



Educational and Scientific Program

May 10 -11, 2023: *Pre-Conference Workshops*

Wednesday (May 10): 09'00 – 18'00

Thursday (May 11): 08'00 – 12'00

May 11-13, 2023: *Main Conference*

Thursday (May 11): 12'15 – 18'00

Friday (May 12): 08'15 – 18:00

Saturday (May 13): 08'15 – 12'45

W1 Newer ventilation modes, strategies and concepts in neonatal ventilation

- *Volume Targeted Ventilation during CMV (David Tingay, Australia)*
- *Volume Targeted Ventilation during HFOV (Manuel Sanchez Luna, Spain)*
- *Searching for optimal lung volumes (Anton van Kaam, Netherlands)*
- *Case scenarios and hands-on*

W2 Non-invasive ventilation for acute and chronic respiratory failure in children

- *To delay or prevent endotracheal intubation (Joe Brierley, UK)*
- *For weaning (Padmanabhan Ramnarayan, UK)*
- *Longterm non-invasive respiratory support (Juerg Hammer, Switzerland)*
- *Negative pressure (biphasic cuirass) ventilation for acute and chronic respiratory failure (Omar Alibrahim, USA)*
- *Case scenarios and hands-on*

W4 How to set the ventilator: a practical approach to CMV and HFOV

- *Setting the ventilator: Basic concepts applied (Peter Rimensberger, Switzerland)*
- *Setting the ventilator for restrictive, obstructive and mixed lung disease (Juerg Hammer, Switzerland)*
- *Setting the oscillator in children (Martin Kneyber, Netherlands)*
- *Case scenarios, simulations and hands-on*

W5 Non-invasive ventilation in prematurely born infants

- *HFNC (Manuel Sanchez Luna, Spain)*
- *nCPAP: various working principals, setting pressures (David Tingay, Australia)*
- *NIPPV (Haresh Kirpalani (USA)*
- *nHFOV (Daniele de Luca, France)*
- *Case scenarios and hands-on (Anna Lavizzari, Italy and faculty)*

W6 ECMO: Workshop on VV and VA ECMO for beginners and advanced providers

- *Circuit Set Up for Neonates and Pediatrics-Facts and pitfall (Malaika Menonca, Switzerland)*
- *Cardiac VA ECMO: From on to off (start to weaning) (Aparna Hoskote, UK)*
- *Respiratory ECMO: VV/VA when, why and how ? (Angelo Polito, Switzerland)*
- *Addressing Complications and weaning of VV ECMO (Pete Roeleveld, The Netherlands)*
- *Case scenarios and hands-on: Troubleshooting, Component Complications, Scenarios and case discussions on VV ECMO and VA ECMO simulation in small groups*

This workshop is limited to 28 participants

W7 The use of various measures and monitoring concepts during mechanical ventilation in children and neonates

- *Monitoring gas exchange and ventilator parameters and what additional information can be gained from it (Peter Rimensberger, Switzerland)*
- *Monitoring patient-ventilator synchrony and patient effort during assisted breathing (Martin Kneyber, The Netherlands)*
- *Clinical application of the Forced Oscillation Technique (FOT) (Anna Lavizzari, Italy)*

W8 Closed loop oxygenation and its clinical application

- *Introduction & historical overview (Christian Poets, Germany)*
- *A simulator to test different FiO₂-controllers (Hylke Salverda, The Netherlands)*
- *FiO₂-control in the delivery room (Tomasz Szczapa, Poland)*
- *Pitfalls during automated FiO₂-control (Christoph Schwarz, Germany)*
- *Hands-on session with rotating groups*
- *Outlook & concluding remarks (Christian Poets, Germany)*

Thursday May 11, 2023 – 10.00 – 12.00

W9 External and epicardial pacing in the PICU/CICU

Workshop leaders: Johan Lindhout and Pete Roeleveld (The Netherlands)

