

Marshall University Annual Report 2007-2008  
Submitted December 2008

**I. Program's Student Learning Outcomes:**

The mission of the St. Mary's/Marshall University Cooperative Bachelor of Science in Respiratory Care Program is congruent with the mission of Marshall University.

The School of Respiratory Care has specific student learning outcomes which are based on the NBRC job competencies matrix established by the American Association of Respiratory Care. There are 4 core competencies: Patient data evaluation, Collect and evaluate clinical information, Initiate & modify therapeutic procedures, Evaluate & monitor patient response. Our program outcomes/student learning outcomes have specific behaviors for each of these competencies. Each course has competencies that flow from the program outcomes/student learning outcomes. These program outcomes are monitored and submitted annually through our data base system with our accrediting body CoARC. An example is listed in Appendix A.

Each year, the School of Respiratory Care develops goals based on the pillars of St. Mary's Medical Center. These departmental goals must be congruent with St. Mary's Medical Center. Our goals were therefore revised and approved by the Faculty Organization in its June 2008 meeting. The revised goals also included objectives which are stated in measurable terms. (See Appendix B for the evaluation of the BSRT program goals for the 2007-2008 academic goals.) See Appendix C for the newly developed goals for 2008-2009.

A formal Systematic Evaluation Plan is in place for the St. Mary's/ Marshall University Cooperative BSRT Program. The components being evaluated include:

- Mission and Governance
- Faculty
- Student
- Curriculum and Instruction
- Resources
- Integrity
- Educational Effectiveness

The assessment plan is implemented by ad hoc committees out of the St. Mary's Faculty Organization. The program will be evaluated by site visitors from the Committee on Accreditation for Respiratory Care during the fall of 2009 or spring of 2010. A thorough self-study was submitted to CoARC in 2004 and a letter of intent was issued. The CoARC referee reviewed the self study and made several recommendations. The school did put in place the items recommended and the authorization to be conditionally accredited was approved.

(See Appendix D for letter from CoARC)

CoARC requires an annual report each November to ensure compliance with the essentials. The annual report is included in Appendix E.

The faculty reviews the evaluation data to be used for program development, maintenance and revision. St. Mary's/Marshall University Cooperative BSRT Program faculty reviewed the new standards and criteria and has updated the program's systematic plan. The faculty approved a calendar for reviewing each component at the May 2007 meeting of the Faculty Organization. A revised template was also approved at this same meeting. (A copy of the schedule and the Systematic Evaluation Plan is included in Appendix F.)

## II. Assessment Activities:

### A. **Assessment Measures (Tools):**

The student learning outcomes are evaluated by several methods. Theory is evaluated by the use of both teacher made and standardized examinations. The benchmark for passing is 70% for teacher made exams and 75% for standardized exams. In the clinical area, students are evaluated as either satisfactory or unsatisfactory based on specific criteria listed for each objective. There is an example of the specific criteria used in the clinical area in Appendix G.

Students receive formative assessments each week in the clinical area based on their performance that day. Faculty will use the competencies to describe areas in which the students met the criteria, areas in which they need to improve and areas in which they excelled. Summative assessments are given at the end of each semester based on the summary of their weekly formative assessments. In addition, students were asked to evaluate the degree to which they can meet the objectives. The scale used to evaluate the students' responses is as follows:

- A (1) = strongly Agree- can meet this objective all the time without faculty assistance.
- B (2) = Agree- can meet this objective about 75% of the time without faculty assistance
- C (3) = Neutral- can meet this objective more than 50% of the time without faculty assistance
- D (4) = Disagree- can meet this objective 25-50% of the time with faculty Assistance
- E (5) = strongly Disagree- need faculty assistance all of the time to meet this Objective.

Departmental goals are assessed annually at the completion of the school year in June. The Systematic Evaluation Plan is evaluated according to the calendar attached with the plan. Each year, two or three components are assessed.

### B. **Benchmarks:**

The minimum passing percentage for classroom assessment is 70%.

### C. Results/Analysis:

The final grades (theory and clinical) for each of the Respiratory Courses are stated in Table 1, labeled as “Grades for Each Respiratory Course”.

Table 1: Grades for Each Respiratory Course

RESPIRATORY COURSES	# A's	# B's	# C's	# D's	# F's	# I's	# W's	# S's In Clinical	# U's In Clinical	Total Students	% Passing
RSP 100 Respiratory Pharmacology	13	1	0	0	0	0	0	0	0	14	100%
RSP 101 Intro to Resp, Care	4	7	2	0	0	0	0	0	0	13	100%
RSP 102 Intro to Resp, Procedures	0	5	5	3	0	0	0	0	0	13	100%
RSP 201 Pulm Pathophysiology	3	6	0	0	0	0	1	0	0	9	100%
RSP 202 Mech. Vent & Mgt	0	5	4	0	0	0	1	0	0	9	100%
RSP 203 Resp Internship 1	4	4	1	0	0	0	1	0	0	9	100%
RSP 204 Pulm Rehab/Home Care	3	5	1	0	0	0	1	0	0	9	100%
RSP 205 Cardio Diagnostics	1	6	2	0	0	0	1	0	0	9	100%
RSP 206 Neonatal/Peds	2	6	1	0	0	0	1	0	0	9	100%
RSP 207 Intro to Critical Mgt	2	5	2	0	0	0	1	0	0	9	100%
RSP 208 Seminars in Resp.	0	9	0	0	0	0	1	0	0	9	100%
RSP 209 Resp. Intern 2	7	2	0	0	0	0	1	0	0	9	100%
RSP 211 Seminar	2	6	1	0	0	0	0	0	0	9	100%
RSP 301 Intro to Mgt	9	0	0	0	0	0	0	0	0	9	100%

RSP 303 Respiratory Education	9	0	0	0	0	0	0	0	0	9	100%
RSP 304 Adv. Neonatal/Peds	2	2	8	0	0	0	0	0	0	12	100%
RSP 307 Adv Tech/Adult Critical Care	1	5	6	0	0	0	0	0	0	12	100%
RSP 308 Resp. Care Mgt.	6	3	0	0	0	0	0	0	0	9	100%
RSP 401 Intro to Sleep	12	0	0	0	0	0	0	0	0	12	100%
RSP 402 Trends & Issues	6	3	0	0	0	0	0	0	0	9	100%
RSP 403 Resp. Care Research	2	7	0	0	0	0	0	0	0	9	100%
RSP 407 Intro to Resp Specialties	6	4	1	0	0	0	0	0	0	11	100%
RSP 420 Capstone	2	6	3	0	0	0	0	0	0	11	100%

The benchmarks were met for the student evaluation of the student learning outcomes as demonstrated on the page titled “Curriculum Objectives/Program Outcomes/Student Learning Outcomes” in Appendix A. All of the means were below the 2.5, as none were over 2.0. The course grades listed above indicate that the majority of the students are able to achieve in the classroom and in the clinical/lab area. The benchmarks for the TEAS examinations are listed in Appendix B. The TEAS group results also identify content /concepts tested and the percent of the group able to answer each one correctly.

**D. Analysis/Planned Action:**

The analysis is described above. The faculty is constantly assessing the data from courses and evaluation of other outcomes to assure the students are able to achieve the learning outcomes. Faculty are able to use the NBRC self assessment exam results to identify content/concepts in which students were weak and can plan strategies to enhance those areas.

The Center for Education, which includes the School of Respiratory Care, will be moving into new facilities during the summer of 2009. The new facilities will have increased number and size of classrooms, increases number of skills labs from one to two, and increased technology. Our computers available for students to use will increase from 8 to 80.

We plan to purchase several high fidelity, simulation mannequins which will definitely be an asset in both teaching and evaluation. We believe the new facilities and technology will enable us to enhance the teaching-learning process.

**III. Assistance Needed with Assessment:**

We appreciate timely reports of the course evaluations. We are always open to new ideas regarding assessment and evaluation for both our students and the program.

# **APPENDIX**

## **A**

CURRICULUM OBJECTIVES/PROGRAM OUTCOMES/  
STUDENT LEARNING OUTCOMES

*Upon completion of this program the graduate will:*

*I. PATIENT DATA EVALUATION/ASSESSMENT*

- Complete comprehensive evaluations/assessments.

**MEAN= 1.57**

*II. COLLECT & EVALUATE CLINICAL INFORMATION*

- Utilize assessment data and evidence based information to make decisions that ensure safe, effective, individualized care.

**MEAN= 1.43**

*III. INITIATE & MODIFY THERAPEUTIC PROCEDURES*

- Evaluate effectiveness of care and modify client care as needed

**MEAN= 1.57**

*IV. EVALUATE & MONITOR PATIENT RESPONSE*

- Implement caring behaviors that are nurturing, protective, compassionate and person-centered.

