A Sabbatical Summary Report

To Implement Innovative Education

Submitted by James Wm Taylor MA, RRT

March 10, 1988
In my original proposal of November 5, 1986 I had identified my sabbatical objectives as follows:

a. Review literature for information on Interactive Education and its value in developing higher learning skills.
b. Review literature for information on Branching Logic examination methodology and its application to the development of critical thinking skills.
c. Examine hardware requirements for interactive education and branching logic examinations and prepare a proposal for future budget considerations for the health technologies.
d. Research the costs and manpower requirements involved in these instructional technologies and report as such.
e. Create a branching logic exam for at least two of the following instructional topics (one pediatric/neonatal, one adult). This project will be completed and available for implementation during the Spring 1988 semester.

Neonatal/Pediatric Simulations

1. Performance of Neonatal CPR
2. Use of Transcutaneous Gas Monitoring Systems
3. Stabilization of a High Risk Newborn
4. Emergency Management of Upper Airway Disorders

Adult Simulations

1. Respiratory Management of Adult Head Trauma
2. Use of Hemodynamic Monitoring (including trouble shooting)
3. Respiratory Management of AIDS (emphasizing infection control)
4. Performance of Adult Advanced Life Support (utilizing the 1986 American Heart Association Standards)

f. Reviewing/Evaluating the simulations with local content experts (to include both physicians and therapists)

g. Designing, producing, and/or evaluating one interactive video program for future use in the Cardiorespiratory Care program.

(Completion of this phase of the proposal will be contingent upon the availability of the needed hardware and availability of technical expertise. It will be pursued as far as hardware constraints will permit.)

I am pleased to say that almost all of my objectives were completed. I will briefly summarize my activity in each of the areas as listed above.

Objectives a, b, c, and d were accomplished by a review of literature. As described, I had hoped to find evidence of the value of interactive education and branching logic methodologies. Alas, I found little justification for such ventures. Conflicting assumptions and data abound in the literature. Early authors such as the Schwartz editorial (Journal of Medical Education, Volume 57, Number 4, April 1982) on "Microcomputers and Computer Based Instruction" in which he concludes that "microcomputers may be the answer!" offer positive hope. This attitude is repeated throughout as in the J. R. Boring (Journal of Medical Education, Volume 59, Number 11, November 1984) work entitled "Analytical Thinking: Educating Students for the Practice of Modern Medicine". He optimistically concludes that "computers show promise" as an instructional tool.
More objective and scientific work brings one back to reality. In the *Journal of Medical Education* article "An Evaluation of Computer Assisted Teaching in Physiology" (Volume 49, Number 3, March 1974) Frederick-Meyer and Beaton compare using tutors, traditional lecture-discussion strategies, and computer assisted instructional systems and found no difference in learning outcomes. Similarly, in the July 1982 issue of the *Journal of Medical Education*, Marion and others presented a review of 100 articles pertaining to the use of computer-based instruction in basic medical education. No scientific evidence suggests that the use of these technologies affects learning outcomes. Finally, in the article "A Comparison of Simulation Programs for Endodontic Review" by Dale et al. (*Journal of Biomedical Communication*, Spring 1986), computer-assisted instruction was compared to computer-assisted interactive video instruction. Again, no significant difference was noted in outcomes.

An unanticipated dilemma is reported by Diserens and colleagues in the *Journal of Medical Education* article "Measurement of Problem Solving Ability of Students and Residents by Microcomputer" (Volume 61, Number 6, June 1986). They reviewed a computerized simulation system called CAMPS (Computer Assisted Medical Problem Solving) and examined its value as a testing and evaluation tool. They addressed four fundamental questions: 1) What impact does clinical experience have on scores, 2) how does case difficulty effect performance, 3) to what degree does the users' score correlate to clinical effectiveness, and 4) statistically, how reliable are the computerized cases? They concluded that as measurement tools, such activities may be
Although no 'hard data' can be found, some subjective benefits and disadvantages are reported in patient education via interactive systems as examined in study by Lyons et al (Heart and Lung, Volume 11, Number 4, July – August 1982) entitled "Interactive Computerized Patient Education". The computerized interactive video system was called "Dr. Goodheart" and was used to instruct post myocardial infarction patients in prudent living concepts, risk of symptom reoccurrence, and disease understanding. It is important to note that this program was written in Basic and used a videotape. The authors identified the following advantages and disadvantages of the system by the subjective evaluations of users (patients) and health care providers.

**Advantages**
- patient is active in the learning process
- efficient use of staff time (as opposed to repeated instructional periods)
- increased access by patient (system was portable and available around the clock)
- increased enthusiasm of patient
- printed materials were made available (a printer was attached)

**Disadvantages**
- patients had to be able to read well enough to follow directions
- many patient expressed a 'technophobia' to the system
- poor video quality was a detraction
patients were annoyed by the 30-40 second wait while the system searched for the videotape segment.