- Basics in external/epicardial pacing:
 - how does a pacemaker work
 - types of pacing: aai, vvi, DDD
 - determining sensing threshold
 - determining pacing threshold
 - setting the pacemaker
- Troubleshooting:
 - oversensing
 - undersensing
 - problems with capture
 - pacemaker induced arrhythmia

from 10:30	Check-in and Registration	
12:15- 13:15	Lunch Symposium	Lunch Symposium
13:30- 13:45	EPNV Opening Remarks <i>Peter C Rimensberger (Switzerland)</i>	EPNCIC Opening Remarks <i>Aparna Hoskote (UK), Angelo Polito (Switzerland)</i>
13:45- 15:00	Todays perspective on landmark papers in neonatal respiratory failure <i>Chairs: David Tingay (Australia), Daniele de Luca (France)</i>	Hemodynamics in the in the critically ill child with congenital heart disease – What I need to know? <i>Chairs: Angelo Polito (Switzerland) and Brigitte Stiller (Germany)</i>
13:45- 14:10	52 years later: The 'Gregory box' (CPAP) <i>Gregory GA et al. Treatment of the Idiopathic Respiratory-Distress Syndrome with Continuous Positive Airway Pressure. N Engl J Med 1971; 284:1333-1340</i> <i>Haresh Kirpalani (USA)</i>	13:45- 14:05 Cardiac mechanics: the complex interplay of cardiac output determinants <i>Joan Sanchez de Toledo (Spain)</i>
14:10- 14:35	43 years later: Surfactant for RDS <i>Fujiwara T et al. Artificial surfactant therapy in hyaline membrane disease. Lancet 1980; i:55-59</i> <i>Daniele De Luca (France)</i>	14:05- 14:25 LCOS, the uninvited guest: definition, pathophysiology, invasive and non-invasive monitoring <i>Aparna Hoskote (UK)</i>
14:35- 15:00	40 years later: Systemic steroids for BPD <i>C Mammel MC et al. Controlled trial of dexamethasone therapy in infants with bronchopulmonary dysplasia. Lancet 1983; 18;1(8338);1356-8</i> <i>Anton van Kamm (The Netherlands)</i>	14:25- 14:45 Inotropic drugs and afterload reduction in LCOS: do we get it right? <i>Malaika Mendonca (Switzerland)</i>
		14:45- 15:00 Q&A
15:00- 15:45	Coffee break	
15:45- 18:00	Todays perspective on landmark papers in mechanical ventilation <i>Chairs: Peter Rimensberger (Switzerland) and Saptharishi Lalgudi Ganesan (Canada)</i>	The failing myocardium from congenital to acquired causes across all ages <i>Chairs: Pete Roeleveld (The Netherlands) and Aparna Hoskote (UK)</i>
15:45 - 16:10	56 years later: Ashbaugh and ARDS definitions <i>Ashbaugh D et al. The Lancet 1967; 290 (7511): 319-323</i> <i>Guillaume Emeriaud (Canada)</i>	15:45- 16:00 Dilated, hypertrophic or restrictive: distinct entities, overlapping features <i>Brigitte Stiller (Germany)</i>
16:10- 16:35	25 years later: Lung protective ventilation <i>Amato M et al. Effect of a protective-ventilation strategy on mortality in the acute respiratory distress syndrome. N Engl J Med 1998; 338:347-54</i> <i>Marcelo Amato (Brazil)</i>	16:00- 16:20 Heart on fire: the inflamed myocardium (myocarditis, MIS-C, Kawasaki disease) The intensivist's view <i>Serge Grazioli (Switzerland)</i> The cardiologist's view <i>Julie Wacker (Switzerland)</i>

	16:35-17:00	10 years later: HFOV in the adult setting and what I have learned from it <i>Niall Ferguson et al. High-Frequency Oscillation in Early Acute Respiratory Distress Syndrome. N Engl J Med 2013; 368:795-805</i> <i>Martin Kneyber (The Netherlands)</i>	16:20-16:35	How, when, for whom: a simplified approach to ECLS indications? <i>Ravi Thiagarajan (USA)</i>
			16:35-16:50	Management of acute decompensated heart failure: from the cradle to the ICU <i>Brigitte Stiller (Germany)</i>
			16:50-17:00	Q&A
		Dynamic lung imaging methods in the PICU and NICU: What do these methods add to improve patient care? <i>Chairs: David Tingay (Australia) and Anton van Kaam (The Netherlands)</i>		The right ventricle: sadly misunderstood? <i>Chairs: Ravi Thiagarajan (USA) and Maurice Beghetti (Switzerland)</i>
	17:00-17:25	Lung Ultrasound <i>Daniele De Luca (France)</i>	17:00-17:20	When side matters: why is the RV so special? <i>Aparna Hoskote (UK)</i>
	17:25-17:50	Electrical Impedance Tomography <i>Felipe Rossi (Brazil)</i>	17:20-17:40	Acute pulmonary hypertension <i>Maurice Beghetti (Switzerland)</i>
	17:50-18:00	Oral Presentation EPNV OP 1: Use of Electrical impedance tomography in a pediatric intensive care unit <i>Florent Baudin (France)</i>	17:40-18:00	Meeting an old friend: the failing Fontan patient <i>Jürgen Hörer (Germany)</i>
18:00-20:00	Welcome Reception in the Exhibition Area			

