



Western Technical College

# 10515112 Respiratory Airway Management

## Course Outcome Summary

### Course Information

<b>Description</b>	Provides a comprehensive exploration of airway management concepts and skills. Emphasis is placed on promotion of evidence-based practice using established clinical practice guidelines and published research for its relevance to patient care.
<b>Career Cluster</b>	Health Science
<b>Instructional Level</b>	Associate Degree Courses
<b>Total Credits</b>	2
<b>Total Hours</b>	54

### Textbooks

*Egan's Fundamentals of Respiratory Care*. 12th Edition. Copyright 2021. Kacmarek, Robert M., James K. Stoller and Albert J. Heuer. Publisher: Elsevier Science. **ISBN-13:** 978-0-323-81121-7. Required.

### Success Abilities

1. Cultivate Passion: Expand a Growth-Mindset
2. Refine Professionalism: Improve Critical Thinking
3. Refine Professionalism: Participate Collaboratively
4. Refine Professionalism: Practice Effective Communication

### Program Outcomes

1. Apply respiratory therapy concepts to patient care situations.
2. Demonstrate technical proficiency required to fulfill the role of a Respiratory Therapist.
3. Practice respiratory therapy according to established professional and ethical standards.

### Course Competencies

1. **Demonstrate the use of manual resuscitators**

### **Assessment Strategies**

- 1.1. given various patient scenarios
- 1.2. by answering questions in an oral or written format
- 1.3. in a laboratory setting with mechanical ventilation equipment

### **Criteria**

*Your performance will be successful when:*

- 1.1. you assemble and troubleshoot manual resuscitator
- 1.2. you clean manual resuscitator
- 1.3. you state the factors that may affect the FiO<sub>2</sub> of various devices
- 1.4. you utilize manual resuscitator to deliver appropriate volumes for a variety of patients
- 1.5. you compare and contrast different types of resuscitators

### **Learning Objectives**

- 1.a. Select appropriate resuscitation device for specific patient population
- 1.b. Demonstrate correct assembly and use of various resuscitation devices
- 1.c. Recognize the need to troubleshoot various resuscitation devices

## **2. Assess the need for artificial airways**

### **Assessment Strategies**

- 2.1. given various patient scenarios
- 2.2. by answering questions in an oral or written format
- 2.3. in a laboratory setting with mechanical ventilation equipment

### **Criteria**

*Your performance will be successful when:*

- 2.1. you distinguish normal and abnormal anatomy and physiology of the airways
- 2.2. you assess patient's ability to protect airway
- 2.3. you assess patient for airway obstruction
- 2.4. you assess patient's ability to mobilize secretions
- 2.5. you recognize need to provide invasive ventilatory support
- 2.6. you recommend appropriate artificial airways for patient situation
- 2.7. you evaluate legal and ethical considerations associated with the use of artificial airways

### **Learning Objectives**

- 2.a. List the criteria for the need of an artificial airway
- 2.b. Determine when a specific artificial airway is necessary

## **3. Apply basic artificial airways**

### **Assessment Strategies**

- 3.1. given various patient scenarios
- 3.2. by answering questions in an oral or written format
- 3.3. in a laboratory setting with mechanical ventilation equipment

### **Criteria**

*Your performance will be successful when:*

- 3.1. you demonstrate use, maintenance, and infection control of selected basic artificial airways (i.e. OPA, NPA)
- 3.2. you select the appropriate basic artificial airways for the patient situation
- 3.3. you monitor patient's response to basic artificial airways

### **Learning Objectives**

- 3.a. Assess the need for and select an artificial airway.
- 3.b. Identify the complications and hazards associated with insertion of artificial airways.
- 3.c. Ascertain proper endotracheal tube placement.
- 3.d. Demonstrate how to perform orotracheal and nasotracheal intubation of an adult.
- 3.e. Identify the types of damage that artificial airways can cause.
- 3.f. Describe how to maintain and troubleshoot artificial airways properly.
- 3.g. Describe techniques for measuring and adjusting tracheal tube cuff pressures.

3.h. Describe how to assist a physician in setting up and insertion of an artificial airway.

#### **4. Apply advanced artificial airways**

##### **Assessment Strategies**

- 4.1. given various patient scenarios
- 4.2. by answering questions in an oral or written format
- 4.3. in a laboratory setting with mechanical ventilation equipment

##### **Criteria**

*Your performance will be successful when:*

- 4.1. you demonstrate use, maintenance, and infection control of selected advanced artificial airways (i.e. ETT, supraglottic airways, tracheostomy)
- 4.2. you select the appropriate advanced artificial airways for the patient situation
- 4.3. you monitor patient's response to advanced artificial airways and ensure proper placement
- 4.4. you summarize why a laryngectomy would be performed
- 4.5. you utilize devices that assist with artificial airway management

#### **5. Apply specialized airway adjuncts**

##### **Assessment Strategies**

- 5.1. given various patient scenarios
- 5.2. by answering questions in an oral or written format
- 5.3. in a laboratory setting with mechanical ventilation equipment

##### **Criteria**

*Your performance will be successful when:*

- 5.1. you demonstrate use, maintenance, and infection control of selected specialized airway adjuncts(i.e. speaking valves, specialty tracheal tubes, trach buttons)
- 5.2. you select the appropriate specialized airway adjuncts for the patient situation
- 5.3. you monitor patient's response to specialized airway adjuncts

##### **Learning Objectives**

- 5.a. Summarize the need for various specialized airways

#### **6. Demonstrate skill of secretion removal**

##### **Assessment Strategies**

- 6.1. given various patient scenarios
- 6.2. by answering questions in an oral or written format
- 6.3. in a laboratory setting with mechanical ventilation equipment

##### **Criteria**

*Your performance will be successful when:*

- 6.1. you perform endotracheal, nasotracheal, oropharyngeal and tracheostomy tube suctioning according to the procedure checklist
- 6.2. you select, use, maintain and troubleshoot equipment needed for secretion removal
- 6.3. you assess the need for secretion removal
- 6.4. you recommend techniques to enhance secretion removal

##### **Learning Objectives**

- 6.a. Show how to perform endotracheal and nasotracheal suctioning safely.
- 6.b. Describe how to obtain sputum samples properly.
- 6.c. Identify indications and how to assess the patient's need for suctioning.
- 6.d. List side effects and hazards of suctioning
- 6.e. Demonstrate the ability to troubleshoot and modifythe suctioningprocedure

#### **7. Analyze criteria for discontinuing artificial airways**

##### **Assessment Strategies**

- 7.1. given various patient scenarios
- 7.2. by answering questions in an oral or written format
- 7.3. in a laboratory setting with mechanical ventilation equipment

## Criteria

*Your performance will be successful when:*

- 7.1. you assess patient's readiness for artificial airway discontinuation
- 7.2. you select appropriate strategy(ies) for artificial airway discontinuation
- 7.3. you select, assemble, utilize, and troubleshoot equipment used for artificial airway discontinuation
- 7.4. you monitor patient status following artificial airway discontinuation
- 7.5. you evaluate legal and ethical considerations associated with discontinuation of artificial airway
- 7.6. you perform procedures to safely remove artificial airways

## Learning Objectives

- 7.a. Identify when and how to extubate or decannulate a patient.
- 7.b. Elaborate criteria that need to be met before extubation is considered.
- 7.c. Identify hazards and complications of extubation.
- 7.d. Explain actions to take when accidental extubations occur.