Using a similar type of Basic program, J. Blackman et al. (Pediatrics, Volume 11, Number 4, November 1984) reported on a program they had prepared for computer assisted instruction. They estimated, including staff time, that the project cost $150,000 for a 30 minute lesson and took 18 months to complete. The video portion itself made up 6 months.

Jones et al. reported in their article "Use of Interactive Videodisk to Teach Pathology: A Preliminary Report" (Journal of Biocommunication, Volume 13, Number 3, Summer 1986) that advantages and disadvantages of this type of system as compared to videotape were as follows:

**Advantages**

- A rapid access to video (4 seconds was the longest delay)
- Durability of the disk
- Larger storage capability (the entire encyclopedia would take up 1/4 of the disk)

**Disadvantages**

- Cost (about $1,500 per disk)
- Lack of commercially prepared materials
- Lack of editing capabilities

From this review, I have come to the conclusion that the only 'selling points' to the creation of computer assisted instruction or interactive video technologies are the efficiency factor and student
enthusiasm. Efficiency is a tough trade off. As some of the above articles state, the preparation of said materials is time consuming and expensive. As identified in the Dale article, these estimations are as follows:

<table>
<thead>
<tr>
<th># of staff</th>
<th>man hours</th>
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<tbody>
<tr>
<td>slide tape</td>
<td>3</td>
</tr>
<tr>
<td>latent image</td>
<td>3</td>
</tr>
<tr>
<td>computer aided instruction</td>
<td>5</td>
</tr>
<tr>
<td>interactive video</td>
<td>7</td>
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</tbody>
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Once done, it does allow students to access the materials for individualized instruction. Since some limitations to the use of the interactive video hardware exist, I do not currently believe the creation of interactive lessons to be a worthwhile investment of time. Secondly, I believe that the College does not currently have the resources to support interactive video production. The availability of the hardware is limited and the development time is very high. Similarly, the need for a 'Hollywood' type of video production in our visual orientated society becomes a central focus to the success of such a system.

Objectives e, f, and g were modified slightly after my literature review. It became apparent that a large expenditure of time was required to prepare an interactive video project and the selection of topic would be critical since learning outcome was unchanged by the medium used. Added to my concern was the limited technical support the College can provide. Since student access to the required hardware is limited, my hopes for a high quality, student intended resource began to dim. Only recently have I been able to identify a topic that the
College has the resources to produce, is not available in other media formats, and has educational merit. Perhaps this project to be complete by next Fall. I did prepare myself for this project by attending a local conference on interactive video and participating in the production of the interactive module "Tennessee vs Gardner".

Instead, I focused my time on the creation of several Patient Management Problems as listed in objective e. As opposed to my taget of two simulations, I have completed four. I have another two in the process of being completed. The complete simulations are attached under Appendix A of this report. A synopsis is as follows:

Mrs. June - A short pulmonary function case in which students are expected to interpret the studies and make recommendations based upon the data.

Mr. Rodney - A case involving the intensive care of a motorcycle accident victim.

John Taggett - A case involving a cardiac arrest patient in which basic and advanced life support procedures are tested in accordance with the 1986 American Heart Association Standards.

Bob Nelson - A case involving a chronic lung disease patient in need of basic respiratory care procedures.

I am not yet comfortable with the thoroughness of the field testing of these simulations. I expect another six months will be required before testing is complete.

Finally I would like to thank the Cabinet, the Board of Trustess, and
Administration for the privilege of a sabbatical. It gave me the opportunity to refamiliarize myself with my family, my professional colleagues across the state, and with the local medical community. I returned to serve the College refreshed, recharged and invigorated.
SIMULATION SECTIONS

SIMULATION: MRS. JUNE

SIMULATION AUTHOR: J.W. TAYLOR RRT

TOTAL DESIGNATED SECTIONS: 5

SECTIONS COMPLETED: 5

STATUS: FINISHED

ACCUMULATED OPTIMAL SCORES:

INFORMATION = 0

DECISION = 0

MINIMAL REQUIRED SCORES:

PROFICIENCY = 0%

EFFICIENCY = 0%

BRANCH TYPES:

0 = INTERNAL BRANCH

-1 = END OF SIM.

99 = UNUSED CHOICE

INTRODUCTORY SCENARIO:

THIS SIMULATION IS INTENDED TO BE USED IN CRC 205 AND 206. STUDENTS SHOULD HAVE A CALCULATOR AND SET OF NORMALS AVAILABLE FOR USE DURING THIS EXCERCISE.
You are the clinician in charge of a pulmonary function laboratory in a 300 bed multiservice hospital. You receive a call from Dr. Snow asking you to help evaluate an outpatient's pulmonary status. Mrs. June, a 34 year old white female shows up at your lab the next morning. She is 5'5" tall and is applying for a medical disability for a chronic back problem. Which of the following are pertinent questions to draw a basic picture of the patient's overall condition? (Choose as many as you feel are needed.)

