12.15pm AEST, Tuesday November 15, 2022
 Seminar Room 2003, Translational Research Institute, Brisbane
 and online - [register here](#) to receive link

KEYNOTE: The Challenges of Conducting Controlled Trials in Low Resources Settings

Professor Kathryn Maitland OBE
 MBBS, FRCPCH, PhD, FMEDSci
 Professor of Paediatric Tropical Infectious Diseases
 Division of Medicine, Imperial College London, KENYA

PANEL CONTINUES AFTER KEYNOTE 12.30-1.30pm AEST

Panelists:

- Prof Isomson Kinyanjui**
 Centre for Tropical Medicine and Global Health
 University of Oxford
 KENYA
- Prof Gabriella Best**
 Hendrick Research Fellow
 Diamantina Institute
 The University of Queensland
 AUSTRALIA
- Prof John Fraser**
 Founder and Director
 Critical Care Research Group
 The Prince Charles Hospital
 AUSTRALIA
- Prof Thomas Williams**
 Haemoglobinopathy Research
 Imperial College London
 KENYA
- Dr Rini F. Mubandari**
 Clinical Assistant Professor
 Chairperson of Paediatric
 Emergency and Intensive Care
 Working Group of Indonesian
 Paediatric Society, Faculty of
 Medicine, Universitas Sumatra
 Utara, INDONESIA
- Dr Nicholas Obonyo**
 Post Doctoral Research Fellow
 Critical Care Research Group
 KENYA

APELSO Adult ECMO Training Course 2022

Queen Mary Hospital, Hong Kong

5 – 7 December 2022



REGISTRATION IS NOW OPENED



APELSO ADULT ECMO TRAINING COURSE

Jointly organized by Asia-Pacific ELSO, Queen Mary Hospital, Grantham Hospital and Critical Care Medicine Unit, The University of Hong Kong

5 – 7 DECEMBER 2022
HONG KONG

Overseas Faculties (Online Lectures)

Rodrigo Diaz (Chile)

Cara Agerstrand (USA)

Course design:

Full Course Track (3 full days. Didactic lecture + simulation sessions)[#]

Lecture-only Track (3 half days. Online lectures)

[#]For overseas participants, the whole course will be conducted via Zoom (Online lecture + Tele-simulation).

Course fee:

Full Course Track: USD1,900

Lecture-only Track: USD430



Application Deadline: 6 NOV 2022

Registration & enquiries:

- Hong Kong participants: contact Viann Yu at yth184@ha.org.hk
- Overseas participants: contact Peter Lai at lck230@ha.org.hk

Chief Executive Officer Remarks

There were so many good lectures and conversations that were part of our 33rd Annual Conference! For those of you that made the effort to be together in person, thank you so much for being a part of it. I was not entirely sure what to expect, as this was my first ELSO in-person conference. The community that is ELSO was beyond my expectations. It was such a privilege to be able to thank many of you in person for your extraordinary hard work over the past few years. Thank you for making me feel welcome to this great family.

The virtual program of the conference is free to you if you attended in person and available through January if you missed it (or you were there, but were talking to so many people that you missed some sessions – as was my case). For those interested in CME, there is much more available through the virtual program. Please take a look at your convenience.

I hope you appreciated the many volunteers that helped make the conference run smoothly as much as I did. They did an amazing job! Thank you for the time commitment and devotion – some new, some a constant part of our team.

A very big thank you to the ~230 authors that contributed to the Red Book 6th Edition. We are proud of that contribution to the field and hope everyone enjoys the latest edition – a significant update.

There are so many signs of collaboration across countries, disciplines, and cultures at ELSO: annual conference, research, registry, education, and the Red Book. One area that makes me quite proud to be part of ELSO is that we do the hard work to collaborate – and it shows. There isn't another medical society quite like us. Thanks for making ELSO such a unique, collaborative, and thoughtful organization.

As 2022 enters Fall, we are planning in earnest for 2023. If there is something you would like ELSO to do or improve, please let us know. Feel free to email me or WhatsApp any time with thoughts or suggestions; cstead@elso.org or +17347172493 (my cell).

With gratitude,

Christine



Bottom Row: Kennethia Banks, Dr. Bartlett, Christine Stead, Velia Antonini, Peter Rycus; Top Row: Graeme MacLaren, Daniel Brodie, Matthew Paden, Alex Fox



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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The Extracorporeal Life Support Organization (ELSO)
3001 Miller Road, Ann Arbor, Michigan 48103, USA

www.elseo.org

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