**MEAN= 1.14**

## NBRC Detailed Content Outline for RRT Written Examination

Task	Recall	Application
<b>I. Select, Review, Obtain and Interpret Data</b> <b>SETTING:</b> In any patient care setting, the advanced respiratory therapist reviews existing clinical data and collects or recommends obtaining additional pertinent clinical data. The therapist evaluates all data to determine the appropriateness of the prescribed respiratory care plan, and participates in the development of the respiratory care plan.	<b>3</b>	<b>3</b>
<b>A. Review patient record and recommend diagnostic procedures.</b>	<b>1*</b>	<b>1</b>
1. Review existing data in the patient record:		
a. patient history [e.g., present illness, admission notes, respiratory care orders, progress notes]	X**	
b. physical examination [e.g., vital signs, physical findings]	X	
c. lab data [e.g., CBC, chemistries/electrolytes, coagulation studies, Gram stain, culture and sensitivities, urinalysis]	X	X
d. pulmonary function and blood gas results	X	X
e. radiologic studies [e.g., radiographs of chest/upper airway, CT, MRI]	X	X
f. monitoring data		
(1) fluid balance (intake and output)		
(2) pulmonary mechanics [e.g., maximum inspiratory pressure (MIP), vital capacity]	X	X
(3) respiratory monitoring [e.g., rate, tidal volume, minute volume, I:E, inspiratory and expiratory pressures; flow, volume and pressure waveforms]	X	X
(4) lung compliance, airway resistance, work of breathing	X	X
(5) noninvasive monitoring [e.g., capnography, pulse oximetry, transcutaneous O <sub>2</sub> /CO <sub>2</sub> ]	X	X
g. results of cardiovascular monitoring		
(1) ECG, blood pressure, heart rate	X	X
(2) hemodynamic monitoring [e.g., central venous pressure, cardiac output, pulmonary capillary wedge pressure, pulmonary artery pressures, mixed venous O <sub>2</sub> , $\overline{V}d$ , shunt studies (*)]	X	X
h. maternal and perinatal/neonatal history and data [e.g., Apgar scores, gestational age, L/S ratio, pre/post-ductal oxygenation studies]	X	
i. other diagnostic studies [e.g., EEG, intracranial pressure monitoring, metabolic studies (M), $\pm$ nutritional assessment), ventilation/perfusion scan, pulmonary angiography, sleep studies, other ultrasonography]		
2. Recommend the following procedures to obtain additional data:		
a. CBC, electrolytes, other blood chemistries		

b. radiograph of chest and upper airway, CT scan, bronchoscopy, ventilation/perfusion lung scan, barium swallow	X	X
c. Gram stain, culture and sensitivities	X	X
d. spirometry before and/or after bronchodilator, maximum voluntary ventilation, diffusing capacity, functional residual capacity, flow-volume loops, body plethysmography, nitrogen washout distribution test, total lung capacity, CO <sub>2</sub> response curve, closing volume, airway resistance, bronchoprovocation, maximum inspiratory pressure (MIP), maximum expiratory pressure (MEP)	X	X
e. blood gas analysis, insertion of arterial, umbilical and/or central venous, pulmonary artery monitoring lines	X	X
f. lung compliance, airway resistance, lung mechanics, work of breathing	X	X
g. ECG, echocardiography, pulse oximetry, transcutaneous O <sub>2</sub> /CO <sub>2</sub> monitoring	X	X
h. V <sub>D</sub> /V <sub>T</sub> , ♦, cardiac output, cardiopulmonary stress testing		
<b>B. Collect and evaluate clinical information.</b>	<b>1</b>	<b>1</b>
1. Assess patient's overall cardiopulmonary status by <i>inspection</i> to determine:		
a. general appearance, muscle wasting, venous distention, peripheral edema, diaphoresis, digital clubbing, cyanosis, capillary refill	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
b. chest configuration, evidence of diaphragmatic movement, breathing pattern, accessory muscle activity, asymmetrical chest movement, intercostal and/or sternal retractions, nasal flaring, character of cough, amount and character of sputum	X	X
c. transillumination of chest, Apgar score, gestational age	X	X
2. Assess patient's overall cardiopulmonary status by <i>palpation</i> to determine:		
a. heart rate, rhythm, force	X	X
b. asymmetrical chest movements, tactile fremitus, crepitus, tenderness, secretions in the airway, tracheal deviation, endotracheal tube placement	X	X
3. Assess patient's overall cardiopulmonary status by <i>percussion</i> to determine diaphragmatic excursion and areas of altered resonance	X	X
4. Assess patient's overall cardiopulmonary status by <i>auscultation</i> to determine presence of:		
a. breath sounds [e.g., normal, bilateral, increased, decreased, absent, unequal, rhonchi or crackles (râles), wheezing, stridor, friction rub]	X	X
b. heart sounds, dysrhythmias, murmurs, bruits	X	X
c. blood pressure	X	X
5. Assess patient's learning needs [e.g., age and language appropriateness, education level, prior disease and medication knowledge]	X	X
6. Interview patient to determine:		
a. level of consciousness, orientation to time, place and person, emotional state, ability to cooperate	X	X

b. presence of dyspnea and/or orthopnea, work of breathing, sputum production, exercise tolerance and activities of daily living	X	X
c. physical environment, social support systems, nutritional status	X	X
7. Review chest radiograph to determine:		
a. presence of, or changes in, pneumothorax or subcutaneous emphysema, other extra-pulmonary air, consolidation and/or atelectasis, pulmonary infiltrates	X	X
b. presence and position of foreign bodies	X	X
c. position of endotracheal or tracheostomy tube, evidence of endotracheal or tracheostomy tube cuff hyperinflation	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
d. position of chest tube(s), nasogastric and/or feeding tube, pulmonary artery catheter, pacemaker, CVP, and other catheters	X	
e. position of, or changes in, hemidiaphragms, hyperinflation, pleural fluid, pulmonary edema, mediastinal shift, patency and size of major airways	X	X
8. Review lateral neck radiograph to determine:		
a. presence of epiglottitis and subglottic edema	X	X
b. presence or position of foreign bodies	X	X
c. airway narrowing	X	X
9. Perform bedside procedures to determine:		
a. ECG, pulse oximetry, transcutaneous O <sub>2</sub> /CO <sub>2</sub> monitoring, capnography, mass spectrometry	X	X
b. tidal volume, minute volume, I:E	X	X
c. blood gas analysis, P(A-a)O <sub>2</sub> , alveolar ventilation, V <sub>D</sub> /V <sub>T</sub> , ♦, mixed venous sampling	X	X
d. peak flow, maximum inspiratory pressure, maximum expiratory pressure, forced vital capacity, timed forced expiratory volumes [e.g., FEV <sub>1</sub> ], lung compliance, lung mechanics	X	X
e. cardiac output, pulmonary capillary wedge pressure, central venous pressure, pulmonary artery pressures, fluid balance (intake and output)		
f. pulmonary vascular resistance and systemic vascular resistance		
g. apnea monitoring, sleep studies, respiratory impedance plethysmography	X	X
h. tracheal tube cuff pressure, volume	X	X
10. Interpret results of bedside procedures to determine:		
a. ECG, pulse oximetry, transcutaneous O <sub>2</sub> /CO <sub>2</sub> monitoring, capnography, mass spectrometry	X	X
b. tidal volume, minute volume, I:E	X	X
c. blood gas analysis, P(A-a)O <sub>2</sub> , alveolar ventilation, V <sub>D</sub> /V <sub>T</sub> , ♦, mixed venous sampling	X	X

