



Text Book of Neonatal Ventilation

Chief Scientific Editor
Dr Amitava Sengupta



NEOCON 2017

37th Annual Convention of
National Neonatology Forum- India
Gurgaon (NCR), Haryana, India



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Chairman, Workshop
Committee



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Chairperson, Scientific
Committee



Dr Ramesh Goyal
Org. Secretary



Dr Ajay Arora
Org. Secretary



Message from Team National Neonatology Forum (NNF), India

Dear Esteemed Delegates and Friends,

Greetings from NNF India !

It is our pleasure to invite you to the Preconference Workshops on Neonatal Ventilation at the 37th Annual Convention of National Neonatology Forum- India (NEOCON 2017) being held at Gurgaon, NCR, Haryana, India on 7th December 2017.

In the Ventilation workshops, we have for you an eminent Panel of International & National Faculty, with rich academic and clinical experience in the subject. The workshops aim to give you an overview and as well focus on the advances and salient aspects of Neonatal Ventilation in today's context.

Neonatal respiratory care comprises of a fascinating blend of basic sciences and clinical application, in one of the fastest growing areas in medicine. This has been facilitated by development of microprocessor based technology, which has dramatically changed the way we manage neonatal respiratory failure these days. Gone are the days when all infants placed on ventilators were handled in the same way. Clinicians now have a wide range of tools to customize management in a disease and infant specific manner.

This exceptional manual on Neonatal Ventilation has been planned and prepared by our **Chairman** Workshop Committee, Dr Amitava Sengupta, a well known neonatologist and includes contributions of the highest level from our eminent International & National Faculty.

Wishing you all the best for a wonderful and fruitful learning experience.

Team NNF - India



Message from Team NEOCON 2017

Dear Esteemed Delegates and Friends,

Greetings from NEOCON 2017!

It is our pleasure to invite you to the Preconference Workshops on Neonatal Ventilation at the 37th Annual Convention of National Neonatology Forum- India (NEOCON 2017) being held at Gurgaon, NCR, Haryana, India on 7th December, 2017.

This year three separate Ventilation Workshops are being conducted in dedicated categories as given below

- a. Advanced Ventilation (HFO, Nitric Oxide & ECMO)
- b. Conventional Ventilation - The Art and Science & Lung Protective Strategies
- c. Non Invasive Ventilation CPAP and HHHFNC (Heated Humidified High Flow Nasal Cannula)

Optimal respiratory management is of prime importance in Neonatal Intensive Care and we have now entered the age of evidence based medicine with rapid advances in techniques of respiratory support in newborns.

This exceptional book on Neonatal Ventilation reflects changes in practice, equipment and science of respiratory support in neonatal medicine. It has been conceptualized and organized by our **Chairman** Workshop Committee, Dr Amitava Sengupta, a core neonatologist of repute.

Our list of contributors represents a profound group of International and National luminaries in this field, who have given their valuable time for making of this book.

Wishing you all the best for a very wonderful and fulfilling learning experience.

Team NEOCON 2017
Gurgaon (NCR) India

Preface



The field of neonatology has seen some remarkable progress over the last four decades in care of the newborn. Improvements in outcome have mainly reflected from the major advances in respiratory care of the term and preterm infant.

The vast progress in the knowledge and understanding of areas like development of the respiratory system, gas exchange during various phases of lung development, and alterations that can lead to respiratory failure and its complications have culminated in the enormous recent advances of today. This has considerably improved the quality of respiratory and ventilatory support being administered in neonatal intensive care units (NICUs) across the globe.

This book aims to give an overview and as well focus on the salient areas and aspects of neonatal ventilation in today's context. The contents of this book has been developed as a readily available source of information on various key aspects of neonatal respiratory care including principles of mechanical ventilation, diagnostic and therapeutic techniques, strategies for reducing ventilator induced lung injury and advances in care of a ventilated infant. Microprocessor based technology continues to refine equipments and offers us many new methods to manage neonatal respiratory failure.

