

RESPIRATORY SESSION 1: modes, strategies and targets of mechanical ventilation in various settings.

Chairs

Paolo Biban & Bryan Kavanagh

Session objective:

Participants will be able to understand and apply the current strategies and modes of respiratory support, both invasively and non invasively, taking into account local availability of expertise and resources in the context of paediatric critical care.

Introduction 2 mins

6 x presentations of 17 mins each =102 mins

Questions & discussion = 16 mins

Total session time = 120 mins

Respiratory support represents one of the pillars of advanced intensive care for critically ill children, even though it may vary in its applications, not only in relation to different clinical conditions but also to different availability of devices and ventilators.

The six speakers magistrally presented very important topics, providing the attendees with updated information about invasive and non invasive support for pediatric acute respiratory distress syndrome, acute hypoxic respiratory failure as well as chronic lung diseases. Dr. Khemani and Dr. Erickson, respectively from USA and Australia, presented relevant insights on the pathophysiology of pediatric ARDS and acute hypoxic respiratory failure in children, describing the optimal strategies to apply in these difficult patients as well as underlying the need of additional data about the optimal way to classify these conditions.

Dr. Newth, from Los Angeles UCLA, provided expert insights on the impact of different ventilatory strategies when dealing with patients affected by chronic respiratory diseases.

Dr. Ben Jaballah, professor of pediatrics in Tunisia, presented an important contribution to the session, by reporting the local situation in her Country, emphasizing the needs to ameliorate their capacity and increase the number of human resources and healthcare providers.

Dr. Tibby, from UK, presented a comprehensive review of alternative modes to increase the oxygenation status in difficult patients in respiratory failure, describing specific modes of ventilation but also including the role of other components, such as those related to cardio-respiratory interactions.

Finally, Dr. Schibler reported some interesting data from his recent research work, related to the use and misuse of high-flow nasal cannula oxygen therapy, providing practical hints and stimulating reflections.

A lively discussion concluded the session, with a very active participation by the audience and a passionate engagement of each speaker.

Key references:

[Variability in usual care mechanical ventilation for pediatric ALI: the potential benefit of a lung protective computer protocol.](#) Robinder G. Khemani, Katherine Sward, Alan Morris, J. Michael Dean, Christopher JL Newth. Intensive Care Med. Author manuscript; available in PMC 2013 March 5

[A Review of Pediatric Critical Care in Resource-Limited Settings: A Look at Past, Present, and Future Directions](#). Erin L. Turner, Katie R. Nielsen, Shelina M. Jamal, Amelie von Saint André-von Arnim, Ndidiyama L. Musa. *Front Pediatr.* 2016; 4: 5. Published online 2016 February 18. doi: 10.3389/fped.2016.00005

[Early high flow nasal cannula therapy in bronchiolitis, a prospective randomised control trial \(protocol\): A Paediatric Acute Respiratory Intervention Study \(PARIS\)](#). Donna Franklin, Stuart Dalziel, Luregn J. Schlapbach, Franz E. Babl, Ed Oakley, Simon S. Craig, Jeremy S. Furyk, Jocelyn Neutze, Kam Sinn, Jennifer A. Whitty, Kristen Gibbons, John Fraser, Andreas Schibler, on behalf of PARIS and PREDICT. *BMC Pediatr.* 2015; 15: 183. Published online 2015