Choice #1 is: Do you ever cough up any phlegm?
Response #1 is: No, I never cough up anything.

Choice #2 is: Do you smoke?
Response #2 is: I smoke a little. I use about 1 pack per day and I've been smoking since I was 14 years old.

Choice #3 is: Do you ever have any chest pain?
Response #3 is: No, I've never had any pains in my chest but my backs hurts a lot.

Choice #4 is: Do you have any lung problems?
Response #4 is: No, but I do get short of breath when I run up the stairs.

Choice #5 is: Do you have any other medical problems?
Response #5 is: Only the problem with my back.

Choice #6 is: Do you have any allergies?
Response #6 is: I don't have any allergies.

Choice #7 is: Where do you work at?
Response #7 is: I used to work on the assembly line of General Motors. I'm not working now because of my back.

Choice #8 is: Do you have any heart disease?
Response #8 is: No, my doctor says my heart is fine.

Choice #9 is: Do you ever wake up at night feeling short of breath?
Response #9 is: No, I only wake up when my dog barks.

Choice #10 is: How many pillows do you sleep with?
Response #10 is: I only use one pillow unless I'm having trouble sleeping. Then I use two.

Primary branch is to Section #2.
YOU CALL DR. SNOW TO CLARIFY EXACTLY WHAT TYPES OF STUDIES HE WANTS. HE REPLIES THAT HE WANTS YOU TO SCREEN HER FOR BASIC DEFECTS AND CALL HIM THE RESULTS. WHICH OF THE FOLLOWING STUDIES WILL YOU PERFORM? (CHOOSE AS MANY AS YOU FEEL ARE APPROPRIATE.)

CHOICE #1 IS: DIFFUSSION STUDIES
RESPONSE #1 IS: DLCO IS 19.7 ML/MINUTE/TORR

CHOICE #2 IS: PEAK FLOW
RESPONSE #2 IS: PEAK FLOW: 7.1 L/M

CHOICE #3 IS: VD/VT
RESPONSE #3 IS: VD/VT: .36

CHOICE #4 IS: OXYGEN CONSUMPTION
RESPONSE #4 IS: OXYGEN CONSUMPTION: 200 ML/MINUTE

CHOICE #5 IS: END TIDAL CO2
RESPONSE #5 IS: END TIDAL CO2: 3.9%

CHOICE #6 IS: ARTERIAL OXYGEN SATURATION
RESPONSE #6 IS: SAO2: 96%

CHOICE #7 IS: P50
RESPONSE #7 IS: P50: 27 TORR

CHOICE #8 IS: MAXIMAL EXPIRATORY PRESSURE
RESPONSE #8 IS: EXPIRATORY PRESSURE: EQUIPMENT NOT AVAILABLE

CHOICE #9 IS: PULMONARY ARTERY PRESSURE
RESPONSE #9 IS: PAP: NO SWAN HAS BEEN INSERTED. DATA NOT AVAILABLE.

CHOICE #10 IS: LEFT VENTRICULAR END DIASTOLIC PRESSURE
RESPONSE #10 IS: LVEDP: NO SWAN HAS BEEN INSERTED. DATA NOT AVAILABLE.

CHOICE #11 IS: CLOSING VOLUME
RESPONSE #11 IS: CLOSING VOLUME: 10%

CHOICE #12 IS: MAXIMUM MID FLOW RATE
RESPONSE #12 IS: MMFR: 3.45 LITERS

CHOICE #13 IS: DLO2
RESPONSE #13 IS: DLO2: 24.2 ML 02/MINUTE/TORR

CHOICE #14 IS: RESIDUAL VOLUME
RESPONSE #14 IS: RV: 1.54 LITERS

CHOICE #15 IS: FORCED EXPIRATORY VOLUME IN ONE SECOND
RESPONSE #15 IS: FEV1: 3.05 LITERS
• CHOICE #16 IS: INSPIRATORY FORCE
  RESPONSE #16 IS: NIF: -79 CM H2O

• CHOICE #17 IS: MAXIMAL BREATHING CAPACITY
  RESPONSE #17 IS: MBC: 156 LITERS PER MINUTE

• CHOICE #18 IS: TIDAL VOLUME
  RESPONSE #18 IS: TIDAL VOLUME: .45 LITERS

• CHOICE #19 IS: FORCED VITAL CAPACITY
  RESPONSE #19 IS: FVC: 3.84 LITERS

• CHOICE #20 IS: COMPLIANCE
  RESPONSE #20 IS: COMPLIANCE: PATIENT UNABLE TO SWALLOW ESOPHAGEAL BALLOON.

