

# NON-INVASIVE VENTILATION IN CHILDREN

## Highlights

- Interactive hands on training by lead International and National faculty
- Hands on training on various types of NIV machines
- Case Based Discussions
- Video demonstration of synchrony and its management
- Successful use of NIV in acute and chronic settings
- Manual on NIV

## Format

- Lectures
- Interactive workshops and hands-on training
- Case studies
- Video Demonstration

## Objectives

1. Introduction to NIV interfaces
2. Introduction to various types of NIV machines
  - a. Ventilator NIV: Conventional ventilator with NIV option
  - b. BiPAP: Home NIV Machine
  - c. Hospital NIV: NIV specific ventilator
  - d. Bubble CPAP- installation of the device and titration of therapy
  - e. Heated humidified high flow nasal cannula therapy
3. Identify the indications for NIV
4. Setting up and initiating NIV and to titrate the therapy
5. Identify failure and its management
6. Care while on NIV

## Target audience

- Paediatric Pulmonologists
- Paediatric Intensivists
- Paediatricians
- Neonatologists
- Critical care nurses
- Respiratory therapists
- Physiotherapists

### About the faculty

All our workshops are led by trained educators who are also experienced practicing paediatric intensivists or pulmonologists. We use high-quality learning materials and innovative practical exercises to tailor content for each group. We believe that learning should be fun and we always encourage participation

#### Dr. Marti Pons

PICU Consultant. Pediatric Home Ventilation Programme.  
University Hospital Sant Joan de Déu.  
Barcelona

#### Dr. Sekhar Venkataraman

Professor, CCM and Pediatrics  
Medical Director, Respiratory Care Services  
University of Pittsburgh School of Medicine  
Pittsburg

#### Dr. Ashwath Ram R. N

Paediatric Intensivist and National Convener of NIV in children, India.  
Manipal Hospital, Bangalore.

#### Dr. Manu Sundaram

Pediatric Intensivist,  
SIDRA Medicine, Doha

#### Dr. Frank Lu

Medical Director,  
Division of Pediatric Pulmonology and Critical Care Medicine,  
National Taiwan University Children's Hospital,  
Taipei, Taiwan

#### Dr. Arun Bansal

Professor  
Pediatric Critical Care Unit,  
  
Advanced Pediatric Center  
PGIMER  
Chandigarh-160012

#### Dr. Wen Yi Thong

Pediatric Intensivist  
National University Children's Medical Institute  
National University Hospital  
Singapore

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#### Program Schedule

| Time | Duration | Topic                                    | Speaker                |
|------|----------|--|------------------------|
| 0800 | 30m      | Registrations & Inauguration             |                        |
| 0830 | 10m      | Introductions, welcome & shared learning | Dr Wen Yi Thong        |
| 0840 | 20m      | Relevant NIV Physiology                  | Dr Shekar Venkataraman |

|      |     |  |                              |
|------|-----|--|------------------------------|
| 0900 | 20m | How to begin NIV- <b>ICEMAN Methodology</b> : Know your Indications/ <b>C</b> ontraindications for NIV | Dr Manu Sundaram             |
| 0920 | 40m | <b>E</b> : Hands on session: Equipment's required for NIV  | Dr Marti Pons/Dr Ashwath Ram |
| 1000 | 15m | <b>M</b> : Modes: Let's make it clear  | Dr Ashwath Ram               |

**1015-1030: Coffee Break**

**Practical demonstration station: Hands on equipment handling (45 minutes each)**

|      |              |   |                     |
|------|--------------|---|---------------------|
| 1030 | <b>Red</b>   | HFNC and CPAP in critical care, Adjuncts in NIV | Dr Ashwath/Dr Frank |
| 1115 | <b>Blue</b>  | NIV: with Home and Hospital NIV machines        | Dr Manu/Dr Shekar   |
| 1200 | <b>Green</b> | NIV: with Conventional ventilator + NIV option  | Dr Marti/Dr Arun    |

**1245 - 1330: Lunch Break**

**Clinical scenario based discussion/simulation (30 minutes each)**

| Time | Duration | Topic  | Speaker          |
|------|----------|--|------------------|
| 1330 | 45m      | Video analysis of NIV, curves and asynchrony | Dr Marti/Dr Manu |

| Time | Group        | Topic                         | Speaker                      |
|------|--------------|-------------------------------|------------------------------|
| 1415 | <b>Red</b>   | Failure analysis: Hypercarbia | Dr Manu/Dr Frank             |
| 1445 | <b>Blue</b>  | Failure analysis: Hypoxia     | Dr Marti/Dr Thong            |
| 1515 | <b>Green</b> | CPAP & HFNC in Infancy        | Dr Shekar/Dr Ashwath/Dr Arun |

**1545-1600: Coffee Break**

| Time  | Duration | Topic   | Speaker         |
|-------|----------|---|-----------------|
| 1600  | 30m      | <b>A</b> : Analysis of failure/Asynchrony: Is it important? | Dr Marti Pons   |
| 1630  | 15m      | <b>N</b> : Next steps: Monitoring & Weaning                 | Dr Frank Wu     |
| 16:45 | 15m      | Future Research collaboration in the field of NIV           | Dr Venkataraman |

**17:00 Feedback and closing remarks.**

