

Elective Module: Noninvasive Ventilation

Introduction

In this module, we focus on an important area for discussion that are critical for a physician to understand.

Noninvasive ventilation (NIV) refers to the delivery of mechanical ventilation to the lungs using techniques that do not require an endotracheal airway. NIV is an important mode of ventilation that can prevent a critical patient from further deterioration hence preventing invasive ventilation. During the first half of the 20th century, negative pressure types of noninvasive ventilation were the main means of providing mechanical ventilatory assistance outside of the anesthesia suite. The past few decades have seen resurgence in the use of positive pressure NIV.

As an MBBS student, it is important to understand the indications and uses of NIV as you will encounter many patients requiring NIV in your medical practice. In this context, learning the indications, contraindications of noninvasive ventilation.

Non-invasive positive pressure ventilation involves the delivery of oxygen into the lungs via positive pressure without the need for endotracheal intubation. It is used in acute and chronic respiratory failure but requires careful monitoring and titration to ensure its success and avoid complications.

In this module the students will learn the physiology behind non-invasive positive pressure ventilation, its indications, contraindications, preparation, and techniques.

Name of Block	Block 2
Name of Elective	NIV
Location of hospital Lab or research facility	Dept. of Respiratory Medicine
Name of internal preceptor (s)	Dr. Akashdeep Singh
Name of external preceptor (if applicable)	
Learning objectives of elective	In the end of elective posting, phase 3 part 2 MBBS Student should be able to: 1. What is NIV 2. Various modes of NIV 3. Indications of NIV usage 4. Contraindications of NIV 5. Equipment and type of masks 6. Possible complications 7. Various teams
Number of students that can be accommodated in this elective	4
Pre-requisites for elective	Knowledge of following topics: NIV,
Learning resources for students	1. Davidson's Principles of Medicine 2. Harrison's Principles of Internal Medicine 3. ERS practical handbook Noninvasive Ventilation
List of activities of student participation	a. History taking and examination of cases b. Diagnosing and management of patients with respiratory illness
Portfolio entries required	Daily log of activities participated and examining and discussing cases of NIV, Pulmonary Rehabilitation and Sleep Apnea
Log book entry required	Satisfactory, completion of posting signed and

	verified by the Preceptor with “M” grade
Assessment	• Attendance • Tutorials • PPT presentation at the end of the elective • Viva • Case presentation at the end of the elective
Other comments	