• PRIMARY BRANCH IS TO SECTION #3
SECTION #3  TYPE OF SECTION: DECISION

THIS SECTION UNSCORED

SCENARIO:

YOU NOW CALL DR. SNOW WITH THE RESULTS OF YOUR STUDIES. BASED UPON THE INFORMATION GATHERED, YOU WOULD RECOMMEND WHICH OF THE FOLLOWING BE DONE? # (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED.)

CHOICE #1 IS: FURTHER STUDIES BE PERFORMED.
RESPONSE #1 IS: DR. SNOW COMPLIES WITH YOUR REQUEST.
BRANCH PATHWAY #1 IS: 4

CHOICE #2 IS: ARTERIAL BLOOD GASES BE PERFORMED AS SOON AS POSSIBLE.
RESPONSE #2 IS: DR. SNOW DISCLAIMS, MAKE ANOTHER SELECTION.
BRANCH PATHWAY #2 IS: 0

CHOICE #3 IS: IPPB WITH A BRONCHODILATOR BE PERFORMED.
RESPONSE #3 IS: DR. SNOW DISCLAIMS, MAKE ANOTHER SELECTION.
BRANCH PATHWAY #3 IS: 0

CHOICE #4 IS: PATIENT BE ADMITTED TO THE HOSPITAL FOR A PULMONARY MEDICINE REFERRAL.
RESPONSE #4 IS: DR. SNOW COMPLIES WITH YOUR REQUEST.
BRANCH PATHWAY #4 IS: 4

CHOICE #5 IS: NOTHING MORE BE DONE. PATIENT IS WITHIN NORMAL LIMITS.
RESPONSE #5 IS: DR. SNOW AGREES AND THANKS YOU FOR YOUR TIME.
BRANCH PATHWAY #5 IS: -1
SECTION #4

THIS SECTION UNSCORED

SCENARIO:

YOUR RECOMMENDATION HAS BEEN ACCEPTED AND PERFORMED. MRS. JUNE IS NOW TO BE GIVEN AN EXTENSIVE PULMONARY WORK UP TO HELP IDENTIFY THE UNDERLYING PROBLEM. WHICH OF THE FOLLOWING STUDIES WOULD YOU RECOMMEND BE PERFORMED? (SELECT AS MANY AS YOU FEEL ARE APPROPRIATE.)

- CHOICE #1 IS: TOTAL LUNG CAPACITY
  RESPONSE #1 IS: TLC: 5.22 LITERS

- CHOICE #2 IS: RESIDUAL VOLUME
  RESPONSE #2 IS: RV: 1.54 LITERS

- CHOICE #3 IS: SLEEP OXIMETRY
  RESPONSE #3 IS: SLEEP OXIMETRY: 94% THROUGH OUT STUDY

- CHOICE #4 IS: ARTERIAL BLOOD GASES
  RESPONSE #4 IS: ABGS: PH 7.48, PaCO2 30, PaO2 100, HCO3 25

- CHOICE #5 IS: AIRWAY RESISTANCE
  RESPONSE #5 IS: RAW: .8 CM/LITER/SECOND

- CHOICE #6 IS: DELTA NITROGEN
  RESPONSE #6 IS: DELTA N2: 1.5%

- CHOICE #7 IS: OXYGEN CONSUMPTION
  RESPONSE #7 IS: O2 CONSUMPTION: 198 ML/MINUTE

- CHOICE #8 IS: CAPNOGRAPHY DURING SLEEP
  RESPONSE #8 IS: AVERAGE LEVEL 4.6%. NO APNEAS NOTED.

- CHOICE #9 IS: PEAK EXPIRATORY FLOW
  RESPONSE #9 IS: PEAK FLOW: 7.39 LITERS PER SECOND

- CHOICE #10 IS: FUNCTIONAL RESIDUAL CAPACITY
  RESPONSE #10 IS: FRC: 2.9 LITERS

PRIMARY BRANCH IS TO SECTION #5
SCENARIO:

BASED UPON YOUR DATA YOU WOULD RECOMMEND WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED.)

CHOICE #1 IS: NASAL 02 BE ADMINISTERED.
RESPONSE #1 IS: DR. SNOW DISAGREES WITH YOUR REQUEST FOR NASAL OXYGEN. MAKE ANOTHER SELECTION.
BRANCH PATHWAY #1 IS: 0

CHOICE #2 IS: IPPB WITH .5 BRONKOSOL BE GIVEN.
RESPONSE #2 IS: DR. SNOW DISAGREES WITH YOUR REQUEST FOR IPPB. MAKE ANOTHER SELECTION.
BRANCH PATHWAY #2 IS: 0

CHOICE #3 IS: ARANE CAPSULE DAILY VIA SPINHALER
RESPONSE #3 IS: DR. SNOW DISAGREES WITH YOUR REQUEST FOR ARANE. MAKE ANOTHER SELECTION.
BRANCH PATHWAY #3 IS: 0

