# EXTRACORPOREAL LIFE SUPPORT ORGANIZATION

ANNUAL

REPORT

2021

### LETTER FROM THE BOARD

Dear ELSO Community,

2021 was a challenging year for the ELSO community. As we reflect on the year, we want to acknowledge the tireless effort of ECMO teams globally that continued to work tirelessly to provide extraordinary care for patients despite the many pandemic-related obstacles. We would like to express our admiration and gratitude for your continued dedication to meet the needs of the very sickest patients.

You will see our new mission and vision statements – a direct result of your feedback. We believe these statements are powerful and inspiring in guiding our future work. More importantly, your suggestions shaped the strategic themes that will help us prioritize our work.

Several initiatives brought to life in 2021 stand out. Among these, we are pleased to announce, after years of effort and global collaboration, the release of ELSO Foundations, an adult ECMO training course, a global standard in ECMO education for the whole ECMO team.

Technological improvements are key to advancing the field, and our industry partners continue to help us improve patient outcomes. We continue to make that data available for each center, available for teams to conduct quality assurance reviews as well as research, and for our industry partners. Improvements in the ELSO Registry are advancing and now include a live dashboard for the entire registry. Improvements in the quality dashboard are coming. All of these reflect the many ways data guides our work.

Most importantly, ELSO exists to serve our members – all of you. We hope you will continue to find a home that values your involvement and continues to lead the way in innovation that improves outcomes for our patients. We look forward to working together more cohesively as a global team.

Thank you for your tremendous work this year. We appreciate your ongoing commitment to improving the lives of patients and to caring for our teams and each other.

With gratitude,

**ELSO Board of Directors** 

Matthew Paden, President
Daniel Brodie, President-Elect
Mark Ogino, Past President
Peta Alexander, Treasurer
Graeme MacLaren, Global Representative
Jay Shiland, Director
Elizabeth Maringer, Director
Robert Bartlett, Founder, Emeritus Director



Matthew Paden, MD
President

# TABLE OF CONTENTS

TAKING CARE	4
OUR FUTURE: NEW MISSION, VISION	5
OUR FUTURE: STRATEGIC PLANNING	6
YEAR IN REVIEW	9
ANNUAL CONFERENCE	13
ELSO FOUNDATIONS & EDUCATION	15
CENTERS OF EXCELLENCE	18
INDUSTRY PARTNERS	19
LOOKING FORWARD	20
FINANCIAL HIGHLIGHTS	22
ABOUT ELSO	23
LETTER FROM CEO	30

# TAKING CARE: OF PATIENTS, TEAMS, EACH OTHER

ECMO care teams continue to play a vital role in meeting the patient needs during this pandemic. In the first year, learning how to safely care for COVID-19 patients brought everyone together. The innovation in staffing models, and even equipment and transportation management to keep teams safe was shared across our community.

As the pandemic stretched into year two, the demand for ECMO continued at an elevated level. More children were impacted by the pandemic, and people grew weary of the demands of the pandemic. Throughout it all, care teams have remained dedicated to doing what they can. And yet, there has been an enormous toll – both emotionally and physically.

ELSO is pleased to share resources for ECMO teams, especially those continuing to take care of COVID-19 patients through the Schwartz Center for Compassionate Care - an organization that specializes in taking care of healthcare teams. If you are seeking resources for your team, or yourself, please <a href="explore">explore</a> what is available at your convenience.

We recognize the enormous effort that this ongoing pandemic asks of us and our colleagues. Supporting each other, taking care of each other, and taking care of ourselves will be important to focus on so that we can continue to meet the needs of our patients and community.

Your continued dedication to taking care of your patients and each other is noticed, appreciated, and inspires. This issue is dedicated to all of us that are doing our best to take care. We celebrate your efforts to continue to rise to the occasion.

Emily Dickenson



# **OUR FUTURE: NEW MISSION, VISION**

# **Mission Statement:**

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

# **Vision Statement:**

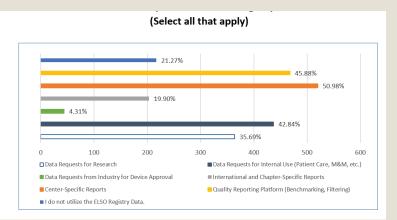
ELSO will be the premier organization for the advancement of extracorporeal life support throughout the world.