d. peak flow, maximum inspiratory pressure, maximum expiratory pressure, forced vital capacity, timed forced expiratory volumes [e.g., FEV <sub>1</sub> ], lung compliance, lung mechanics	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
e. cardiac output, pulmonary capillary wedge pressure, central venous pressure, pulmonary artery pressures, fluid balance (intake and output)		
f. pulmonary vascular resistance and systemic vascular resistance		
g. apnea monitoring, sleep studies, respiratory impedance plethysmography	X	X
h. tracheal tube cuff pressure, volume	X	X
<b>C. Perform procedures and interpret results, determine appropriateness of and participate in developing and recommending modifications to respiratory care plan.</b>	<b>1</b>	<b>1</b>
1. Perform and/or measure the following:		
a. spirometry before and/or after bronchodilator, maximum voluntary ventilation, diffusing capacity, functional residual capacity, flow-volume loops, body plethysmography, nitrogen washout distribution test, total lung capacity, CO <sub>2</sub> response curve, closing volume, airway resistance	X	X
b. ECG, pulse oximetry, transcutaneous O <sub>2</sub> /CO <sub>2</sub> monitoring	X	X
c. V <sub>D</sub> /V <sub>T</sub> , *, mixed venous sampling, ∞ cardiac output, pulmonary capillary wedge pressure, central venous pressure, pulmonary artery pressures, cardiopulmonary stress testing		
d. fluid balance (intake and output)		
e. arterial sampling and blood gas analysis, co-oximetry, P(A-a)O <sub>2</sub>	X	X
f. sleep studies, metabolic studies [e.g., indirect calorimetry]		
g. ventilator flow, volume and pressure waveforms, lung compliance	X	X
2. Interpret results of the following:		
a. spirometry before and/or after bronchodilator, maximum voluntary ventilation, diffusing capacity, functional residual capacity, flow-volume loops, body plethysmography, nitrogen washout distribution test, total lung capacity, CO <sub>2</sub> response curve, closing volume, airway resistance, bronchoprovocation	X	X
b. ECG, pulse oximetry, transcutaneous O <sub>2</sub> /CO <sub>2</sub> monitoring	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
c. V <sub>D</sub> /V <sub>T</sub> , *, mixed venous sampling, ∞, cardiac output, pulmonary capillary wedge pressure, central venous pressure, pulmonary artery pressures, cardiopulmonary stress testing		
d. fluid balance (intake and output)		
e. arterial sampling and blood gas analysis, co-oximetry, P(A-a)O <sub>2</sub>	X	X

f. peripheral venipuncture or insertion of intravenous line		
g. sleep studies, metabolic studies [e.g., indirect calorimetry]		
h. insertion of arterial and umbilical monitoring lines		
i. ventilator flow, volume, and pressure waveforms, lung compliance	X	X
3. Determine the appropriateness of the prescribed respiratory care plan and recommend modifications where indicated:		
a. perform respiratory care quality assurance	X	X
b. develop quality improvement program	X	X
c. review interdisciplinary patient and family care plan	X	X
4. Participate in development of respiratory care plan [e.g., case management, develop and apply protocols, disease management education]	X	X
<b>II. Select, Assemble and Check Equipment for Proper Function, Operation and Cleanliness</b> <b>SETTING:</b> In any patient care setting, the advanced respiratory therapist selects, assembles, and assures cleanliness of all equipment used in providing respiratory care. The therapist checks all equipment and corrects malfunctions.	<b>3</b>	<b>4</b>
<b>A. Select and obtain equipment, and assure equipment cleanliness.</b>	<b>1</b>	<b>2</b>
1. Select and obtain equipment appropriate to the respiratory care plan:		
a. oxygen administration devices		
(1) nasal cannula, mask, reservoir mask (partial rebreathing, nonrebreathing), face tents, transtracheal oxygen catheter, oxygen conserving cannulas	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
(2) air-entrainment devices, tracheostomy collar and T-piece, oxygen hoods and tents	X	X
(3) CPAP devices	X	X
b. humidifiers [e.g., bubble, passover, cascade, wick, heat moisture exchanger]	X	X
c. aerosol generators [e.g., pneumatic nebulizer, ultrasonic nebulizer]	X	X
d. resuscitation devices [e.g., manual resuscitator (bag-valve), pneumatic (demand-valve), mouth-to-valve mask resuscitator]	X	X
e. ventilators		
(1) pneumatic, electric, microprocessor, fluidic	X	X
(2) high frequency		

(3) noninvasive positive pressure	X	X
f. artificial airways		
(1) oro- and nasopharyngeal airways	X	X
(2) oral, nasal and double-lumen endotracheal tubes	X	X
(3) tracheostomy tubes and buttons	X	X
(4) intubation equipment [e.g., laryngoscope and blades, exhaled CO <sub>2</sub> detection devices]	X	X
(5) other airways [e.g., laryngeal mask airway (LMA), Esophageal Tracheal Combitube®(ETC)]		
g. suctioning devices [e.g., suction catheters, specimen collectors, oropharyngeal suction devices]	X	X
h. gas delivery, metering and clinical analyzing devices		
(1) regulators, reducing valves, connectors and flowmeters, air/oxygen blenders, pulse-dose systems	X	X
(2) oxygen concentrators, air compressors, liquid oxygen systems	X	X
(3) gas cylinders, bulk systems and manifolds	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
(4) capnograph, blood gas analyzer and sampling devices, co-oximeter, transcutaneous O <sub>2</sub> /CO <sub>2</sub> monitor, pulse oximeter	X	X
(5) CO, He, O <sub>2</sub> and specialty gas analyzers	X	X
i. patient breathing circuits		
(1) IPPB, continuous mechanical ventilation	X	X
(2) CPAP, PEEP valve assembly	X	X
(3) H-valve assembly		
j. environmental devices		
(1) incubators, radiant warmers		
(2) aerosol (mist) tents	X	X
(3) scavenging systems		X
k. positive expiratory pressure device (PEP)		
l. Flutter® mucous clearance device		
m. other therapeutic gases [e.g., O <sub>2</sub> /CO <sub>2</sub> , He/O <sub>2</sub> ]		

n. manometers and gauges		
(1) manometers – water, mercury and aneroid, inspiratory/expiratory pressure meters, cuff pressure manometers	X	X
(2) pressure transducers	X	X
o. respirometers [e.g., flow-sensing devices (pneumotachometer), volume displacement]	X	X
p. electrocardiography devices [e.g., ECG oscilloscope monitors, ECG machines (12-lead), Holter monitors]	X	X
q. hemodynamic monitoring devices		
(1) central venous catheters, pulmonary artery catheters, cardiac output, continuous $\approx$ monitors		
<b>Task</b>	<b>Recall</b>	<b>Application</b>
(2) arterial catheters		
r. vacuum systems [e.g., pumps, regulators, collection bottles, pleural drainage devices]	X	X
s. metered dose inhalers (MDI), MDI spacers	X	X
t. Small Particle Aerosol Generators (SPAG)	X	X
u. bronchoscopes	X	X
2. Assure selected equipment cleanliness [e.g., select or determine appropriate agent and technique for disinfection and/or sterilization, perform procedures for disinfection and/or sterilization, monitor effectiveness of sterilization procedures]	X	X
<b>B. Assemble and check equipment function, identify and correct equipment malfunctions, and perform quality control.</b>	<b>2</b>	<b>2</b>
1. Assemble, check for proper function, and identify malfunctions of equipment:		
a. oxygen administration devices		
(1) nasal cannula, mask, reservoir mask (partial rebreathing, nonrebreathing), face tents, transtracheal oxygen catheter, oxygen conserving cannulas	X	X
(2) air-entrainment devices, tracheostomy collar and T-piece, oxygen hoods and tents	X	X
(3) CPAP devices	X	X
b. humidifiers [e.g., bubble, passover, cascade, wick, heat moisture exchanger]	X	X
c. aerosol generators [e.g., pneumatic nebulizer, ultrasonic nebulizer]	X	X
d. resuscitation devices [e.g., manual resuscitator (bag-valve), pneumatic (demand-valve), mouth-to-valve mask resuscitator]	X	X
e. ventilators		
(1) pneumatic, electric, microprocessor, fluidic	X	X

(2) high frequency		
(3) noninvasive positive pressure	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
f. artificial airways		
(1) oro- and nasopharyngeal airways	X	X
(2) oral, nasal and double-lumen endotracheal tubes	X	X
(3) tracheostomy tubes and buttons	X	X
(4) intubation equipment [e.g., laryngoscope and blades, exhaled CO <sub>2</sub> detection devices]	X	X
g. suctioning devices [e.g., suction catheters, specimen collectors, oropharyngeal suction devices]	X	X
h. gas delivery, metering and clinical analyzing devices		
(1) regulators, reducing valves, connectors and flow meters, air/oxygen blenders, pulse-dose systems	X	X
(2) oxygen concentrators, air compressors, liquid oxygen systems	X	X
(3) gas cylinders, bulk systems and manifolds	X	X
(4) capnograph, blood gas analyzer and sampling devices, co-oximeter, transcutaneous O <sub>2</sub> /CO <sub>2</sub> monitor, pulse oximeter	X	X
(5) CO, He, O <sub>2</sub> and specialty gas analyzers	X	X
i. patient breathing circuits		
(1) IPPB, continuous mechanical ventilation	X	X
(2) CPAP, PEEP valve assembly	X	X
(3) H-valve assembly		X
j. environmental devices		
(1) incubators, radiant warmers		
(2) aerosol (mist) tents	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
k. positive expiratory pressure devices (PEP)		
l. Flutter <sup>®</sup> mucous clearance device		
m. other therapeutic gases [e.g., O <sub>2</sub> /CO <sub>2</sub> , He/O <sub>2</sub> ]		

