

Respiratory Therapy Program 2021 - 2022

Instructional Program Student Learning Outcomes & Assessment Plan

Students will demonstrate:

1. the psychomotor, cognitive, and affective skills necessary to assist the physician and other health care team in the diagnosis, treatment, and management of patients with cardiopulmonary diseases and disorders.
2. clinical competence and possess the technical skills necessary to provide respiratory care effectively, accurately, and efficiently in clinical and laboratory areas.
3. effective oral and written communication skills in the classroom/laboratory, clinical settings, and workplace.
4. knowledge and understanding of the respiratory care code of ethics and display a professional attitude based on the code of ethics and employer expectations.
5. knowledge and application of mechanical ventilation and therapeutics.
6. knowledge and application of cardiopulmonary diagnosis and monitoring.

Intended Outcomes	Means of Assessment	Criteria for Success	Summary & Analysis of Assessment Evidence	Use of Results
<p>1. Students will demonstrate the psychomotor, cognitive, and affective skills necessary to assist the physician and other health care team in the diagnosis, treatment, and management of patients with cardiopulmonary diseases and disorders.</p>	<p>Compile data from <u>RPT 220</u>: Demonstrate appropriate psychomotor skills and cognitive abilities necessary to successfully function as primary care giver for routine respiratory care procedures.</p> <p><u>RPT 212</u>: Demonstrate an adequate knowledge base concerning function of respiratory care equipment.</p>	<p>Earn a rating of 3 (acceptable) or higher on all indices</p> <p>The student will achieve a passing score of 75% or greater on all assignments and exams.</p>	<p><u>RPT 220</u>: Total number of students: 20 Total number rated 1: 0/20 Total number rated 2: 0/20 Total number rated 3: 7/20 Total number rated 4: 9/20 Total number rated 5: 4/20</p> <p><u>RPT 212</u>: Total number of students: Total students who scored 75% or higher: 24/24 Total students who scored 74% or lower: 0/24</p>	<p>In order to increase success in psychomotor, cognitive and affective skills, the following changes were made in the 220 and 212 assignments and curriculum moving forward:</p> <p>For RPT 220 We began moving to an online data tracking system and creating a preceptor database with DataArc.</p> <p>For RPT 212 we moved infection control earlier in the term to emphasize spread of infection, infection prevention strategies, disinfection and sterilization,</p>

				and proper equipment handling procedures before the start of student's first clinical.
<p>2. Students will demonstrate clinical competence and possess the technical skills necessary to provide respiratory care effectively, accurately, and efficiently in clinical and laboratory areas.</p>	<p>Compile data from <u>RPT 214</u>: Demonstrate an adequate understanding of the clinical pharmacology of respiratory care drugs, and the general principles of pharmacology</p> <p>RPT 241: Demonstrate an understanding of discharge planning</p>	<p>The student will achieve a passing score of 75% or greater on all assignments and exams.</p> <p>The student will achieve a passing score of 75% or greater on all assignments and exams.</p>	<p><u>RPT 214</u>: Total number of students: Total students who scored 75% or higher: 24/24 Total students who scored 74% or lower: 0/24</p> <p>RPT 241: Total number of students: Total students who scored 75% or higher: 34/34 Total students who scored 74% or lower: 0/34</p>	<p>In order to increase success in demonstrating clinical competence and technical skills the following changes were made in the 214 and 241 assignments and curriculum moving forward.</p> <p>For RPT 214 we increased emphasis on different types of nebulizers to be used for different medications in order to increase particle deposition in the lungs</p> <p>RPT 241 had home-care therapist lecture on the importance of doing an environmental assessment of the home, prior to discharging patient from an acute care facility and establishing a safe environment for continuum of care with life support equipment. Emphasized establishing a back-up system in case of power outage. (home generator, or backup generator and battery-operated equipment.)</p>
<p>3. Students will demonstrate effective</p>	<p>Data compiled from <u>RPT 211</u>: Demonstrate</p>	<p>The student will achieve a passing score of 75% or</p>	<p><u>RPT 211</u>: Total number of students:</p>	<p>In order to increase success in demonstrating clinical</p>