The contributors are a distinguished group of international and national health care professionals who are leaders in this field and it is sincerely hoped that the material contained in this volume will be helpful to all those who come into contact with neonatal intensive care units, including postgraduate students, residents and fellows, nurses, paediatricians and neonatologists. The user of this manual will best serve patients by recognizing that, optimal ventilatory management of infant blends accurate clinical assessment, effective technique, and a touch of the art of respiratory management.

I am indebted to our eminent authors for taking the time and effort to provide their valuable insights and knowledge and enhancing the academic standard of the book.

Dr Amitava Sengupta, Fellowship Neonatology (Neth)

Director, Mother & Child Unit, Neonatology & Pediatrics
Paras Hospitals, Gurgaon (NCR), India

Chairperson & Executive Director
Development and Supportive Care (DSC) Foundation for Newborn & Children (India)

Chairman Workshop Committee:
37th Annual Convention of National Neonatology Forum (**NEOCON 2017**)

National Assessor, NICU Accreditation Program (NNF-UNICEF) 2014.

National Instructor, FBNC Program (NNF-UNICEF) 2014.

National Faculty, NNF-IAP Advanced NRP 2010.

Chief Advisor, 49th Annual National Conference of IAP (Pedicon 2012).

Contributors List

Ajay Lal, Fellowship Neonatology (NNF-India)
Consultant, Division of Neonatology, Mother & Child Unit, Paras Hospitals, Gurgaon (NCR), India

Amitava Sengupta, Fellowship Neonatology (NIH)
Director, Mother & Child Unit, Neonatology & Pediatrics
Paras Hospitals, Gurgaon (NCR), India
Chairperson & Executive Director
Development and Supportive Care (DSC) Foundation
for Newborn & Children (India)
Chairman Workshop Committee- 37th Annual Convention
of National Neonatology Forum (NEOCON 2017)

Anil Gupta, MD, Fellowship Neonatology
Consultant, Neonatology, Little Stars Children's Hospital, Hyderabad, India

Ashish Jain, MD, DM (Neonatology)
Assistant Professor
Department of Neonatology, LNJP & Allied Hospitals
Maulana Azad Medical College, New Delhi, India

Ashish Mehta, MD, Fellowship Neonatology (Australia)
Director, Arpan Newborn Care Center, Ahmedabad, India

Arnaot Kaur, MD, DNB Neonatology
Senior Consultant & Incharge NICU
Apollo Cradle, Motil Nagar, New Delhi, India

D V Promotnov, MD
St. Petersburg State Pediatric Medical University,
St. Petersburg, Russia

Gopal Agrawal, MD, DM (Neonatology)
Consultant, Neonatology, Cloudnine Hospitals
Gurgaon (NCR), India

I V Boronina, MD
Voronezh State Medical University
named after N.N. Burdenko, Russia

Jay Kishore, MD, DNB (Neonatology)
NICU In-charge
Senior Consultant Neonatology & Pediatrics
Max Super Speciality Hospital, Patparganj, New Delhi, India

Kedar Sawlshwarkar, MD
Fellowship Neonatology
Director, Daogiri Children's Hospital, Aurangabad, India
Formerly - Associate Professor, Govt. Medical College, Aurangabad
National Faculty NRP India
National Instructor FBNC program

Manish Balda, Fellowship Neonatology (AP)
Consultant Neonatology, Cloudnine Hospitals, Gurgaon (NCR), India

Megha Consul, MD, DNB, Pediatrics,
Fellowship in Neonatal Perinatal Medicine, University of Western
Ontario, Canada
Consultant-Neonatology, Max Hospital, Gurgaon (NCR), India

Monika Kaushal, MD, DM (Neonatology) FRCPCH, UK
Consultant - Neonatal - Perinatal Medicine
Chief of Neonatology, Emirates Speciality Hospital, Dubai Health
Care City
Head of Department - Neonatology, Iran Hospital Dubai

Navon Gupta, MD, DNB Neonatology
Fellowship from BC Children Hospital, Vancouver, Canada
Neonatologist and NICU Incharge, Senior Consultant - Neonatology
Rainbow Childrens Hospital, New Delhi, India