CHOICE #4 IS: AEROSOL TREATMENT WITH ATROPINE EVERY 4 HOURS.
RESPONSE #4 IS: DR. SNOW DISAGREES WITH YOUR REQUEST FOR ATROPINE AEROSOL. MAKE ANOTHER SELECTION.
BRANCH PATHWAY #4 IS: 0

CHOICE #5 IS: FURTHER STUDIES BE PERFORMED.
RESPONSE #5 IS: DR. SNOW DISAGREES WITH YOUR REQUEST FOR MORE STUDIES. MAKE ANOTHER SELECTION.
BRANCH PATHWAY #5 IS: 0

CHOICE #6 IS: NOTHING MORE IS INDICATED. PATIENT IS WITHIN NORMAL LIMITS.
RESPONSE #6 IS: DR. SNOW AGREES AND THANKS YOU FOR YOUR HELP.
BRANCH PATHWAY #6 IS: -1
TOTAL DESIGNATED SECTIONS: 15  
SECTIONS COMPLETED: 15  
STATUS: FINISHED

ACCUMULATED OPTIMAL SCORES:
INFORMATION = 31  
DECISION = 41

MINIMAL REQUIRED SCORES:
PROFICIENCY = 70%  
EFFICIENCY = 70%

BRANCH TYPES:  
0 = INTERNAL BRANCH  
-1 = END OF SIM.  
99 = UNUSED CHOICE

: INTRODUCTORY SCENARIO :  
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THIS SIMULATION IS INTENDED FOR USE IN CRC 202 OR RELATED COURSEWORK. AN UNDERSTANDING OF VENTILATOR CARE OF THE CLOSED HEAD INJURY IS NEEDED FOR THIS SIMULATION.
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You are the afternoon shift therapist at a 200 bed community hospital. You are paged to the E.R. to help care for Mr. Rodney, a 26 year old motorcyclist. He is bleeding profusely from the nose and mouth and is confused and combative. The smell of alcohol permeates the room. He appears to be in distress and has multiple abrasions across his chest and extremities. He has a cervical collar in place and is on a backboard. Based upon the information presented, your first concern would be which of the following? (Select only one unless otherwise indicated).

- Choice #1 is: Draw arterial blood gases
  - Response #1 is: Physician disagrees with drawing gases now. Make another selection.
  - Score value #1 is: -5
  - Branch pathway #1 is: 0

- Choice #2 is: Starting oxygen therapy via nasal cannula at 6 liters per minute
  - Response #2 is: Physician disagrees with nasal oxygen. Make another selection.
  - Score value #2 is: -5
  - Branch pathway #2 is: 0

- Choice #3 is: Getting a stat chest X-ray to survey the thoracic trauma.
  - Response #3 is: Physician disagrees with a chest X-ray. Make another selection.
  - Score value #3 is: -5
  - Branch pathway #3 is: 0

- Choice #4 is: Inserting an oral endotracheal tube.
  - Response #4 is: Done. Intubated without difficulty. Cervical collar remains in place. The patient has bilateral breath sounds.
  - Score value #4 is: 5
  - Branch pathway #4 is: 2

- Choice #5 is: Inserting an oral airway.
  - Response #5 is: Physician disagrees with using an oral airway. Make another selection.
  - Score value #5 is: -5
  - Branch pathway #5 is: 0
THE ENDOTUBE IS SECURED IN PLACE AND 100% OXYGEN VIA "T" PIECE IS ATTACHED. TO FURTHER ASSESS THE PATIENT'S CONDITION YOU WOULD EVALUATE WHICH OF THE FOLLOWING? # (CHOOSE AS MANY AS APPROPRIATE)

CHOICE #1 IS: URINE OUTPUT
RESPONSE #1 IS: URINE OUTPUT: A CATHETER HAS NOT BEEN INSERTED YET
SCORE VALUE #1 IS: 0

CHOICE #2 IS: SPUTUM COLOR
RESPONSE #2 IS: SPUTUM COLOR: BLOOD STREAKED
SCORE VALUE #2 IS: 0

CHOICE #3 IS: PULSE
RESPONSE #3 IS: PULSE: 120 AND REGULAR
SCORE VALUE #3 IS: 1

CHOICE #4 IS: RESPIRATORY RATE
RESPONSE #4 IS: RESPIRATORY RATE: 32 PER MINUTE
SCORE VALUE #4 IS: 1

CHOICE #5 IS: PUPILS
RESPONSE #5 IS: PUPILS: LEFT PUPIL SLIGHTLY LARGER THAN RIGHT. BOTH ARE REACTIVE TO LIGHT.
SCORE VALUE #5 IS: 1

