1. **Overview**
   - Mechanical Ventilation is a treatment option to support patient’s respiration and ventilation addressing hypoxemic and/or hypercapnia respiratory failure. Mechanical Ventilation consists of either non-invasive or invasive ventilation using an endotracheal tube.

2. **Goal of the Procedure**
   - The goal for mechanical ventilation in critical care is to optimize respiration and ventilation while managing reversible causes for acute respiratory failure.

3. **Reference(s)**

4. **Required Reading / Review**

To access the Clinical Key webpages listed below use the Direct Link Generator and use the second box on the page (below the OR) to put in the following URLs (one at a time) then click “show URL” to generate a link to the video and information (if the page does not display click on the generated link again)
- [https://www.clinicalkey.com/#!/content/medical_procedure/19-s2.0-mp_IM-007](https://www.clinicalkey.com/#!/content/medical_procedure/19-s2.0-mp_IM-007)
- [https://www.clinicalkey.com/#!/content/medical_procedure/19-s2.0-mp_EM-013](https://www.clinicalkey.com/#!/content/medical_procedure/19-s2.0-mp_EM-013)

**Mandatory Video:**
- Ventilator 101

This video will explain all the basics in a very straightforward manner. Not only easy to understand but points out all the bullet points you need to know as a study guide.

**Mandatory PowerPoint**

Excellent PowerPoint summarizing all the key points in the video above.

5. **Required Competencies**
   - Discusses the criteria for NIPPV and invasive mechanical ventilation.
   - Discusses acute lung injury and mechanical ventilation:
   - Demonstrates CPAP and BiPap using a NIPPV mechanical ventilator.
   - Discusses PIP and Plateau Pressures in relation to expected and abnormal values.
   - Discusses the different ventilator settings and risks/benefits.
   - Demonstrates various ventilator settings titrating for changes in patient oxygenation and ventilation.
   - Discusses different ventilator alarms.