n. manometers and gauges		
(1) manometers – water, mercury and aneroid, inspiratory/expiratory pressure meters, cuff pressure manometers	X	X
(2) pressure transducers		
o. respirometers [e.g., flow-sensing devices (pneumotachometer), volume displacement]	X	X
p. electrocardiography devices [e.g., ECG oscilloscope monitors, ECG machines (12-lead), Holter monitors]	X	X
q. hemodynamic monitoring devices		
(1) central venous catheters, pulmonary artery catheters, cardiac output, continuous $\approx$ monitors		
(2) arterial catheters		
r. vacuum systems [e.g., pumps, regulators, collection bottles, pleural drainage devices]	X	X
s. bronchoscopes		
2. Take action to correct malfunctions of equipment:		
a. oxygen administration devices		
(1) nasal cannula, mask, reservoir mask (partial rebreathing, nonrebreathing), face tents, transtracheal oxygen catheter, oxygen conserving cannulas	X	X
(2) air-entrainment devices, tracheostomy collar and T-piece, oxygen hoods and tents	X	X
(3) CPAP devices	X	X
b. humidifiers [e.g., bubble, passover, cascade, wick, heat moisture exchanger]	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
c. aerosol generators [e.g., pneumatic nebulizer, ultrasonic nebulizer]	X	X
d. resuscitation devices [e.g., manual resuscitator (bag-valve), pneumatic (demand-valve), mouth-to-valve mask resuscitator]	X	X
e. ventilators		
(1) pneumatic, electric, microprocessor, fluidic	X	X
(2) high frequency		
(3) noninvasive positive pressure	X	X
f. artificial airways		
(1) oro- and nasopharyngeal airways	X	X

(2) oral, nasal and double lumen endotracheal tubes	X	X
(3) tracheostomy tubes and buttons	X	X
(4) intubation equipment [e.g., laryngoscope and blades, exhaled CO <sub>2</sub> detection devices	X	X
g. suctioning devices [e.g., suction catheters, specimen collectors, oropharyngeal suction devices	X	X
h. gas delivery, metering and clinical analyzing devices		
(1) regulators, reducing valves, connectors and flow meters, air/oxygen blenders, pulse-dose systems	X	X
(2) oxygen concentrators, air compressors, liquid oxygen systems	X	X
(3) gas cylinders, bulk systems and manifolds	X	X
(4) capnograph, blood gas analyzer and sampling devices, co-oximeter, transcutaneous O <sub>2</sub> /CO <sub>2</sub> monitor, pulse oximeter	X	X
(5) CO, He, O <sub>2</sub> and specialty gas analyzers		
i. patient breathing circuits		
(1) IPPB, continuous mechanical ventilation	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
(2) CPAP, PEEP valve assembly	X	X
(3) H-valve assembly		
j. environmental devices		
(1) incubators, radiant warmers		
(2) aerosol (mist) tents	X	X
k. positive expiratory pressure devices (PEP)		
l. Flutter <sup>®</sup> mucous clearance device		
m. other therapeutic gases [e.g., O <sub>2</sub> /CO <sub>2</sub> , He/O <sub>2</sub> ]		
n. manometers and gauges		
(1) manometers – water, mercury and aneroid, inspiratory/expiratory pressure meters, cuff pressure manometers	X	X
(2) pressure transducers		
o. respirometers [e.g., flow-sensing devices (pneumotachometer), volume displacement]	X	X

p. electrocardiography devices [e.g., ECG oscilloscope monitors, ECG machines (12-lead), Holter monitors]		
q. hemodynamic monitoring devices		
(1) central venous catheters, pulmonary artery catheters, cardiac output, continuous $\approx$ monitors		
(2) arterial catheters		
r. vacuum systems [e.g., pumps, regulators, collection bottles, pleural drainage devices]	X	X
s. Small Particle Aerosol Generators (SPAG)		
t. bronchoscopes		
<b>Task</b>	<b>Recall</b>	<b>Application</b>
3. Perform quality control procedures for:		
a. blood gas analyzers and sampling devices, co-oximeters	X	X
b. pulmonary function equipment, ventilator volume/flow/pressure calibration	X	X
c. gas metering devices	X	X
d. noninvasive monitors [e.g., transcutaneous]		
<b>III. Initiate, Conduct, and Modify Prescribed Therapeutic Procedures</b> <b>SETTING:</b> In any patient care setting, the advanced respiratory therapist evaluates, monitors and records patient's response to care. The therapist maintains patient records and communicates with other healthcare team members. The therapist initiates, conducts, and modifies prescribed therapeutic procedures to achieve the desired objectives. The therapist provides care in emergency settings, assists the physician and conducts pulmonary rehabilitation and home care.	<b>6</b>	<b>8</b>
<b>A. Evaluate, monitor, and record patient's response to respiratory care</b>	<b>2</b>	<b>3</b>
1. Evaluate and monitor patient's response to respiratory care:		
a. recommend and review chest radiograph	X	X
b. perform arterial puncture, capillary blood gas sampling, and venipuncture; obtain blood from arterial or pulmonary artery lines; perform transcutaneous O <sub>2</sub> /CO <sub>2</sub> , pulse oximetry, co-oximetry, and capnography monitoring	X	X
c. observe changes in sputum production and consistency, note patient's subjective response to therapy and mechanical ventilation	X	X
d. measure and record vital signs, monitor cardiac rhythm, evaluate fluid balance (intake and output)	X	X
e. perform spirometry/determine vital capacity, measure lung compliance and airway resistance, interpret ventilator flow, volume, and pressure waveforms, measure peak flow	X	X
f. determine and record central venous pressure, pulmonary artery pressures, pulmonary capillary wedge pressure and/or cardiac output		

g. recommend measurement of electrolytes, hemoglobin, CBC and/or chemistries		
h. monitor mean airway pressure, adjust and check alarm systems, measure tidal volume, respiratory rate, airway pressures, I:E, and maximum inspiratory pressure (MIP)	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
i. measure F <sub>I</sub> O <sub>2</sub> and/or liter flow	X	X
J. monitor endotracheal or tracheostomy tube cuff pressure	X	X
k. auscultate chest and interpret changes in breath sounds	X	X
l. perform hemodynamic calculations [e.g., shunt studies (♦), cardiac output, cardiac index, pulmonary vascular resistance and systemic vascular resistance, stroke volume]		
m. interpret hemodynamic calculations:		
(1) calculate and interpret P(A-a)O <sub>2</sub> , $\dot{V}_D/\dot{V}_T$ , ♦		
(2) interpret exhaled CO <sub>2</sub> monitoring, V <sub>D</sub> /V <sub>T</sub>		
(3) cardiac output, cardiac index, pulmonary vascular resistance and systemic vascular resistance, stroke volume		
2. Maintain records and communication:		
a. record therapy and results using conventional terminology as required in the healthcare setting and/or by regulatory agencies by noting and interpreting:		
(1) patient's response to therapy including the effects of therapy, adverse reactions, patient's subjective and attitudinal response to therapy	X	X
(2) auscultatory findings, cough and sputum production and characteristics	X	X
(3) vital signs [e.g., heart rate, respiratory rate, blood pressure, body temperature]	X	X
(4) pulse oximetry, heart rhythm, capnography	X	X
b. verify computations and note erroneous data	X	X
c. apply computer technology to patient management [e.g., ventilator waveform analysis, electronic charting, patient care algorithms]	X	X
d. communicate results of therapy and alter therapy per protocol(s)	X	X
<b>Task</b>	<b>Recall</b>	<b>Application</b>
<b>B. Conduct therapeutic procedures to maintain a patent airway, achieve adequate ventilation and oxygenation, and remove bronchopulmonary secretions.</b>	<b>1</b>	<b>1</b>
1. Maintain a patent airway including the care of artificial airways:		
a. insert oro- and nasopharyngeal airway, select endotracheal or tracheostomy tube, perform endotracheal intubation, change tracheostomy tube, maintain proper cuff inflation, position of endotracheal or tracheostomy tube	X	X