08:15-08:55	Morning tutorial 1 Neonatal physiology for the intensivist (PICU/CICU) <i>David Tingay (Australia)</i>	Morning Tutorial 2 (joint session EPNV/EPNCIC) Better together: Cardiopulmonary interactions <i>Matteo Di Nardo (Italy), Aparna Hoskote (UK)</i>	
09:00-10:15	Evolving concepts in mechanical ventilation <i>Chairs: Martin Kneyber (Netherlands) and Peter Rimensberger (Switzerland)</i>	Nutrition Management in respiratory care of the chronically supported and acutely supported infant/child <i>Chairs: Daniele de Luca (France) and Joe Brierley (UK)</i>	The neonate with CHD: a walk on eggshells <i>Chairs: Hannes Sallmon (Germany) and Malaika Mendonca (Switzerland)</i>
	09:00-09:30 SILL: Do we have any evidence for it in children and neonates? <i>Guillaume Emeriaud, (Canada)</i>	09:00-09:30 Nutritional support in neonates with respiratory support <i>Manuel Sanchez Luna (Spain)</i>	09:00-09:25 Pre-operative management of the neonatal congenital heart disease <i>Angelo Polito (Switzerland)</i>
	09:30-10:00 Mechanical power or driving pressure and respiratory rate only? <i>Marcelo Amato (Brazil)</i>	09:30-10:00 Individualized nutrition strategies in pediatric mechanical ventilation <i>Padmanabhan Ramnarayan, UK</i>	09:25-09:50 Struggling to find balance: univentricular physiology in the post-operative period <i>Cailyn Rood (USA)</i>
	10:00-10:15 Roundtable discussion / Oral presentation	10:00-10:15 Roundtable discussion /Oral presentation	09:50-10:15 Severe persistent pulmonary hypertension: let's prepare for a hard fight <i>Hannes Sallmon (Germany)</i>
10:15-10:45	Coffee break		
10:45-12:00	Poster Walks (paediatric topics) <i>Poster Moderators: Guillaume Emeriaud (Canada) ; Matteo Di Nardo (Italy)</i>	Poster Walks (neonatal topics) <i>Poster Moderators : Neil Patel (Scotland) ; Florian Kipfmüller (Germany)</i>	
10:45-12:00	Oral presentations (paediatric topics) OP 3: Using surface electromyography of parasternal intercostal muscles and diaphragm to quantify patient-ventilator interaction <i>Alette Koopman (The Netherlands)</i> OP 5: Association of severe hyperoxemic events and excess mortality in pediatric critical care: An observational study <i>Tom Bachmann (Czech Republic)</i> OP 6: Acute respiratory distress syndrome: Response to high frequency oscillation ventilation in a population of children with ARDS and according to its subtypes (direct versus indirect ARDS)	Oral presentations (neonatal topics) OP 7: Higher continuous positive airway pressure level to prevent extubation failure in extremely preterm infants: A randomized controlled trial. <i>Anna Kidman (Australia)</i> OP 8: Short and long-term respiratory outcomes after unplanned extubation in the NICU: A Prospective study from the SEPREEN trial <i>Hélène Yager (France)</i> OP 9: Work of breathing and comfort in preterm infants comparing non-invasive neurally adjusted ventilatory assist and continuous positive airway pressure- A randomized	Residual lesions after CHD surgery <i>Chairs: Aparna Hoskote (UK) and Cailyn Rood (USA)</i> 10:45-11:15 In need for an answer: CHO, CT/IRM and Cath Lab or none <i>Julie Wacker (Switzerland)</i> 11:15-12:00 The earlier the better? – What and when residual lesions should be corrected? 3 points of view (round table) <i>Maurice Beghetti (Switzerland)</i> <i>Jürgen Hörer (Germany)</i> <i>Aparna Hoskote (UK)</i>