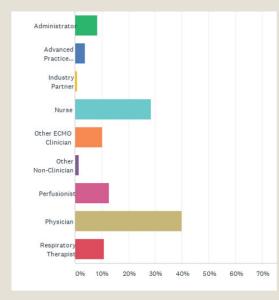
### STRATEGIC PLANNING ELSO MEMBER INPUT

### Member Survey Feedback

1,020 members provided feedback as part of our strategic planning process in 2021. Members represented 59 countries and a broad interprofessional team.

Please rank the following services ELSO provides. (1 = not important, 5 = very important)						
	Score 4 & 5 Combined*	Not Aware	Weighted Average*			
Award of Excellence	75.7%	4.5%	4.11			
Books	86.0%	2.5%	4.43			
Conference	92.4%	1.9%	4.59			
Discussion Board (Website)	69.0%	6.2%	3.93			
Education (Courses & Workshops	89.1%	1.7%	4.50			
Guidelines	96.6%	1.3%	4.77			
Networking	80.0%	5.0%	4.19			
Newsletters	66.4%	3.6%	3.82			
Registry	91.4%	1.9%	4.61			
Research	91.6%	2.4%	4.58			
Webinars	83.7%	4.7%	4.28			
Website Content	82.2%	1.9%	4.26			





### **Interviews**

40 provided input during in-depth interviews to share more details on what ELSO should be doing going forward.

The input from member surveys and interviews were used to craft our new mission, vision, and strategic themes. In addition, input helped shaped the initiatives that ELSO will prioritize in the coming years.

thank you!

40 ELSO colleagues were able to participate in an individual interview during a very busy summer. We cannot thank you enough for being as thoughtful in your contributions to ELSO as you were and continue to be. The advice you shared for the benefit of ELSO's future is invaluable.

A very special thank you for those that were able to participate.

Thank you from ELSO!

### **Interview Participants**

Akram Bary John Fraser Alain Combes John Toomasian Jonathan Haft Antonio Pesent Bill Lynch Justin Sleasman Bill Wood Lakshmi Raman Bjorn Frencknei Leonardo Salazar **Bradley Kuch** Mark Ogino Cara Agerstrano Matt Paden Charles Stolar Palle Palmer Dan Brodie Pearl O'Rourke Dr. Bartlett Peta Alexander Eddy Fan Peter Rycus Elizabeth Maringer Rene Gomez Gail Annich Rodrigo Diaz Giles Peek Ryan Barbaro Graeme MacLarer Scott Merz Heidi Dalton Steven Conrad Thomas Mueller Jan Belohlavek Jay Shiland Tracy Morrison Jim Fortenberry Warwick Butt

### STRATEGIC PLANNING PROCESS

ELSO conducted a strategic planning process in 2021. There are many priorities, with fast-evolving needs for ECMO in the field during the global pandemic. Listening to our members, considering our colleagues in the field, and appreciating the needs of the global community we serve, least of which - the patients and families that we serve.

The ELSO Steering Committee and Global Chapter Chairs provided input throughout this process. ELSO's Board of Directors led the overall effort. We are grateful for the time and energy this took on everyone's part. This investment in energy will pay off for years for ELSO - all of you. We are committed to an ongoing process of seeking input and adjusting our plans to ensure we are meeting the needs of our community.

### **Strategic Planning Steering Committee Meetings**

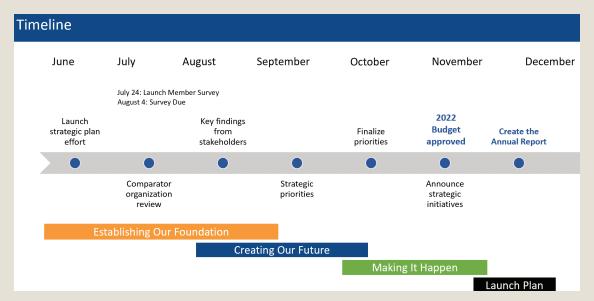
- 1. June 24, 2021
- 2. July 20, 2021
- 3. August 25, 2021
- 4. September 22, 2021

### Feedback Sessions - Interviewees + SC

- 1. August 25, 26 2021
- 2. January 24 2022

### **Board Work Sessions**

- 1. August 30, 2021
- 2. September 23, 2021
- 3. November 10, 2021



# **OUR FUTURE: STRATEGIC THEMES**

# Strategic Themes:

- Advocate for patients, families, and centers to improve access, quality, and outcomes with ECLS.
- Promote trust and credibility in all our work.
- Provide insight and definitive data for clinical research, quality improvement, and benchmarking for centers, industry, and regulatory agencies.
- Lead as an inclusive, global, interprofessional, and collaborative organization.