b. maintain adequate humidification	X	X
c. extubate the patient	X	X
d. properly position patient	X	X
e. identify endotracheal tube placement by available means	X	X
2. Achieve adequate spontaneous and artificial ventilation:		
a. initiate and adjust IPPB therapy	X	X
b. initiate and select appropriate settings for high frequency ventilation		
c. initiate and adjust ventilator modes [e.g., A/C, SIMV, pressure support ventilation (PSV), pressure control ventilation (PCV)]	X	X
d. initiate and adjust independent (differential) lung ventilation		
3. Remove bronchopulmonary secretions by instructing and encouraging bronchopulmonary hygiene techniques [e.g., coughing techniques, autogenic drainage, positive expiratory pressure device (PEP), intrapulmonary percussive ventilation (IPV), Flutter <sup>®</sup> , High Frequency Chest Wall Oscillation (HFCWO)]	X	X
4. Achieve adequate arterial and tissue oxygenation:		
a. initiate and adjust CPAP, PEEP, and noninvasive positive pressure	X	X
b. initiate and adjust combinations of ventilatory techniques [e.g., SIMV, PEEP, PS, PCV]	X	X



a. change patient breathing circuitry, change type of ventilator	X	X
b. measure volume loss through chest tube(s)	X	
c. change mechanical dead space	X	X
<b>D. Initiate, conduct, or modify respiratory care techniques in an emergency setting.</b>	<b>1</b>	<b>1</b>
1. Treat cardiopulmonary collapse according to:		
a. BCLS	X	X
b. ACLS	X	X
c. PALS	X	X
d. NRP	X	X
2. Treat tension pneumothorax		
3. Participate in land/air patient transport		
<b>E. Assist physician, initiate and conduct pulmonary rehabilitation.</b>	<b>2</b>	<b>2</b>
1. Act as an assistant to the physician performing special procedures including:		
a. bronchoscopy	X	X
b. thoracentesis	X	X
c. transtracheal aspiration		
<b>Task</b>	<b>Recall</b>	<b>Application</b>
d. tracheostomy	X	X
e. cardiopulmonary stress testing		
f. percutaneous needle biopsies of the lung		
g. sleep studies		
h. cardioversion	X	X
i. intubation	X	X
j. insertion of chest tubes		
k. insertion of lines for invasive monitoring [e.g., central venous pressure, pulmonary artery catheters, arterial lines]		
l. conscious sedation		

2. Initiate and conduct pulmonary rehabilitation and home care within the prescription:		
a. monitor and maintain home respiratory care equipment, maintain apnea monitors		
b. explain planned therapy and goals to patient in understandable terms to achieve optimal therapeutic outcome, counsel patient and family concerning smoking cessation, disease management	X	X
c. assure safety and infection control	X	X
d. modify respiratory care procedures for use in the home	X	X
e. implement and monitor graded exercise program		
f. conduct patient education and disease management programs	X	X
<b>TOTALS</b>	<b>12</b>	<b>15</b>

\* The number in each column is the number of items in that content area and cognitive level contained in each examination. For example, in category I.A., one item will be asked at the recall level, one item at the application level and three items at the analysis level. The items could be asked relative to any tasks listed (1-2) under category I.A.

\*\* Note: An "x" denotes the examination does NOT contain items for the given task at the cognitive level indicated in the respective column (Recall, Application, Analysis).

# **APPENDIX**

## **B**

# St. Mary's/Marshall University Cooperative BSRT Program Goals and Objectives for Classes of Dec. 2007 – May 2008

## Goals and Objectives:

### Service

1. Maintain a satisfactory graduation rate.
  - a. Achieve a graduation rate of 80% or greater.
2. Provide academic support to students at risk of academic failure.
  - a. Continue enhancing the existing services and resources for the Students.

**The first class had a 100% graduation rate.**

#### **Goal Met:**

**Various computer instructed cd rom's are provided to the student to enhance their learning experience.**

**The Center for Education has purchased various manikins to enhance the students experience and training level prior to practice in the clinical area.**

**The Center for Education has purchased periodicals to enhance and support their learning experience. This information is located in the student library.**

- b. Identify at risk students and assist them with a remediation plan that will assist them in achieving success in the respiratory program .

#### **Goal Met:**

**The faculty of the School of Respiratory Care has a mandatory conference with the students at mid term each semester.**

**Weaknesses are identified at this point and discussed with the student. A remediation plan is designed and available for the student and assistance is rendered by the faculty to enhance the students learning experience.**

### Quality

1. Faculty will maintain membership in professional organizations.
  - a. All faculty will be a member of a professional organization.

#### **Goal Met:**

**All faculty members are members of the American Association of Respiratory Care and the West Virginia Society for Respiratory Care.**

- b. Fifty percent (50%) of faculty will serve in a leadership role (officer, board member, committee member) in a professional organization.

**Goal Not Met:**

**No faculty member has had the opportunity to be elected or participate in a leadership role in a professional organization. All faculty members are continuing to seek state level offices within the WVSORC.**

2. Prepare graduates for entry level CRT/RRT positions as indicated on standardized tests.
  - a. Meet or exceed the national mean on standardized tests.

**The first class will graduate in December 2008. Only 1 candidate has taken the examination and successfully passed it. The other candidates are currently scheduled to take their examination**

3. Graduates will be prepared for entry level CRT/RRT positions as indicated by the National Board of Respiratory Care (NBRC).
  - a. The graduates will meet or exceed the national pass rate as determined by the National Board of Respiratory Care (NBRC).

**The first class will graduate in December 2008. 1 candidate successfully passed the examination. The other 8 are scheduled to take their examination in Jan. 09**

CLASS	PASSED	FAILED	UNKNOWN	TOTAL	PERCENT
December 2008	N/A	N/A	N/A	N/A	N/A
December 2009	N/A	N/A	N/A	N/A	N/A
May 2010	N/A	N/A	N/A	N/A	N/A
May 2011	N/A	N/A	N/A	N/A	N/A
<b>TOTAL</b>					

4. Maintain graduate satisfaction with the program.
  - a. The graduates will rate "program satisfaction" as a 2 or below on the St. Mary's Graduate Questionnaire.

The mean was a 1.86

5. Enhance critical thinking skills.
- a. The graduates will have a group mean score on the ATI Critical Thinking EXIT EXAM that meets or exceeds the ATI Critical Thinking ENTRANCE EXAM group mean.

**This testing phase began with the class that entered in the Fall of 2008. All students passed the ATI exam**

	SEMESTER GIVEN	NUMBER TAKING TEST	NATIONAL NORM %	CLASS MEAN %
TEAS- Respiratory Class of 2011	Spring 2008	17	68	63
TEAS Critical Thinking-	Spring 2008	17	68	63
TEAS Self Assessment Inventory	Spring 2008	17	No National Norm	None
TEAS Reading	Spring 2008	87	68.3	70.6
TEAS Math	Spring 2008	10	62.5	62.8
TEAS Science	Spring 2008	78	70.1	74.1
TEAS English	Spring 2008	10	70.1	70.7

- b. Meet or exceed the national mean on ATI Comprehensive Predictor exam.

**GOAL NOT MET. Refer to following table.**

	National Mean TEAS	TEAS Group Mean
Class of 2011	68%	63%

6. Implement the PDA bulk-buying program for all incoming Year I students.

**Goal Met:**

**PDA's were purchased and given to the students**

## Financial

1. Enhance financial resources.
  - b. In collaboration with the SMMC Foundation, submit a grant through the Center for Education Grant Committee for student or faculty use.

**Goal Met:**

**The faculty members of the School of Respiratory Care have participated in several grant applications to benefit the Center for Education.**

2. Faculty will support the capital campaign for the Center for Education.

**Goal Met:**

**The faculty members have participated in activities that directly support the capital campaign.**

3. Faculty will seek support of area clinical affiliates to secure donations of supplies and equipment.

**Goal Met:**

**The faculty and staff have solicited and obtained donations to assist the School of Respiratory Care.**

## People

1. Caring will be a concept of the curriculum.
  - a. Students will rate the courses as enhancing the "ability to be a caring professional" as evidenced by a mean of 2.5 or less on the St. Mary's Course Evaluation.

**Goal Met:**

Mean was 1.14

2. Student communication skills will be developed.
  - a. Students will rate the courses as facilitating "the development of my communication skills" as evidenced by a mean score of 2.5 or less on the St. Mary's Course Evaluation.

**Goal Met:**

Mean was 1.43

## Growth

1. Demonstrate a continued need for the BSRT Program.
  - a. Recruit a pool of qualified applicants for each space in the program. Total space allocation for the program is 15 students

**Goal Met:**

**The School of Respiratory Care has met the number of qualified applicant for the currently enrolled class and for the class beginning in January 2008.**

**The Junior class had 9 students enrolled. The current enrollment is 9.**

**The Sophomore class had 18 enrolled. The current enrollment is 17**

**1 student dropped because they failed to meet academic standards.**

- b. Ninety percent (90%) of the graduates seeking a position in respiratory care will have a job offer within 6 months of graduation.

**There has not been a graduating class from the School of Respiratory Care. The first class will graduate in December 2008**

2. Demonstrate a plan to enhance the physical facilities of the School of Respiratory Care.
  - a. Faculty will continue to participate in the planning for the Center for Education.