CHOICE #6 IS: ALLEN TEST
RESPONSE #6 IS: ALLEN TEST: HYPEREMIA WITHIN 6 SECONDS
SCORE VALUE #6 IS: 1

CHOICE #7 IS: TEMPERATURE
RESPONSE #7 IS: TEMPERATURE: WITHIN NORMAL LIMITS
SCORE VALUE #7 IS: 0

CHOICE #8 IS: BLOOD PRESSURE
RESPONSE #8 IS: BLOOD PRESSURE: 135/90 mm Hg
SCORE VALUE #8 IS: 1

CHOICE #9 IS: LEVEL OF CONSCIOUSNESS
RESPONSE #9 IS: LEVEL OF CONSCIOUSNESS: CONFUSED AND COMBATIVE
SCORE VALUE #9 IS: 1
CHOICE #10 IS: RADIAL ARTERY GASES
RESPONSE #10 IS: RADIAL ARTERY GASES: PH 7.53, PaCO2 28, HCO3 22, PaO2 246, SaO2 98%
SCORE VALUE #10 IS: 1

CHOICE #11 IS: CHEST SYMMETRY
RESPONSE #11 IS: PARADOXICAL MOTION ON THE LEFT
SCORE VALUE #11 IS: 1

CHOICE #12 IS: PULMONARY CAPILLARY WEDGE PRESSURE
RESPONSE #12 IS: WEDGE: NO SWAN HAS BEEN INSERTED
SCORE VALUE #12 IS: 0

CHOICE #13 IS: HEMOGLOBIN LEVEL
RESPONSE #13 IS: HEMOGLOBIN LEVEL: 10 GRAMS
SCORE VALUE #13 IS: 1

CHOICE #14 IS: CHEST X RAY
RESPONSE #14 IS: CHEST X RAY: MULTIPLE RIB FRACTURES ON THE LEFT
SCORE VALUE #14 IS: 1

CHOICE #15 IS: CT SCAN
RESPONSE #15 IS: CT SCAN: NOT YET PERFORMED
SCORE VALUE #15 IS: 0

CHOICE #16 IS: BLOOD ALCOHOL
RESPONSE #16 IS: BLOOD ALCOHOL: DRAWN AND SENT TO LAB
SCORE VALUE #16 IS: -1

CHOICE #17 IS: INSPIRATORY FLOW
RESPONSE #17 IS: INSPIRATORY FLOW: UNABLE TO PERFORM
SCORE VALUE #17 IS: -5

CHOICE #18 IS: INSPIRATORY FORCE
RESPONSE #18 IS: INSPIRATORY FORCE: EQUIPMENT NOT AVAILABLE
SCORE VALUE #18 IS: -3

PRIMARY BRANCH IS TO SECTION #3
THE PATIENT WILL SOON BE MOVED TO CT SCAN FOR EVALUATION. WHILE YOU ARE WAITING, THE PHYSICIAN ASKS FOR YOUR RECOMMENDATIONS. BASED UPON THE INFORMATION PRESENTED, WHAT WOULD YOU RECOMMEND BE DONE UNTIL THE PATIENT IS TRANSFERRED TO CT? # (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED)

CHOICE #1 IS: ADD CPAP AT 5cm AND 100% OXYGEN
RESPONSE #1 IS: THE PATIENT IS PLACED ON CPAP AS RECOMMENDED
SCORE VALUE #1 IS: -5
BRANCH PATHWAY #1 IS: 5

CHOICE #2 IS: DECREASE THE OXYGEN LEVEL TO 40% VIA THE BRIGGS "T"
RESPONSE #2 IS: OXYGEN LEVEL DECREASED TO 40% AS RECOMMENDED.
SCORE VALUE #2 IS: -3
BRANCH PATHWAY #2 IS: 4

CHOICE #3 IS: MANUALLY VENTILATE THE PATIENT
RESPONSE #3 IS: PATIENT IS NOW BEING BAGGED WITH 100% OXYGEN.
SCORE VALUE #3 IS: 5
BRANCH PATHWAY #3 IS: 6

CHOICE #4 IS: MAINTAIN CURRENT CARE UNTIL AFTER CT SCAN
RESPONSE #4 IS: YOU PROCEED TO CT
SCORE VALUE #4 IS: 0
BRANCH PATHWAY #4 IS: 6
SECTION #4

TYPE OF SECTION: DECISION

MINIMAL PASSING SCORE: 4  SUM OF POINTS IN THIS SECTION: 2

SCENARIO:

YOU PROCEED TO CT WITH OXYGEN TO "T" PIECE. DURING THE PROCEDURE THE PATIENT APPEARS TO HAVE INCREASED DISTRESS. YOU WOULD NOW DO WHICH OF THE FOLLOWING? # (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED)