### YEAR IN REVIEW: FLSO REGISTRY

### Live Dashboard

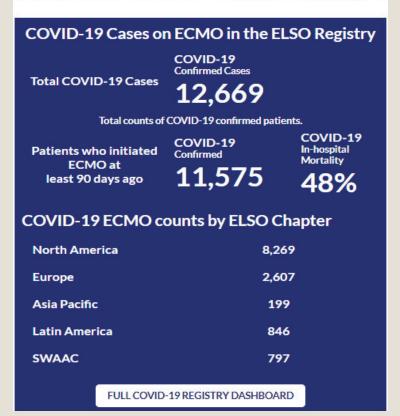
The entire registry now has a live dashboard, with the ability to filter data for specific patient populations. The live dashboard for the entire registry has been a goal for some time. The usefulness of the live COVID-19 dashboard reinforced how access to live data could serve our community. Simple searches can help see what data is available in the registry, inform major trends, and provide some context for data requests or other interests.

### **Improvements: Equipment Complications**

Improvements in the registry are ongoing. In January 2020, ELSO improved the registry for tracking equipment changes where pumps, cannulae, and oxygenators change outs are recorded along with the reason of the equipment change instead of just the initial configuration. This information will help provide important feedback for our community, especially our industry partners who look to improve the technology we have available for our patients.







### YEAR IN REVIEW: ONGOING PANDEMIC RECOVERY

### **ECMO Capacity Map**

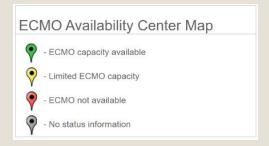
ELSO makes available a map to see ECMO capacity quickly. Many factors go into determining whether a center has capacity: equipment availability, staffing, and beds. We ask centers to update your status frequently, as this information is used by many for assistance in seeking ECMO care, especially during the pandemic, where demand for ECMO often exceeds capacity. Many use this map for information: referral centers, families struggling to find ECMO for their loved ones, governments, and the media. Please continue to update your center's status. A visual snapshot of ECMO capacity is a help to many. Data is time-stamped. Transportation capability is also important to update.

### **Access to ECMO**

As ECMO centers became full, many looked elsewhere for capacity for their patients. Referring centers did this as well. ELSO began exploring the need for a global waitlist tool that could help coordinate and communicate access to ECMO in larger regions than typical referral patterns.

Some countries coordinate access to ECMO. Others lack a system for communicating and coordinating access. ELSO continues to explore this area of need on behalf of the patients and the providers that are working so hard to find access to ECMO in high demand periods, as we continue to be in.





### YEAR IN REVIEW: ONGOING PANDEMIC RECOVERY

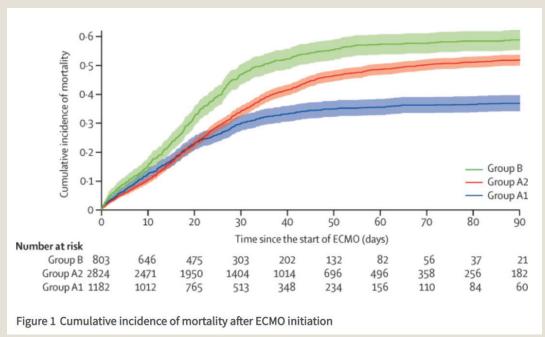
### **Evolving Outcomes**

Patient outcomes during the pandemic continue to change. The ELSO Registry team published an important update to the initial Lancet publication on COVID-19 patients treated with ECMO to reflect these observations. The Lancet study is based on the international ELSO registry and reported on 4,812 ECMO patients in 349 centres from 41 countries in 2020. The study found that patients treated at the same collection of centers later in the pandemic had a 15% increase in in-hospital mortality 90-days after ECMO initiation and the median duration of ECMO support increased by 6 days.

Compared to patients with COVID-19 who received ECMO earlier in the pandemic, more recently a higher proportion of patients received treatment with corticosteroids. Factors appearing to affect outcomes included that more recent ECMO-supported patients had a higher likelihood of treatment-refractory disease despite similar conventional risk factors and that centers with less experience providing ECMO support for COVID-19 were more likely to have a higher mortality rate.