**Goal Met:**

**The faculty of the School of Respiratory Care have been actively involved with the planning committee for the new Center for Education.**

**The faculty have provided input and assisted with the allocated space for classroom and labs for their program.**

3. Implement a plan to address the respiratory shortage.
  - a. Achieve and implement a plan to attract the CRT's employed within a 50 mile radius of the school and recruit them for enrollment into the RRT program.

**Goal Not Met:**

**Mr. Chris Trotter, RRT, B.S. Marshall University/St. Mary's Center for Education and faculty in the School of Respiratory Care attends all recruitment and job fairs within a 75 mile radius of the school.**

## Community

Encourage faculty involvement in community health related activities.

- a. All faculty will participate in a community health related activities.

**Goal Met:**

**The faculty members have participated in health fairs throughout the tri-state area to promote health and wellness for the population of our service area.**

2. Enhance the students' ability to provide service to the community.

- a. All students will participate in a community health project.

**Goal Met:**

**Respiratory students in conjunction with the nursing students participated in a community health fair in the spring semester of 2008 for the 2<sup>nd</sup> & 3<sup>rd</sup> year students.**

**APPENDIX**

**C**

## **St. Mary's/Marshall University Cooperative BSRT Program Goals and Objectives Academic Year 2008 – 2009**

1. Maintain a satisfactory graduation rate.
  - a. Achieve a graduation rate of 80%.
2. Provide academic support to students at risk of academic failure.
  - a. Continue enhancement of the existing services/resources for the students
  - b. (Computer Lab, Nursing Arts Lab, and Academic Support Room).
  - c. Assess the revised guidelines for the identification of students at risk.
  - d. Evaluate the new policies related to returning students.
3. Implement new technology in the classroom.
  - a. i>clickers: Faculty will rate satisfaction with i>clickers in all courses.
4. Faculty will maintain membership in professional organizations.
  - a. All faculty will be a member of a professional organization.
  - b. Fifty percent (50%) of faculty will serve in a leadership role (officer, board member, committee member) in a professional organization.
5. A format will be developed for follow up of identified concerns resulting from the Systematic Evaluation Plan.
6. Prepare graduates for entry level CRT positions as indicated on standardized tests.
  - a. Meet or exceed the national mean on secured standardized tests administered by the NBRC.
7. Graduates will be prepared for entry level CRT positions as indicated by the NBRC.
  - a. The graduates will meet or exceed the national pass rate as established by the NBRC.
8. - Maintain graduate satisfaction with the program.
  - a. The graduates will rate "program satisfaction" as a 2.0 or below on the St. Mary's Graduate Questionnaire.
9. Enhance critical thinking skills.
  - a. The graduates will have a group mean score on the A TI Critical Thinking EXIT EXAM that meets or exceeds the A TI Critical Thinking ENTRANCE EXAM group mean.
10. Maintain student satisfaction with PDA.
  - a. The students will rank satisfaction as a 2.0 or below.
11. Examine goals unmet for 2007-2008.
  - a. Develop and evaluate action plan for unmet goals.

**Financial.**

1. Enhance Financial Resources
  - a. In collaboration with the SMMC Foundation, submit a grant through the Center for Education Grant Committee for student or faculty use.
2. Faculty will support the capital campaign and/or the Brick campaign for the Center for Education.
  - a. At least ninety percent (90%) of the faculty will contribute monies to the capital campaign and/or the Brick campaign.

**People**

1. Caring will be a concept of the curriculum.
  - a. Students will rate the courses as enhancing their "ability to be a caring professional" as evidenced by a mean of 2.5 or below on the St. Mary's course evaluation.
2. Student communication skills will be developed.
  - a. Students will rate the courses as facilitating "the development of my communication skills" as evidenced by a mean score of 2.5 or below on the St. Mary's course evaluation.
3. The faculty of the School of Respiratory Care will have less than a 10% turnover rate (excluding retirement).

**Growth**

1. Demonstrate a continued need for the BSRT Program.
  - a. Recruit a pool of qualified applicants for each space available
  - b. 90% of graduates will have employment 6 months post graduation
2. Demonstrate a plan to enhance the physical facilities of the School of Respiratory Care
  - a. Continued progress on the Center for Education will be shared at the monthly department meetings

**Community**

1. Encourage faculty involvement in community health related activities
  - a. All faculty will participate in community health related activities

**APPENDIX**

**D**



*Sponsored By:*

The American Association of Respiratory Care • The American College of Chest Physicians  
The American Society of Anesthesiologists • The American Thoracic Society

**Executive Office**

## **MEMORANDUM**

TO: St. Mary's Medical Center

FROM: Richard T. Walker, MBA, RRT CoARC,  
Executive Director

SUBJECT: **"APPROVAL OF INTENT"  
TO ESTABLISH A RESPIRATORY CARE PROGRAM**

Date: September 16, 2004

This "Memorandum" serves as formal approval to begin the process of establishing an educational program in Respiratory Care. Please be advised that a qualified Program Director should be appointed and will be responsible for of the initial review process. The initial review process will consist of the following:

1. Self-Study #1 — For Programs seeking a "Letter of Review"
2. Self-Study #2 — For programs seeking "Initial Accreditation"
3. The On-Site Visit, to occur after the program's first class graduates
4. Response to the Site Visit Report following the On-Site Visit

The following items can be found on the CoARC Web Site: [www.coarc.com](http://www.coarc.com)

1. The CoARC *Standards and Guidelines for the Profession of Respiratory Care*
2. CoARC Accreditation Handbook — see "New or Re-Accreditation" section

**NOTE:** The Program Director should feel free to call me for any assistance needed during the remainder of the accreditation process (817-283-2835, Ext. 101).

1248 Harwood Road • Bedford, Texas 76021-4244 (817) 283-2835 • Fax (817) 252-0773 • (800) 874-5615

**APPENDIX**

**E**

# 2008 Report of Current Status for an Education Program in Respiratory Therapy at Marshall University/St. Mary's Medical Center CoARC Program Reference:200506

Page 1. Created on 9/19/2008 Respiratory Therapy - Marshall University/St. Mary's Medical Center- CAAHEP program ID:2433

## Sponsoring Institution and Personnel

### Sponsoring Institution

Marshall University/St. Mary's Medical Center  
2900 First Avenue  
Huntington, WV 25702 Phone: (304) 526-1234  
Institution Type: Consortium

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## **Affiliates**

St. Mary's Medical Center - Clinical Affiliate - Huntington , WV  
Cabell Huntington Hospital - Clinical Affiliate - Huntington, WV  
All Med Respiratory and Mobility - Clinical Affiliate - Huntington, WV  
Health South Rehabilitation - Clinical Affiliate - Huntington, WV  
Charleston Medical Center - Clinical Affiliate - Charleston, WV  
Holzer Medical Center - Clinical Affiliate - Gallipolis , OH  
Cornerstone Hospital - Clinical Affiliate - Huntington , WV  
Pleasant Valley Hospital - Clinical Affiliate - Point Pleasant, WV

## **Satellites**

Page 3. Created on 9/19/2008 Respiratory Therapy - Marshall University/St. Mary's Medical Center- CAAHEP program ID:2433

## Examination Results

Evaluation System: NBRC CRT Credentialing

Cut Score: 75

Analysis: No students have graduated. The graduating class will graduate in 12/08 and be eligible to take the CRT written exam in Jan. 09

Action: No action necessary

Evaluation System: NBRC RRT Credentialing

Cut Score: 70

Analysis: No students have graduated. The graduating class will graduate in 12/08 and be eligible to take the RRT written exam in Jan. 09

Action: No action necessary

Evaluation System: Comp Written RRT SAE

Cut Score: 55

Page 4. Created on 9/19/2008 Respiratory Therapy - Marshall University/St. Mary's Medical Center- CAAHEP program ID:2433

Analysis: The Comprehensive Written RRT exam was administered to the Graduating class of 2008 at the completion of their sophomore year and again in the last semester.

The Comp Written RRT SAE was administered to the class of 2009 at the completion of their sophomore year.

Class of 2008

Student Name Raw Score

Andrea Fife 64

Carissa Lewis 75

Chad Woodard 79

Heather Adkins 67

Ryan Stoler 84

Courtney Rooper 98

Megan Cook 65

Sherri Johnson 82

Stephanie Houdek 72

Ryan Spurlock 68

Stacy Shreves 57

Class of 2009

Student Name Raw Score

Karen Abbess 94

Kalieggh Elkins 84

Matthew Roush 93

Shauna Pauley 53

Karri Sarka 83

Richard Bellomy 84

Khoa Njuyen 83

Sarah Moore 74

Cassidy Akers 60

Total Students Tested = 21

Average Total Score = 77.8

96% of our students passed the CRT SAE

60% of our students passed the RRT SAE

Action: The faculty have reviewed the content area where the applicants were weak.

