

## Testing Chest Wall Deformations during Negative Pressure Ventilation

### **Introduction:**

Negative pressure ventilation (NPV) is a commonly used method for providing respiratory support to patients with respiratory distress. The negative pressure applied to the chest wall during NPV can cause significant chest wall deformations, which can impact the efficiency and effectiveness of NPV, as well as the comfort and well-being of the patient. However, there is limited understanding of the chest wall deformations that occur during NPV, particularly under different conditions and patient populations.

### **Objectives:**

The primary objective of this project is to quantify and characterize chest wall deformations during NPV in different patient populations. The goal is to better understand the impact of chest wall deformations on NPV efficiency and effectiveness, as well as to provide information that can be used to optimize NPV for different patient populations.