"These data suggest two key issues. First, continued surveillance of local and regional outcomes among ECMO-supported patients with COVID-19 is essential because outcomes can be different from center to center and change overtime. Second, centers should be aware that patients with COVID-19 often required ECMO support for more than a month and we recommend centers establish local polices to guide the ethical allocation of ECMO if it becomes a scarce resource." said Ryan Barbaro, MD, Chair of ELSO's Registry Committee and lead author of the study.

https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01960-7/fulltext



### YEAR IN REVIEW: PATIENT & FAMILY SUPPORT

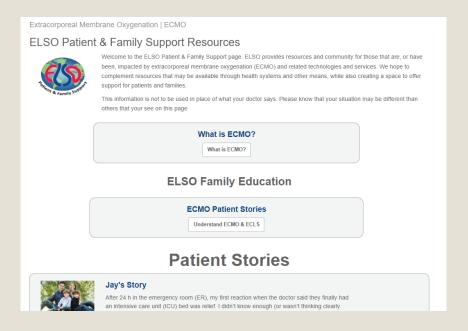
ELSO is enhancing what we offer for patients and families. Most ECMO centers provide some level of education, support, follow-up, and community for patients and family members to connect with each other. Follow-up services and access to community vary, with less currently available for adult ECMO patients and their families. ELSO has often included patients and families in our annual conference. Input from patients and families is important for ECLS teams to hear, understand, and incorporate into ECMO programs and services, including follow up and ongoing support for former ECMO patients.

In 2021, ELSO launched a patient and family support page on our website. We are starting with sharing patient and family stories. We look forward to adding to them and sharing diverse global perspectives. We will add more resources to this site over time, eventually achieving community for patients and families. We recognize that there are varied experiences in recovery that both patients and families want to know about. In addition, patients and families often ask about the latest advancements in ECMO research. We will feature developments from ECMO research labs around the world. Let us know if you would like your work featured here.

# Phil Mason, MD facilitating a discussion with two long-term awake ECMO patients at the 32nd ELSO Annual Conference.



# **ELSO's new Patient & Family Support Page:** www.elso.org/resources/patientsandfamilies.aspx



### 32ND ANNUAL FLSO CONFERENCE

ELSO's 32nd Annual Conference took to the virtual stage for the second consecutive year, a necessity during the ongoing pandemic. The scientific agenda reflected a diverse set of sessions, emphasizing innovation and new areas of work. We were excited to broaden our speakers to include a more diverse team and emerging leaders in the field.

Highlights of the scientific program include system preparedness and innovations during COVID-19; research findings in ECPR, ECCO2R, and related innovative technologies; new clinical care & management guidelines; and a late-breaking publication from the ELSO Registry in The Lancet. Across four different tracks and two plenary sessions, conference attendees saw the best of ELSO, from the latest guidelines and research findings to stories of hope from ECMO survivors.

In total, over 2,000 participants registered for this year's conference, representing 30 countries and each of the ELSO Global Chapters. This year also saw a broad spectrum of professions, including both clinical & non-clinical roles. A welcome addition to our program for the second year in a row, our Spanish-language sessions brought together colleagues from across our LATAM and Spanish-speaking community.





### 32ND ANNUAL ELSO CONFERENCE

Late-breaking research in The Lancet was yet again a cornerstone of our annual gathering. This September 2021 paper from the ELSO Registry is an update to an earlier publication examining the treatment of COVID-19 patients with ECMO support. In this follow-up analysis using data from May 2 to December 31, patients on ECMO experienced worsening 90-day in-hospital mortality. In a secondary finding, experienced ECMO centers had better outcomes than less experienced centers.

Patients and care teams were topics covered in our annual conference. If you have not had a chance to view these sessions, please do. Terri Hough facilitated a session on 'Taking Care of Our Teams to Take Care of Our Patients'. Phil Mason facilitated a session where two long-duration awake ECMO patients provided their experience and perspectives - something we can benefit from as more centers implement awake ECMO protocols.

ELSO would like to thank all those who contributed to, presented at, and attended our 32nd Annual Meeting. It is a testament to our community that especially during a pandemic, we can come together to learn, share, and inspire. Thank you for making the ELSO Annual Meeting one of the world's premiere gatherings for the advancement of ECLS technology.