We will review again for improvement when the examination is administered next summer.

It is our policy that our students take the CRT & RRT SAE at the completion of their sophomore & senior years.

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## Surveys - Cognitive Domain

Evaluation System: Employer Surveys - Cognitive

Cut Score: 3 or greater on a 5-point Likert scale

Analysis: .No students have graduated. The graduating class will graduate in 12/08. No students in this class are working under student permits.

In the class of 2009 1 student is working under a student permit in Ohio.

All other students have made the choice not to work.

Action: No action necessary

Evaluation System: Graduate Survey - Cognitive

Cut Score: 3 or greater on a 5-point Likert scale

Analysis: No students have graduated. The graduating class will graduate in 12/08. No students in this class are working under student permits.

In the class of 2009 1 student is working under a student permit in Ohio.

All other students have made the choice not to work.

Action: No action necessary

## **Surveys - Psychomotor Domain**

Evaluation System: Employer Surveys - Psychomotor

Cut Score: 3 or greater on a 5-point Likert scale

Analysis: No students have graduated. The graduating class will graduate in 12/08. No students in this class are working under student permits.

In the class of 2009 1 student is working under a student permit in Ohio.

All other students have made the choice not to work.

Action: No action necessary

Evaluation System: Graduate Survey - Psychomotor

Cut Score: 3 or greater on a 5-point Likert scale

Analysis: No students have graduated. The graduating class will graduate in 12/08. No students in this class are working under student permits.

In the class of 2009 1 student is working under a student permit in Ohio.

All other students have made the choice not to work.

Action: No action necessary

## **Surveys - Affective Domain**

Evaluation System: Employer Surveys - Affective

Cut Score: 3 or greater on a 5-point Likert scale

Page 6. Created on 9/19/2008 Respiratory Therapy - Marshall University/St. Mary's Medical Center- CAAHEP program ID:2433

Analysis: No students have graduated. The graduating class will graduate in 12/08. No students in this class are working under student permits.

In the class of 2009 1 student is working under a student permit in Ohio.

All other students have made the choice not to work.

Action: No action necessary

Evaluation System: Graduate Survey - Affective

Cut Score: 3 or greater on a 5-point Likert scale

Analysis: No students have graduated. The graduating class will graduate in 12/08. No students in this class are working under student permits.

In the class of 2009 1 student is working under a student permit in Ohio.

All other students have made the choice not to work.

Action: No action necessary

## **Attrition / Retention**

Evaluation System: Attrition / Retention

Analysis: 1 student in the class was dismissed from the program due to failure to pass a secured drug screen.

Action: No action required. This student has informed us they are entering a drug rehab program.

## **Positive Placement**

Evaluation System: Positive Placement

Analysis: No students have graduated. The graduating class will graduate in 12/08. No students in this class are working under student permits.

In the class of 2009 1 student is working under a student permit in Ohio.

All other students have made the choice not to work.

Action: No action necessary

## Current Program Statistics

CoA Reference: 200506

Program Enrollment and Attrition Table with Current and Past Five Years' Data(if available):

Enrollment

Year

Enrollment

Date

Graduation

Date

Estimated

Number of

Applicants

Maximum

Number of

Students

Number

Initially

Enrolled

Number

Enrolled

After

Class Start

Total

Enrollment

Number

'In Progress'

To-Date

Non-

Academic

Attrition

General

Education

Courses

Attrition

Professional

Courses

Attrition

Attrition Percent

Attrition

# Grads to

Date

2008 8/25/2008 5/15/2011 30 25 11 7 18 17 1 0 0 1 5.6 % 0

2007 8/20/2007 12/10/2010 21 20 11 0 11 11 0 0 0 0 0.0 % 0

2006 8/13/2006 12/11/2009 20 20 13 0 13 8 1 1 3 5 38.5 % 0

2005 8/21/2005 12/5/2008 25 20 14 0 14 11 3 0 0 3 21.4 % 0

## Graduates by Enrollment Cohort

Graduated in (year)

Enrollment Year Enrollment Date On-time Graduation Date 2008 2007 2006 2005 2004 2003 2002 2001 # Grads to Date

2008 8/25/2008 5/15/2011 0

2007 8/20/2007 12/10/2010 0

2006 8/13/2006 12/11/2009 0

2005 8/21/2005 12/5/2008 0

Total Graduates by Year = 0 0 0 0 0 0 0 0

2008 Report of Current Status for an Education Program in Respiratory Therapy at Marshall University/St.

Mary's

Medical Center CoA Program Reference:200506

## Outcomes Summary

Graduation Year. Class of...

2008 2007 2006 2005 2004 2003 2002 2001 Threshold

3 yr Total

2007 to

2005

5 yr Total

2007 to

2003

Graduates 0 0 0 0 0 0 0 0

Outcomes Assessments

3 yr Avg  
2007 to  
2005  
5 yr Avg  
2007 to  
2003

Attrition 21.4

% 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 30% NaN NaN

Retention 78.6

% 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % NaN NaN

Positive Placement 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 70 % 0.0 % 0.0 %

NBRC CRT Credentialing %

grads Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 80 % 0.0 % 0.0 %

NBRC RRT Credentialing %

grads Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 50 % 0.0 % 0.0 %

Comp Written RRT SAE %

grads Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 80 %

Employer Survey - %

returned 0 % 0 % 0 % 0 % 0 % 0 % 0 % 0 % 50 % NaN NaN

Employer Survey -

Cognitive - Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 100.0 %

Employer Survey -

Psychomotor - Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 100.0 %

Employer Survey - Affective

- Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 100.0 %

Graduate Survey - %

returned 0 % 0 % 0 % 0 % 0 % 0 % 0 % 0 % 50 % NaN NaN

Graduate Survey - Cognitive

- Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 100.0 %

Graduate Survey -

Psychomotor - Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 100.0 %

Graduate Survey - Affective

- Success 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 0.0 % 100.0 %

Enrollment Year

Enrollment 2008 2007 2006 2005 2004 2003 2002 2001 Threshold

3 yr Total  
2007 to  
2005  
5 yr Total  
2007 to  
2003

Enrollment 18 11 13 14 0 0 0 38 38

**APPENDIX**

**F**

## **2008 PROGRAM RESOURCE ASSESSMENT**

**RESOURCE:** ADVISORY COMMITTEE – Center for Education Faculty

**PURPOSE(S):**

To actively develop, promote, support and evaluate the goals of the respiratory therapy program.

**MEASUREMENT SYSTEM(S):**

1. Program Personnel Program Resource Survey
2. Advisory Committee Minutes and Actions.

**DATE(S) OF MEASUREMENT:**

1. Monthly.

**RESULTS: 2008**

Surveys were administered and no negative surveys were returned and no negative comments noted.

**ACTION PLAN(S):**

None

## 2008 PROGRAM RESOURCE ASSESSMENT

**RESOURCE:** MEDICAL DIRECTOR

### **PURPOSE(S):**

1. To provide input into curriculum including review of appropriateness of medical content.
2. To provide review of selected respiratory care topics in a format that encourages student interaction with a physician.
3. To assist in the development of physician "communication skills" and to assist in the evaluation of student attainment of these skills.

### **MEASUREMENT SYSTEM(s):**

Program Course and Resource Survey(s) completed by the students.

Program Resource Survey completed by the faculty and advisory committee.

Medical Director written evaluation(s) of student communication skills.

### **DATE(S) OF MEASUREMENT:**

Program Resource Surveys are completed annually at the end of the spring semester.

Course Surveys are completed at the end of each semester.

Medical Director evaluation of student "communication skills"-Minimum of once per semester.

### **RESULTS: 2008**

1. Survey results for the medical director were all positive

### **ACTION PLAN(S):**

It was the consensus of the Program full-time personnel that no specific changes in medical director activities were indicated based on the 2008 assessments.

## 2008 PROGRAM RESOURCE ASSESSMENT

**RESOURCE:** FACULTY

### **PURPOSE(S):**

Program Director: To provide classroom, lab, and clinical instruction and to coordinate the overall program activities.

Director of Clinical Education: To provide classroom, lab, and clinical instruction and to coordinate the clinical education of the students.

Additional Full-time Faculty: To teach selected classroom and labs and to supervise the clinical rotation at various clinical sites.

Adjunct Clinical Faculty: to provide focused review on specific procedures and provide "formative evaluations" in the clinical setting.

Medical Director: See Medical Director Resource Assessment.