<p>oral and written communication skills in the classroom/laboratory, clinical settings, and workplace.</p>	<p>effective communication skills and knowledge of appropriate professional ethics and behavior.</p>	<p>greater on all assignments and exams.</p>	<p>Total students who scored 75% or higher: 24/24 Total students who scored 74% or lower: 0/24</p>	<p>competence and technical skills the following changes were made in the 211 assignments and curriculum moving forward.</p> <p>Invited medical director to lecture to students about responsibilities of respiratory therapist as a member of the health care team.</p>
<p>4. Students will demonstrate knowledge and understanding of the respiratory care code of ethics and display a professional attitude based on the code of ethics and employer expectations.</p>	<p>Data compiled from <u>RPT 211</u>: Demonstrate effective communication skills and knowledge of appropriate professional ethics and behavior.</p>	<p>The student will achieve a passing score of 75% or greater on all assignments and exams.</p>	<p><u>RPT 211</u>: Total number of students: Total students who scored 75% or higher: 24/24 Total students who scored 74% or lower: 0/24</p>	<p>In order to increase success in demonstrating clinical competence and technical skills the following changes were made in the 211 assignments and curriculum moving forward.</p> <p>Introduced patient assessment criteria earlier in the term. Encouraged students to review AARC clinical practice guidelines.</p>
<p>5. Students will demonstrate knowledge and application of mechanical ventilation and therapeutics.</p>	<p>Data compiled from <u>RPT 234</u>: Demonstrate knowledge including indications, modification, and discontinuance of mechanical ventilation.</p>	<p>Earn a 75% or better grade in each core class and lab</p>	<p><u>RPT 234</u>: Total number of students: Total students who scored 75% or higher:18/19 Total students who scored 74% or lower: 1/19</p>	<p>In order to increase success in demonstrating clinical competence and technical skills the following changes were made in the 234 assignments and curriculum moving forward.</p> <p>Increased emphasis on weaning criteria and discontinuation of ventilatory support. Compared various modes of weaning in relation to their</p>

				success in liberation from the ventilator.
<p>6. Students will demonstrate knowledge and application of cardiopulmonary diagnosis and monitoring.</p>	<p>Data compiled from <u>RPT 221</u>: Demonstrate the ability to gather appropriate information from various sources in support of diagnosis of specific cardiopulmonary disease</p> <p><u>RPT 231</u>: Use clinical and laboratory data to support diagnosis and treatment of the specific disease entities.</p>	<p>Earn a 75% or better grade in each core class and lab</p> <p>Earn a 75% or better grade in each core class and lab</p>	<p><u>RPT 221</u>: Total number of students: Total students who scored 75% or higher: 20/20 Total students who scored 74% or lower: 0/20</p> <p><u>RPT 231</u>: Total number of students: Total students who scored 75% or higher: 19/19 Total students who scored 74% or lower: 0/19</p>	<p>In order to increase success in demonstrating clinical competence and technical skills the following changes were made in the 221 and 231 assignments and curriculum moving forward.</p> <p>In RPT 221, we spent more time this semester working through CH 4, Pulmonary Function testing, due to the previous years' difficulties with understanding the subject matter. I broke the students up into groups and assigned case study problems concerning analyzing PFTs for additional practice. We also watched the following YouTube Videos by the Respiratory Coach, which the students said helped with their understanding of how to calculate for unknown PFT values.</p> <p><u>See:</u> PFT Case study problems</p> <p>Respiratory Coach PFT Videos</p> <p>○ Respiratory Therapy - Pulmonary Function Test Series (1/4)</p>

				In RPT 231 increased emphasis on recognition, diagnosis and management of early childhood disorders such as laryngotracheobronchitis (LTB – Croup), Epiglottitis, and Near Drowning.
Plan submission date: 10/30/2020			Submitted by: David Trott and Jennifer Chesser	

Pulmonary Function Testing Cases

The following cases are designed to help you learn how to interpret pulmonary function tests. Each case contains a short clinical scenario and the pulmonary function tests for that patient. For each case, you should attempt to

- describe the pattern of abnormality, if one is present,
- grade the severity of the abnormality and
- generate a differential diagnosis for the observed abnormality.

The cases have been provided by Kenneth Steinberg, MD, Division of Pulmonary and Critical Care Medicine.