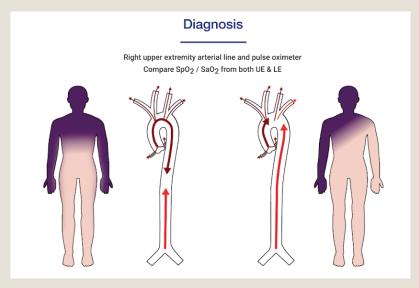
The 33rd ELSO Annual Meeting is in Boston, Massachusetts from September 14-17, 2022.





### ELSO FOUNDATIONS: ADULT ECMO TRAINING COURSE





### Online Self-Paced Training Available Anytime, Anywhere

Years in the making: a global, interprofessional team has developed a uniquely designed ECMO Training experience. Created by 29 international ECMO practitioners and edited by a team of over 30 world-renowned ECMO experts, representing every ELSO chapter, we are happy to present: ELSO Foundations – Adult ECMO Training Course.

This self-paced ECMO course consists 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 Foundations course provides individual practitioners up-to-date standards of practice & evidence-based recommendations to optimize clinical decision making that are rooted in the foundations of ECMO clinical management.

Completion of this course can also be used to prepare practitioners for the ELSO – Adult ECMO Certification (E-AEC) exam. ELSO Foundations, Adult ECMO Training Course will set the new global standard for ECMO Training. We envision many centers incorporating this course into their education and training programs.

ELSO Foundations launched on December 21, 2021.

More information about ELSO Foundations: Adult, incuding a brief video, can be found on our website.

## A Special Thank You to Our Authors, Editors, and Knowldedge Experts

Wallace Ngai

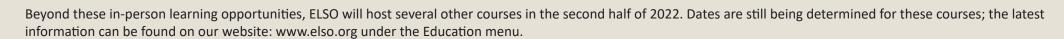
Simon Finney

**England** 

Daniel Albania	LICA	Al- F-	LICA	Chair Nial and	A -1 1'-
Darryl Abrams	USA	Alex Fox	USA	Chris Nickson	Australia
Cara Agerstrand	USA	Tammy Friedrich	USA	Mark Ogino	USA
Rocio Agliati	Chile	Daniel Garros	Canada	Clark Owyang	USA
Guillaume Alinier	Qatar	Rene Gomez	Mexico	Giles Peek	USA
Felipe Antoniali	Brazil	Don Granoski	Canada	Tai Pham	Canada
Velia Antonini	Italy	Amy Hackmann	USA	Lakshmi Raman	USA
Lovkesh Arora	USA	Jonathon Haft	USA	KR Ramanathan	Singapore
Jenelle Badulak	USA	Ali Hassain	Qatar	Andrew Retter	England
Mike Baram	USA	Ibrahim Hassan	Qatar	Jordi Riera	Spain
Nick Barrett	England	Kasia Hryniewicz	USA	Peter Roeleveld	Netherlands
Robert Bartlett	USA	Shingo Ichiba	Japan	Jose Alfonso Rubio	Spain
Vitor Barzilai	Brazil	Crystal Ives	USA	Ahmed Said	USA
Jan Beholavek	Czech Republic	Lindsay Johnston	USA	Leonardo Salazar	Colombia
Melania Bembea	USA	Jae-Sung Jung	South Korea	Assad Sassine	Brazil
Priya Bhaskar	USA	Jeannie Kukutscha	Mexico	Matthieu Schmidt	France
Daniel Brodie	USA	Peter Lai	Hong Kong	Sean Scott	Australia
Steven Conrad	USA	Roberto Lorusso	Netherlands	Troy Seelhammer	USA
Dennis Daniel	USA	Graeme MacLaren	Singapore	Kiran Shekar	Australia
Mark Davidson	Scotland	Jai Madhok	USA	Jayne Sheldrake	Australia
Rodrigo Diaz	Chile	Phil Mason	USA	Grace van Leeuwen	Qatar
Marc Dickstein	USA	Tim Maul	USA	Leen Vercaemst	Belgium
Christian Fajardo	Chile	Colin McCloskey	USA	Bishoy Zakhary	USA
Lars Falk	Sweden	Elizabeth Moore	USA		
Eddy Fan	USA	Chirine Mosadegh	France		

### **Learning Opportunities in 2022**

Hong Kong



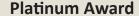
### YEAR IN REVIEW: RETURN TO IN-PERSON SIMULATION, FOR A MINUTE

The ELSO Education & Simulation Team was able to provide in-person learning in early December 2021, just before Omicron would be announced as the next major COVID-19 variable of interest. Simulation training is an important component in ELSO's education services. We look forward to being able to provide more simulation opportunities in 2022, pandemic-permitting.