	<p><i>Fabienne Gebistorf (Switzerland)</i></p>	<p>crossover study</p> <p><i>Hilde Brenne (Norway)</i></p> <p>OP 10: Optimized lung expansion ventilation modulates ventilation-induced lung injury in preterm lambs</p> <p><i>Matthias Hüten (The Netherlands)</i></p> <p>OP 11: Lung function response to postnatal corticosteroids for the prevention and treatment of bronchopulmonary dysplasia</p> <p><i>Emanuela Zannin (Italy)</i></p>	
12:05-13:05	Lunch Symposium	Lunch Symposium	

Friday, May 12, 2023

13:15 – 18:00

13:15-13:55	Special Guest Lecture Designing clinical trials in critical care: Do we have to rethink it? <i>Haresh Kirpalani, US</i>		
14:00-15:40	Alternative ventilation modes and approaches Chairs: <i>Peter Rimensberger (Switzerland) and Guillaume Emeriaud (Canada)</i>	Hemodynamic controversies and challenges in the NICU (joint session EPNV/EPNCIC) Chairs: <i>Neil Patel (Scotland) and David Tingay (Australia)</i>	Cardiac arrest in CICU <i>Chairs: Aparna Hoskote (UK) and Julie Wacker (Switzerland)</i>
	14:00-14:25 Airway pressure release ventilation (APRV) in children: Shall we forget it? <i>Saptharishi Lalguldi Ganesan (Canada)</i>	14:00-14:30 PDA management: Where are we now? <i>Samir Gupta (UK)</i>	14:00-14:15 From reaction to prevention: can we reduce CA events in CICU? <i>Cailyn Rood (USA)</i>
			14:15-14:30 Pharmacologic treatments during CPR: the lesser the better? <i>Angelo Polito (Switzerland)</i>
	14:25-14:50 The potential of closed-loop mechanical ventilation <i>Pedro David Wendel Garcia (Switzerland)</i>	14:30-15:00 Acute Pulmonary Hypertension: Can we learn from the PICU? <i>Neil Patel (Scotland)</i>	14:30-14:45 Mitigating CA consequences <i>Ravi Thiagarajan (USA)</i>
			14:45-15:00 ECPR: ready to pull the trigger? <i>Pete Roeleveld (The Netherlands)</i>
	14:50-15:15 Variable ventilation: are we ready for the bedside? <i>Walid Habre (Switzerland)</i>	15:00-15:30 Pulmonary Hypertension and BPD <i>Hannes Sallmon (Germany)</i>	15:00-15:10 Q&A
	15:15-15:40 Biphase cuirass ventilation: For whom and when? <i>Omar Alibrahim (USA)</i>		15:10-15:40 Oral Presentations EPNCIC OP 12: Dynamic platelets transfusion thresholds In pediatric ECMO - giving less and gaining more <i>Eran Shostak, (Israel)</i> OP 13: Standard versus high-risk extubation readiness test (ert) protocol for cardiac patients: A quality improvement (qi) project <i>Chen Yun Goh (Singapore)</i> OP 14: Extubation failure in the pediatric population after cardiac surgery <i>Sabien Heisterkamp (The Netherlands)</i>
15:40-16:20	Coffee break		