CHOICE #1 IS: INCREASE THE OXYGEN LEVEL TO 60%
RESPONSE #1 IS: OXYGEN LEVEL IS INCREASED TO 60%
SCORE VALUE #1 IS: 0
BRANCH PATHWAY #1 IS: 7

CHOICE #2 IS: INCREASE THE OXYGEN LEVEL TO 100%
RESPONSE #2 IS: OXYGEN LEVEL INCREASED TO 100%
SCORE VALUE #2 IS: 2
BRANCH PATHWAY #2 IS: 7

CHOICE #3 IS: PLACE THE PATIENT ON CPAP OF 5 CM AND 60% OXYGEN
RESPONSE #3 IS: THE PROCEDURE WILL BE STOPPED AND CPAP WILL BE ADDED.
SCORE VALUE #3 IS: -5
BRANCH PATHWAY #3 IS: 5

CHOICE #4 IS: MANUALLY VENTILATE THE PATIENT.
RESPONSE #4 IS: THE PATIENT IS NOW BEING BAGGED WITH 100% OXYGEN.
SCORE VALUE #4 IS: 5
BRANCH PATHWAY #4 IS: 6
THE CT SCAN IS NOW COMPLETED. RESULTS ARE PENDING. THE PATIENT HAS BEEN ON CPAP FOR 30 MINUTES AND HAS CONTINUED DISTRESS. SURGERY IS SCHEDULED. BASED UPON YOUR FINDINGS YOU WOULD RECOMMEND WHICH OF THE FOLLOWING? # (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED)

**CHOICE #1 IS: INCREASING THE AMOUNT OF OXYGEN TO 100%**
- RESPONSE #1 IS: DONE
- SCORE VALUE #1 IS: 1
- BRANCH PATHWAY #1 IS: 8

**CHOICE #2 IS: PLACE THE PATIENT ON A MECHANICAL VENTILATOR**
- RESPONSE #2 IS: NOTED
- SCORE VALUE #2 IS: 4
- BRANCH PATHWAY #2 IS: 6

**CHOICE #3 IS: DRAW AN ARTERIAL BLOOD GAS**
- RESPONSE #3 IS: NOTED
- SCORE VALUE #3 IS: 1
- BRANCH PATHWAY #3 IS: 8

**CHOICE #4 IS: MANUALLY VENTILATE THE PATIENT WITH 100% OXYGEN**
- RESPONSE #4 IS: NOTED
- SCORE VALUE #4 IS: 2
- BRANCH PATHWAY #4 IS: 6
MR. RODNEY TOLERATED THE CT PROCEDURE WITHOUT INCIDENT. HE HAS HAD VARIOUS OTHER STUDIES PERFORMED AND HAS BEEN SENT TO SURGERY FOR PLACEMENT OF AN ICP PROBE. A SMALL RIGHT SIDED HEMATOMA WAS ALSO DRAINED. HE IS NOW TO BE PLACED ON A VOLUME VENTILATOR POST OPERATIVELY. CONSIDERING THAT THE PATIENT IS 5'4" AND WEIGHS 135 POUNDS, YOU WOULD RECOMMEND WHICH OF THE FOLLOWING? # (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED)

CHOICE #1 IS: CONTROL MODE, RATE OF 12 MINUTE, TIDAL VOLUME 600cc, AND 40% OXYGEN
RESPONSE #1 IS: SET UP AS RECOMMENDED
SCORE VALUE #1 IS: 5
BRANCH PATHWAY #1 IS: 9

CHOICE #2 IS: IMV MODE, MANDATORY RATE OF 10 PER MINUTE, 600cc TIDAL VOLUME, AND 40% OXYGEN
RESPONSE #2 IS: SET UP AS RECOMMENDED
SCORE VALUE #2 IS: 5
BRANCH PATHWAY #2 IS: 9

CHOICE #3 IS: ASSIST MODE, CONTROL RATE 6 PER MINUTE, TIDAL VOLUME 600cc, 41% OXYGEN
RESPONSE #3 IS: PHYSICIAN DISAGRESS, MAKE ANOTHER SELECTION
SCORE VALUE #3 IS: -3
BRANCH PATHWAY #3 IS: 0

CHOICE #4 IS: CONTROL MODE, RATE OF 20 PER MINUTE, FIO2 OF .6
RESPONSE #4 IS: PHYSICIAN DISAGREES, MAKE ANOTHER SELECTION
SCORE VALUE #4 IS: -3
BRANCH PATHWAY #4 IS: 0

CHOICE #5 IS: IMV MODE, CONTROL RATE 10 PER MINUTE, TIDAL VOLUME OF 600cc, 80% OXYGEN
RESPONSE #5 IS: PHYSICIAN DISAGREES, MAKE ANOTHER SELECTION
SCORE VALUE #5 IS: -2
BRANCH PATHWAY #5 IS: 0
THE OXYGEN HAS BEEN INCREASED PER YOUR RECOMMENDATION. THE PATIENT CONTINUES TO HAVE LABORED BREATHING AND DISTRESS. WHICH OF THE FOLLOWING WOULD YOU RECOMMEND AT THIS TIME? # (CHOOSE ONLY ONE UNLESS OTHERWISE INDICATED)