N Karthik Nagesh, MD, FRCPCH (UK), FNNF
Chairman, Manipal Advanced Children's Centre (MACC), Manipal
Hospital, Bangalore
Chairman, Neonatology & NICU, Manipal Hospitals
Professor of Pediatrics (Adjunct), Manipal University

Pankaj B Agrawal, MD, MMSC
Assistant Professor of Pediatrics, Harvard Medical School
Staff Scientist, Division of Genetics and Genomics
Medical Director, Gene Discovery Core, Manton Center for Orphan
Disease Research, Boston Children's Hospital
Associate Member, Broad Institute of Harvard & MIT

Piyush Shah, MD, Fellowship Neonatology (Australia)
Consultant Neonatology, Cloudnine Hospitals, Mumbai, India

Sanjay Wazir, MD, DM (Neonatology)
Director, Neonatology, Cloudnine Hospitals, Gurgaon (NCR), India
President: IAP Neonatology Chapter 2017
National Faculty-NNF-IAP Advanced NRP 2010

Satish Ghanta, MD
Neonatal Fellowship (Sydney, Aus)
Bayley Scales Accredited Developmental Pediatrics (Sydney, Aus)
Pediatric & Cardiac Intensive Care Fellowship (Sydney, Aus)
Director - Neonatal & Pediatric Intensive Care Services
Little Stars Children's Hospital, Hyderabad, India

Srinivas Murki, MD, DM (Neonatology)
Director Neonatology,
Femadex Hospital, Hyderabad, India

Suman Rao, MD, DM (Neonatology)
Professor & Head, Department of Neonatology
St. John's Medical College & Hospital
Bangalore, India

Surya Prakash, MD, Fellowship Neonatology
Consultant, Neonatology, Little Stars Children's Hospital, Hyderabad,
India

T J Antony, MD, FRCPCH, UK
Director & Head, Neonatology
Fortis Memorial Research Institute, Gurgaon (NCR), India

Vladimir Chijanas, MD
Consultant Neonatologist,
Neonatal Division, Vilnius Maternity Hospital
Vilnius, Lithuania
UNICEF Consultant team leader 2014-15

YU S Aleksandrovich, MD
St. Petersburg State Pediatric Medical University,
St. Petersburg, Russia

Contents

Chapter 1	An Introduction to Mechanical Ventilation in the Newborn.....	08
Chapter 2	Oxygenation and Oxygen Therapy.....	14
Chapter 3	Physiology of respiration and pulmonary mechanics.....	23
Chapter 4	Modes of Ventilation.....	29
Chapter 5	Pulmonary Graphics.....	36
Chapter 6	Blood gas analysis.....	40
Chapter 7	Supportive Care during Mechanical Ventilation.....	50
Chapter 8	Art and science of weaning from Mechanical Ventilation.....	57
Chapter 9	Disease - Specific Ventilation Strategies.....	64
Chapter 10	Surfactant therapy: Practical aspects.....	70
Chapter 11	Less Invasive Surfactant Administration (LISA) / Minimal Invasive Surfactant Therapy (MIST) In Preterm Neonates.....	74
Chapter 12	Practical Application of CPAP.....	80
Chapter 13	Role of HHHFNC In preterm Infants- the Evidence.....	83
Chapter 14	Humidified High Flow Nasal Cannula - Clinical application.....	87
Chapter 15	Nasal Intermittent Positive Pressure Ventilation (NIPPV) In the Newborn.....	91
Chapter 16	Noninvasive High Frequency Oscillatory Ventilation.....	97
Chapter 17	Supportive Care and Complications with babies on Non-Invasive Ventilation.....	104
Chapter 18	Lung Protective Strategies In Newborns.....	108
Chapter 19	Ventilator Induced Lung Injury (VILI) In Neonates.....	118
Chapter 20	High Frequency Ventilation.....	126
Chapter 21	High Frequency Ventilation: Physiology and Machines.....	131
Chapter 22	Inhaled Nitric Oxide.....	136
Chapter 23	Pulmonary Air Leaks In the Newborn.....	140
Chapter 24	Transport of Ventilated Infants.....	145

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