16:20-18:00	PARDS and nARDS: Update on the PALICC 2 recommendations <i>Chairs: Joe Brierley (UK) and Omar Alibrahim (USA)</i>	Update on BPD <i>Chairs: Anton van Kaam (The Netherlands) and Samir Gupta (UK)</i>	Protecting the patient while fixing the heart <i>Chairs: Malaika Mendonca (Switzerland) and Serge Grazioli (Switzerland)</i>
	16:20- PARDS: any news on ventilator management 16:45 <i>Peter Rimensberger (Switzerland)</i>	16:20- Definitions and Pathophysiology: Why haven't we 16:45 got it right yet? <i>Wes Onland (The Netherlands)</i>	16:20- Inflammation on CPB: friend of foe? 16:45 <i>Walid Habre (Switzerland)</i>
	16:45- PARDS: Personalised medicine is next 17:10 <i>Martin Kneyber (The Netherlands)</i>	16:45- Prevention and Prediction 17:10 <i>Wes Onland (The Netherlands)</i>	16:45- Early detection of neurological 17:10 complications postoperatively <i>Francesca Iodice (ITA)</i>
	17:10- PARDS: Controversies on Steroids and iNO 17:35 <i>Guillaume Emeriaud (Canada)</i>	17:10- Effects on long term development 17:35 <i>Jeanie Chong (Australia)</i>	17:10- Stroke prevention and management 17:35 <i>Laszlo Vutskits, Switzerland</i>
	17:35- nARDS: Is it really different from PARDS? 18:00 <i>Daniele de Luca (France)</i>	17:35- Respiratory morbidity in formerly preterm infants 18:00 with and without BPD: How to diagnose and to follow up these infants" <i>Anna Lavizzari (Italy)</i>	17:35- Water everywhere: fluid balance, AKI and their 18:00 interplay <i>Valeria Raggi (Italy)</i>
from 19:00	Networking-Event		

08:15-08:55	Morning tutorial 3 Lung - Brain Interaction <i>Saptharishi Lalgundi Ganesan (Canada)</i>	Morning tutorial 4 (joint session EPNV/EPNCIC) Early detection and management of circulatory failure in the neonate <i>Samir Gupta (UK)</i>	Morning tutorial 5 Diagnosis and management of arrhythmias in ICU <i>Valeria Raggi (Italy)</i> <i>Francesca Iodice (Italy)</i>
09:00-10:00	Pragmatic vs explanatory trials in paediatric and neonatal critical care <i>Chairs: Martin Kneyber (The Netherlands) and Guillaume Emeriaud (Canada)</i>	Airway management in the NICU/PICU: Evolving concepts <i>Chairs: Juerg Hammer (Switzerland) and Walid Habre (Switzerland)</i>	Transfusion and anticoagulation in CICU <i>Chairs: Angelo Polito (Switzerland) and Pete Roeleveld (The Netherlands)</i>
09:00-09:25	Lessons learned from the FIRST-ABC study <i>Padmanabhan Ramnarayan (UK)</i>	09:00-09:25 SHINE - THRIVE: high flow nasal cannula oxygen for intubation in neonates and children Where are we? <i>Andreas Schibler, Australia</i>	09:00-09:25 The transfusion conundrum: confronting international guidelines to real life <i>Joan Sanchez Toledo (Spain)</i>
09:25-09:50	Artificial Intelligence, Machine Learning and Prediction in the NICU: Benefits and barriers <i>Jeanie Cheong (Australia)</i>	09:25-09:50 Any place for the laryngeal mask in the ICU? <i>Arash Afshari (Denmark)</i>	09:25-09:50 Thrombosis prophylaxis in the cardiac patient <i>Heleen van Ommen (The Netherlands)</i>
09:50-10:15	Big data to optimize ventilation strategies <i>David Tingay (Australia)</i>	09:50-10:15 What can an Anaesthetist teach us? <i>Arash Afshari (Denmark)</i>	09:50-10:15 Anticoagulation and transfusion in ECLS: A riddle wrapped in a mystery inside an enigma <i>Ravi Thiagarajan (USA)</i>
10:15-10:45	Coffee break		
10:45-12:05	Respiratory and hemodynamic challenges in non-cardiac patients (joint session EPNV, EPNCIC) <i>Chairs: Angelo Polito (Switzerland), David Tingay (Australia)</i>		
10:45-11:05	Acute Liver Failure <i>Serge Grazioli (Switzerland)</i>		
11:05-11:25	Asthma <i>Juerg Hammer (Switzerland)</i>		
11:25-11:45	Bronchiolitis <i>Joan Sanchez de Toledo & Maria Lucia Rossi (Spain)</i>		
11:45-12:05	Congenital diaphragmatic hernia <i>Neil Patel (Scotland)</i>		

12:10-12:40	Closing lecture (<i>joint session EPNV, EPNCIC</i>) <i>Chairs: Peter Rimensberger (Switzerland and Angelo Polito (Switzerland)</i> Permissive hypoxemia or hyperoxemia in ARDS: Are they of any good? <i>Marcelo Amato (Brazil)</i>
12:40-12:45	Closing

(version 08.05.2023)