### ELSO CENTERS OF EXCELLENCE

Congratulations to 2021 Center of Excellence awardees. Award periods begin in 2022. We appreciate your commitment to excellence in care, quality, and process for your patients. The award designation is for a three-year period and now begins in January. We will be aligning to calendar years going forward.





Riddhi Vinayak Critical Care and Cardiac Centre Texas Children's Hospital Universy of Minnesota - M Health Fairview UC Davis Medical Center Oregon Health & Science University Medical University of South Carolina Health University of Pittsburgh Medical Center University Hospital Regensburg, UKR UT Southwestern Medical Center Baylor University Medical Center AdventHealth Toronto General Hospital - UHN

Aberdeen Royal Infirmary

Fundacion Cardiovascular De Colombia

### **Gold Award**



UCLA Ronald Reagan & UCLA Mattel Children's Hospital Children's Hospital of Georgia Nebraska Medicine Loma Lina University Children's Hospital Maimonides Medical Center Rhode Island Hospital and Hasbro Children's Hospital

Rhode Island Hospital and Hasbro Children's Hospital
Weill Cornell Medical, New York Presbyterian Hospital

Allegheny General Hospital

Indiana University Health - Methodist Hospital

West Virginia University Medicine Mayo Clinic Hospital - Arizona York Hospital WellSpan Health

**UF Health Shands** 

Aarhus Universtiy Hospital, Skejby

Banner University Medical Center - Phoenix

Connecticut Children's Medical Center Johns Hopkins All Children's Hospital UCSF Benioff Children's Hospital

Geisinger Medical Center

University of Cincinnati Medical Center

**Froedtert Hospital** 

University of Michigan (Michigan Medicine)

Mission Health

Cardinal Glennon Children's Mecical Center

Ochsner LSU Health Shreverport

UC San Diego

Northwestern Memorial Hospital

The University of Chicago Medicine Comer Children's Hospital

**Chonnam National University Hospital** 



Sharp Memorial Hospital
Carilion Roanoke Memorial Hospital
Penn State Hershey Medical Center
Intermountain Medical Center
Children's Hospital of The King's Daughters
JFK Medical Center

### **Silver Award**

Presbyterian Hospital
Dominican Hospital
University Hospitals Cleveland Medical Center
Baylor Scott & White All Saints Medical Center
The Royal Hospital National Heart Centre, Sultanate of Oman

### **INDUSTRY PARTNERS**

### INDUSTRY PARTNER APPRECIATION

ELSO appreciates the partnership we have with industry. Through innovation in technology, they strive to do their part to improve patient outcomes in the field. Our industry partners are essential collaborators in knowledge and technology. We appreciate the ongoing commitment and support of ELSO events, especially our annual conference. This year was no exception. Industry support of our 32nd Annual Conference was exceptional this year, with excellent lunch presentations that remain available for members on our website, under www.elso.org/resources/presentations.

### **DATA QUALITY**

Manufacturers of ECLS equipment rely on the quality of data in the ELSO Registry to make improvements. When we bring our practitioners and industry together through data, patients benefit. ELSO is making improvements to how we check for data quality. ELSO reviews our data elements and data definitions while also maintaining current equipment lists through industry. We review these lists as part of our Device Development Group, a subcommittee of our Technology & Innovations Committee.