- **Case 1>>>** A 65-year-old man undergoes pulmonary function testing as part of a routine health-screening test.
- **Case 2>>>** A 54-year-old man presents to his primary care provider with dyspnea and a cough.
- **Case 3>>>** A 60-year-old man presents to his primary care provider with complaints of increasing dyspnea on exertion.
- **Case 4>>>** A 25-year-old man presents to his physician with complaints of dyspnea and wheezing.
- **Case 5>>>** A 41-year-old woman presents to the General Internal Medicine Clinic at Harborview Medical Center complaining of dyspnea with mild exertion.
- **Case 6>>>** A 30-year-old woman presents for evaluation of dyspnea on exertion which has been present for 2 months.
- **Case 7>>>** A 73-year-old man presents with progressive dyspnea on exertion over the past one year.
- **Case 8>>>** A 64-year-old woman presents with complaints of dyspnea and orthopnea. She is a life-long non-smoker.
- **Case 9>>>** A 35-year-old previously healthy man presents with dyspnea, fevers, chills and night sweats for the past 2 months.
- **Case 10>>>** A 53-year-old woman presents with increasing dyspnea on exertion. She denies cough, fevers, hemoptysis, weight loss or sweats.

- **Case 11>>** A 36-year-old woman presents with a several month history of worsening dyspnea on exertion and exercise limitation.
- **Case 12>>** A 44-year-old woman with cirrhosis secondary to chronic alcohol abuse and Hepatitis C presents with complaints of increasing dyspnea.

Pulmonary Function Testing

Case 1

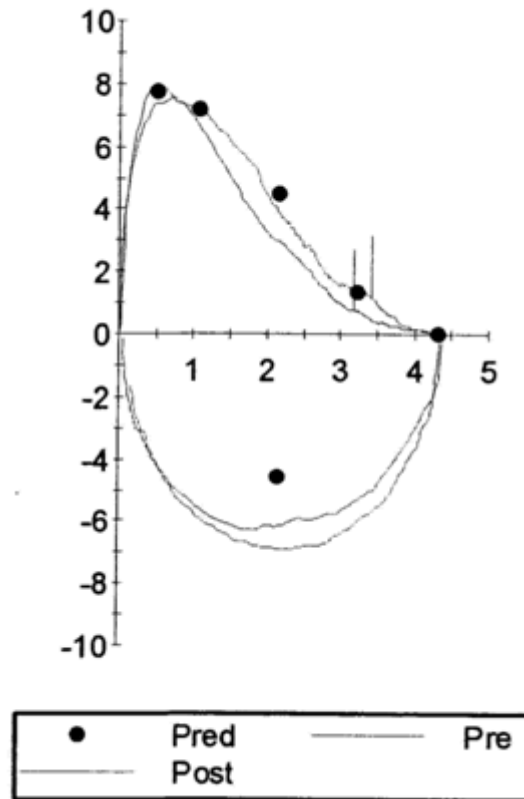
A 65-year-old man undergoes pulmonary function testing as part of a routine health-screening test. He has no pulmonary complaints. He is a lifelong non-smoker and had a prior history of asbestos exposure while serving in the Navy. His pulmonary function test results are as follows:

Test	Pre-Bronchodilator (BD)			Post- BD
	Actual	Predicted	% Predicted	% Change
FVC (L)	4.39	4.32	102	-1
FEV ₁ (L)	3.20	3.37	95	7
FEV ₁ /FVC (%)	73	78		8
FRC (L)	3.17	3.25	98	
ERV (L)	0.63	0.93	68	
RV (L)	2.54	2.32	109	
TLC (L)	6.86	6.09	113	
DLCO* uncorr	25.69	31.28	82	
DLCO corr	26.14	31.28	84	

*DLCO is measured in ml/min/mmHg

Check abbreviations>>

His flow volume loops are as follows:



Describe the pattern of abnormality, if one is present.

Grade the severity of the abnormality.

Generate a differential diagnosis for the observed abnormality.

Pulmonary Function Testing Videos

- Pulmonary Function Test Demonstration
- Pulmonary Function Test
- W5 MVV
- FVL VMax
- Respiratory Therapy - PFT Part 1 - Spirometry
- Respiratory Therapy - Pulmonary Function Test Series (1/4)

Pulmonary Function Testing Videos Cont...

- [W6 Plethysmography](#)
- [VMax N2 washout instructions by TO](#)
- [SpiroAir 7.2 Helium Dilution](#)
- [Respiratory Therapy - Pulmonary Function Test Series \(2/4\) - Lung Volumes](#)
- [W4 DLCO Vmax](#)
- [Respiratory Therapy - Pulmonary Function Testing - Part 3/4 - Diffusion Capacity](#)
- [Respiratory Therapy - Pulmonary Function Testing \(Part 4/4\) - Bringing it all together!](#)