

## Neonatal ventilation: Scientific principles and evidence to help in practical management

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### Abstract

**I**ntroduction: Newborn infants often require support for their respiratory management. Ventilatory management of term and preterm infants is the most important and arguably most challenging part of NICU care. While it is a lifesaving modality, use of ventilation comes with its own risk of lung damage associated with ventilator induced lung injury. With the development of technology and increased resources, we are in a position to save very premature infants to babies with severe meconium aspiration syndrome. With increase in number of neonatal units a need for improvement in understanding of neonatal ventilation is more acute than ever.

**Aim:** To present and discuss a practical approach to neonatal ventilation based on current scientific and evidence base.

**Method:** By the end of the workshop, participants would be able to:

- Learn about historical evolution of ventilation in newborns.
- Learn about scientific principles underlying the different ventilation strategies.
- Learn about different modes of ventilation and how to choose the most suitable one.
- Learn about practical approaches to initiating, titrating and terminating mechanical ventilation in newborns.
- Learn about Pulmonary graphics and how their understanding can help in optimizing ventilation.
- Learn about high frequency ventilation in newborns and its use in difficult situations.
- Learn about ventilator induced lung injury and current evidence on strategies to reduce the impact.
- Learn about non-invasive ventilations – BIPAP/CPAP/HF
- Learn about less invasive surfactant administration (LISA) and its role in current practice

Clarify practical dilemmas and difficulties with help of question and answer session however, more significant in the case of rod-shaped ceria.

### Biography:

Anupam Gupta is a Consultant Neonatologist at Saint Mary's Hospital, Manchester UK. He have trained and worked in world famous and prestigious pediatric and neonatal centers in India and UK and developed an expertise in neonatal ventilation and research. He was awarded his PhD by Durham University and he has carried out award winning projects and presented in

prestigious international conferences like PAS, EAPS, ESPID, UENPS and helped to organize neonatal conferences here in the UK.



### Speaker Publications:

1. "Vascular Shunt for Small Vessel Trauma in a Polytrauma Patient"; Cureus 2020 Jul 12;12(7):e9150. Epub 2020 Jul 12.
2. "Isolated Injury to Prepuce After Motor Vehicle Collision"; Surgery, Delray Medical Center, Delray Beach, USA
3. "Laparoscopic Approach for Gallstone Ileus in Geriatric Patients"; Cureus 2020 Jun 15;12(6):e8642. Epub 2020 Jun 15.
4. "Bleeding After a Single Dose of Ketorolac in a Postoperative Patient"; Cureus 2020 Jun 30;12(6):e8919. Epub 2020 Jun 30.

[29<sup>th</sup> World Neonatal, Pediatric and Family Medicine Conference](#); Dubai, UAE - March 18-19, 2020

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