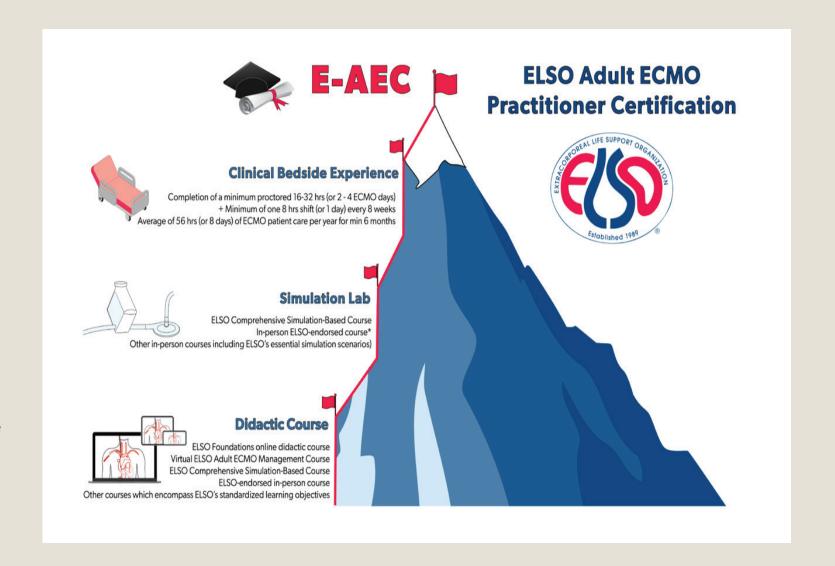
### **REGULATORY AGENCY PARTNERSHIPS**

ELSO continues to work with regulatory agencies globally. In 2021, ELSO continued to advance our statistical expertise for industry-related data. Europe's new Medical Device Regulation (MDR) will require more sophistication here as well. ELSO is committed to meeting our member's needs through collaboration and support from regulatory bodies, industries, and our centers that provide data. We thank the regulatory agencies that we work with to help meet the needs of data integrity and review such that industry can continue to improve their contribution to patients.

### LOOKING FORWARD: ELSO - ADULT ECMO CERTIFICATION EXAM (E-AEC)

### **E-AEC Certification**

The ELSO Adult ECMO Practitioner (E-AEC) Certification is now available! E-AEC Certification is provided through an application and examination process. All adult ECMO practitioners - physicians, nurses, perfusionists, respiratory therapists, and more - are welcome to apply using our free application process. If your application is accepted, an examination and certification fee will apply. E-AEC exams are available monthly via our external proctoring system. Providers may sit for the Exam at any time or place during a twoweek window. Full details about the E-AEC Certification are available on our website.



### LOOKING FORWARD: ENDORSED COURSES



ELSO began endorsing member center-based courses several years ago. Since then, we have refined our learning objectives and approach to both the didactic training and hands-on, high-fidelity simulation training that we believe is important in creating a strong education and training foundation for practitioners.

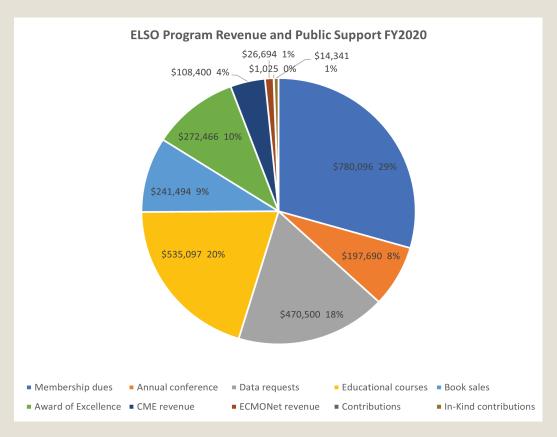
We will be refining our endorsed courses process in early 2022. Please look for more information on the ELSO education page of our website. Endorsed courses that are globally available is important for providing access to high quality education throughout the world. Our new endorsed course approach enables multiple languages to be available to a globally diverse team of practitioners.

To apply to be an endorsed course, we will establish a simplified application process and contractual agreement that allows for courses to be endorsed for up to three years. A one-time application fee and surveyor fee will be sufficient going forward.



# FINANCIAL HIGHLIGHTS

ELSO Financial Highlights		
Statement of Activities		
For the Year Ended December 31, 2020		
Program Revenue and Public Support		
Membership dues	\$ 780,096	29%
Annual conference	\$ 197,690	7%
Data requests	\$ 470,500	18%
Educational courses	\$ 535,097	20%
Book sales	\$ 241,494	9%
Award of Excellence	\$ 272,466	10%
CME revenue	\$ 108,400	4%
ECMONet revenue	\$ 26,694	1%
Contributions	\$ 1,025	0%
In-Kind contributions	\$ 14,341	1%
Total Program Revenue and Public Support	\$ 2,647,803	100%
Operating Expenses		
Program services	\$ 2,258,982	
Management and general	\$ 441,797	
Total Operating Expenses	\$ 2,700,779	
Excess (Shortfall) from Operations	\$ (52,976)	
Nonoperating Income(expenses)	\$ 116,965	
Change in net assets	\$ 63,989	
Net assets - beginning of year	\$ 4,070,985	
Net assets - end of year	\$ 4,134,974	



### Independent Auditors' Report, Yeo & Yeo, LLC:

"We conducted our audit in accordance witht auditing standards generally accepted in the Univerd States of America. Those standards require that we palan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Extracorporeal Life Support Organization as of December 31, 2020, and the changes in its net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America." May 5, 2021

Source: ELSO Audited Financial Statements, Year Ending December 31, 2020

for our audit opinion.