### **MEASUREMENT SYSTEM(S):**

Program Resource Survey(s) completed by the students.  
Program Personnel Resource Surveys completed by the faculty,  
Advisory committee, and Medical Director.

### **DATE(S) OF MEASUREMENT:**

Student Exit/Resource Survey: End of each academic year (May)  
Advisory Committee and Medical Director Survey: Spring Advisory meeting.

### **RESULTS: 2008**

No students will graduate until 12/08. Graduate Surveys will be administered in 6/09.

### **ACTION PLAN(S):**

1. Will monitor feedback on faculty performance by students.
2. Implement newest CoARC Program resource surveys this academic year, which include feedback from advisory committee and Medical director.

## **2008 PROGRAM RESOURCE ASSESSMENT**

**RESOURCE:** Support Personnel

### **PURPOSE(S):**

To provide adequate secretarial support for primary program faculty.

### **MEASUREMENT SYSTEM:**

Faculty Resource survey

### **DATE(S) OF MEASUREMENT:**

Program Resource Surveys are completed annually at the end of the spring semester.

### **RESULTS: 2008**

All faculty felt support services were adequate.

### **ACTION PLAN(S):**

None at this time.

## 2008 PROGRAM RESOURCE ASSESSMENT

**RESOURCE:** PHYSICAL RESOURCES / LABORATORY

### **PURPOSE(S):**

1. To provide adequate physical resources (classroom and lab) for effective delivery of the program curriculum.
2. To provide each student an opportunity to practice with equipment and procedures prior to being responsible for the equipment or skill in the clinical environment.

### **MEASUREMENT SYSTEM(s):**

Program Resource Survey(s) completed by the students.

Program Resource Survey completed by the faculty.

### **DATE(S) OF MEASUREMENT:**

Program Resource Surveys are completed annually at the end of the spring semester.

### **RESULTS: 2008**

100% of the students felt that the laboratory area was not adequate.

### **ACTION PLAN(S):**

St. Mary's center for education will open a new 64,000 square allied health building in 6/09

## 2008 PROGRAM RESOURCE ASSESSMENT

**RESOURCE:** LABORATORY – EQUIPMENT & SUPPLIES

**PURPOSE(S):**

1. To provide adequate laboratory resources (equipment and supplies) for effective delivery of laboratory exercises.
2. To provide each student an opportunity to practice with equipment and procedures prior to being responsible for the equipment or skill in the clinical environment.

**MEASUREMENT SYSTEM(s):**

Program Resource Survey(s) completed by the students.  
Program Resource Survey completed by the faculty.

**DATE(S) OF MEASUREMENT:**

Program Resource Surveys are completed annually at the end of the spring semester.

**RESULTS: 2008**

100% of the students purchase a duffle bag with all necessary lab supplies. They felt this was a good practice. 50% of the students surveyed felt that there was not adequate equipment to practice

**ACTION PLAN(S):**

The new center for education has received a federal to purchase new equipment. The standard equipment provided by CoARC has been submitted for review and purchase.

## **2008 PROGRAM RESOURCE ASSESSMENT**

**RESOURCE:** LEARNING RESOURCES

### **PURPOSE(S):**

1. To provide a quiet place to study (Library).
2. To provide reference material when required to complete class assignments.
3. To provide sufficient computer support for students to complete assignments (computer lab).

### **MEASUREMENT SYSTEM(S):**

Program Resource Survey(s) completed by the students.  
Program Resource Survey completed by the faculty.

### **DATE(S) OF MEASUREMENT:**

Program Resource Surveys are completed annually at the end of the spring semester.

### **RESULTS: 2008**

It was determined that the respiratory students do not participate in the use of the library.

### **ACTION PLAN(S):**

All faculty will begin to make outside assignments that will require the students to use the library

## **2008 PROGRAM RESOURCE ASSESSMENT**

**RESOURCE:** FINANCIAL RESOURCES

**PURPOSE(S):**

To provide adequate financial support to support program needs as identified during the various outcome (product) assessments.

**MEASUREMENT SYSTEM:**

Faculty Resource survey

**DATE(S) OF MEASUREMENT:**

Program Resource Surveys are completed annually at the end of the spring semester.

**RESULTS: 2008**

All faculty felt there was adequate budgets allowed to perform their job efficiently during the 2008 academic year.

**ACTION PLAN(S):**

None

## 2008 PROGRAM RESOURCE ASSESSMENT

**RESOURCE:** CLINICAL RESOURCES

### **PURPOSE(S):**

St. Mary's Medical Center:

To provide sufficient clinical experience at a large teaching medical university in order to:

- (1) develop the student's ability to perform respiratory critical care procedures as identified in the program's clinical activities summary log.
- (2) facilitate the student's development of patient assessment skills.
- (3) develop students "physician interaction" skills
- (4) provide clinical instruction with periodic "formative evaluations" to assist the student and the program in identifying progress in clinical skills development.

All other clinical affiliates (except Neonatal Intensive Care Units):

To provide sufficient clinical experience at teaching and community hospitals in order to:

- (1) develop the student's ability to perform respiratory care procedures as identified in the program's clinical activities summary log.
- (2) facilitate the student's development of patient assessment skills.
- (3) develop students "physician interaction" skills

Neonatal Intensive Care Units:

To provide sufficient clinical experience in Neonatal Intensive Care in order to:

- (1) familiarize the student with neonatal respiratory care.
- (2) develop students "physician interaction" skills

### **MEASUREMENT SYSTEM(s):**

Program Resource Survey(s) completed by the students.  
Program Resource Survey completed by the faculty.  
Faculty Review of student Clinical Summary Logs.

### **DATE(S) OF MEASUREMENT:**

Program Resource Surveys are completed annually at the end of the spring semester.  
Clinical Summary logs are reviewed on an on-going basis as well as being formally reviewed twice each semester

### **RESULTS: 2008**

100% of the students enrolled in the 2008 academic year felt that their clinical experience was above average. The students rotated through the neonatal unit in Charleston as well as CAMC in Charleston

## 2008 PROGRAM RESOURCE ASSESSMENT

**RESOURCE:** PHYSICAIN INPUT - INSTRUCTIONAL

**PURPOSE(S):**

1. The primary purpose of physician interaction in the clinical setting is to assist the students in developing their "professional communication" skills to facilitate their effective interaction in the clinical setting.
2. Physician input by the Medical Director is to assist in the development and evaluation of practitioner/physician "communication skills".

**MEASUREMENT SYSTEM(s):**

1. Program Resource Survey(s) completed by the students.
2. Program Resource Survey completed by the faculty.
3. Physician Interaction documentation forms.
4. Daily clinical log documentation of physician interaction.
5. Medical Director written evaluation(s) of student communication skills.
6. Pulmonologist written assessment of student assessment and communication skills.

**DATE(S) OF MEASUREMENT:**

1. Exit survey conducted at end of academic year (May).

**RESULTS: 2008**

100% of the surveys returned indicated they were very happy with their interaction with the medical director.

**ACTION PLAN(S):**

None

## **APPENDIX G**

**CLINICAL SKILL ASSESSMENT: HANDWASHING**

Objective: The student is expected to demonstrate proficiency in the techniques of hand washing.

**If there is not a place for an evaluators initials please sign after the last box of check off.**

√ = Clinically correct.

X = Clinically incorrect. (Non-critical).

F = Clinically incorrect. (Critical).

NA = Not applicable.

TASK ANALYSIS		Lab	Clinic
<b>Student</b>	<b>Date</b>		
<b>Procedure Sequence</b>	<b>Specific Behavior</b>		
Removes Jewelry:			
Prevents Clothing Contact With Sink			
Turns Water On (Warm):			
Wets Hands:			
Applies Soaps/Disinfectant Thoroughly:	Selects bactericidal scrub solution. Applies solution under nails and between fingers.		
Washes Palms/Back of Hands With Rotary Motion (20 seconds):			
Washes Wrists and Above (4 inches) With Rotary Motion:			
Repeats Steps 5 thru 8:	Scrubs for 2 minutes for isolation procedures and equipment assembly. Uses short scrub for routine procedures only.		
Rinses Well From Wrist to Fingers:			
Dries with Aseptic Towel:			
Turns Off Water Aseptically:			
Discards Materials in Receptacle:			
Repeats Procedure if Contaminated:			
	<b>Evaluator's Initials</b>		

**Oral Review Questions**

What is the rationale for hand washing between patient procedures?

Explain the cycle of contamination that can occur with vectors.

What is a nosocomial infection and how can the occurrence of such infections be minimized by respiratory therapy personnel.

SIGNATURES	
STUDENT:	
EVALUATORS:	1.
	2.
CLINICAL DIRECTOR:	