# ELSO BOARD OF DIRECTORS



Matthew Paden, MD President



Mark Ogino, MD Past-President



Daniel Brodie, MD President-Elect



Peta Alexander, MBBS Treasurer



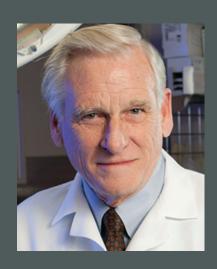
Graeme MacLaren, MBBS **Global Representative** 



Elizabeth Maringer, JD Director



Jay Shiland, JD Director ANNUAL REPORT 2021 | EXTRACORPOREAL LIFE SUPPORT ORGANIZATION



Robert Bartlett, MD Founder, Emeritus Director

# ELSO GLOBAL CHAPTER LEADERSHIP



John Fraser, MBCHB, PhD AP ELSO Chair



Jan Belohlavek, MD, PhD EURO ELSO Chair



Rene D. Gomez, MD LA ELSO Chair



Akram Mohamed Abdalbary Ahmed, MD SWAAC ELSO Chair









# **ELSO STEERING COMMITTEE**



Cara Agerstrand, MD Conference



Jenelle Badulak, MD Membership



Ryan Barbaro, MD Registry



Desiree Bonadonna, CCP Perfusion Liaison



Eddy Fan, MD Research



Jonathan Haft, MD Technology



Rob Hyslop, RN Coordinator Liaison



Bradley Kuch, RRT RT Liaison



Lakshmi Raman, MD Publications



Bishoy Zachary, MD Education

Not pictured: Tracy Morison, RN, Quality

# **ELSO TEAM**



Kennethia Banks, BS Operations Manager



Velia Antonini, CCP, MS Social Media Lead



Phil Boonstra, PhD Biostatistician



Elizabeth Moore, RN, MBA Education Director



Elaine Cooley, RN, MS Clinical Program Manager



Peter Rycus, MPH Executive Director



Alex Fox, MHSA Project Manager



Christine Stead, MHSA CEO



From Left: Peter Rycus, Excetive Director, Christine Stead, CEO, Wanda Bartlett, Kennethia Banks, Operations Manager, Dr. Robert Bartlett, Founder; and Elaine Cooley, Clinical Program Manager





# Work Sessions at ELSO Headquarters

ELSO Education Team members were able to plan together for an upcoming busy year end and 2022! This team has been working hard on a variety of initiatives, which are also included in this report and that we will be happy to share with our members when we can.

We look forward to being able to bring people together more often in the future as the pandemic allows.

If your team would benefit from a gathering and/or work session at ELSO's headquarters, please let us know! We would welcome the opportunity to work in person when we safely can.



Dear ELSO Community,

'Taking Care' honors the dedication, commitment, and ongoing work of our ECMO teams, while also shining a light on the teams themselves. In your unwavering commitment to your patients, we want you to know how much your work is seen and appreciated.

This Annual Report tells the story of 2021 while sharing images and poetry that we hope express our appreciation through positivity, optimism, gratitude, and hope.

Much was achieved in 2021: we learned more together, we advanced tools to better support ECMO teams through education and training; improvements were made in data integrity, security, and technology innovation; new guidelines were released; and we grew as a global community. ELSO is committed to being the place where colleagues come together to improve the lives of the sickest patients.

ELSO asked for your help during 2021 to assess what matters most to our community. Your feedback drove our new mission and vision and strategic themes, which will guide our work for the years ahead.

New viruses will emerge over time. Improvements in technology and broadening use cases for extracorporeal life support will advance. Access, equity, and effective support will drive our efforts based on our new strategic themes and always guided by our mission and vision.

We appreciate your ongoing commitment to the sickest patients. We will continue to come together to make things better: one patient at a time; one study at a time; one day at a time.

With appreciation,
Christine Stead, CEO