CHOICE #1 IS: DRAW A SET OF RADIAL ARTERY GASES
RESPONSE #1 IS: DONE. RESULTS WILL BE CALLED TO YOU.
SCORE VALUE #1 IS: 0
BRANCH PATHWAY #1 IS: 8

CHOICE #2 IS: ADD 5cm OF CPAP AND 100% O2
RESPONSE #2 IS: THE EQUIPMENT IS NOT AVAILABLE AT THIS TIME. MAKE ANOTHER SELECTION.
SCORE VALUE #2 IS: -5
BRANCH PATHWAY #2 IS: 0

CHOICE #3 IS: PLACE THE PATIENT ON MECHANICAL VENTILATION.
RESPONSE #3 IS: A VENT IS BEING ASSEMBLED AND WILL SOON BE AVAILABLE. IS THERE ANYTHING ELSE YOU CAN DO IN THE MEANTIME?
SCORE VALUE #3 IS: 2
BRANCH PATHWAY #3 IS: 0

CHOICE #4 IS: MANUALLY VENTILATE THE PATIENT.
RESPONSE #4 IS: NOTED.
SCORE VALUE #4 IS: 2
BRANCH PATHWAY #4 IS: 6
SECTION #8

TYPE OF SECTION: DECISION

MINIMAL PASSING SCORE: 8
SUM OF POINTS IN THIS SECTION: 0

SCENARIO:

THE OXYGEN HAS BEEN INCREASED IN ACCORDANCE WITH YOUR RECOMMENDATIONS. ARTERIAL GASES ARE AS FOLLOWS: PH 7.55, PaCO2 21, HCO3 23, PaO2 128, SaO2 95%

BASED UPON THE DATA PRESENTED, YOU WOULD RECOMMEND WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED.)

CHOICE #1 IS: MAINTAIN THERAPY
RESPONSE #1 IS: NOTED.
SCORE VALUE #1 IS: 1
BRANCH PATHWAY #1 IS: 6

CHOICE #2 IS: ADD 5cm OF CPAP AND 100% OXYGEN.
RESPONSE #2 IS: THE EQUIPMENT IS NOT AVAILABLE AT THIS TIME. PLEASE MAKE ANOTHER SELECTION.
SCORE VALUE #2 IS: -5
BRANCH PATHWAY #2 IS: 0

CHOICE #3 IS: PLACE THE PATIENT ON MECHANICAL VENTILATION.
RESPONSE #3 IS: NOTED.
SCORE VALUE #3 IS: 2
BRANCH PATHWAY #3 IS: 6

CHOICE #4 IS: MANUALLY BAG THE PATIENT.
RESPONSE #4 IS: NOTED.
SCORE VALUE #4 IS: 2
BRANCH PATHWAY #4 IS: 6
THE PATIENT HAS BEEN ON THE VENT FOR ABOUT 30 MINUTES AND IS STABLE. YOU WOULD NOW EVALUATE WHICH OF THE FOLLOWING TO GET A BASELINE FEELING FOR THIS PATIENT'S OVERALL CARDIORESPIRATORY STATUS? # (CHOOSE AS MANY AS YOU FEEL ARE APPROPRIATE.)

CHOICE #1 IS: URINE OUTPUT
RESPONSE #1 IS: URINE OUTPUT: WITHIN NORMAL LIMITS
SCORE VALUE #1 IS: 0

CHOICE #2 IS: PULSE
RESPONSE #2 IS: PULSE: 100/MINUTE AND REGULAR
SCORE VALUE #2 IS: 1

CHOICE #3 IS: RESPIRATORY RATE
RESPONSE #3 IS: RESPIRATORY RATE: PATIENT NOT BREATHING SPONTANEOUSLY. MECHANICAL BREATHS ONLY.
SCORE VALUE #3 IS: 1

CHOICE #4 IS: PUPILS
RESPONSE #4 IS: PUPILS: LEFT PUPIL SLIGHTLY LARGER. BOTH ARE REACTIVE TO LIGHT.
SCORE VALUE #4 IS: 1

CHOICE #5 IS: CHEST X RAY
RESPONSE #5 IS: CHEST X RAY: ENODOTUBE 2cm ABOVE CARINA. RIBS 3 THRU 6 BROKEN LATERALLY AND ANTERIORLY ON THE LEFT.
SCORE VALUE #5 IS: 1

CHOICE #6 IS: LEVEL OF CONSCIOUSNESS
RESPONSE #6 IS: LOC: PATIENT IS IN BARBITURATE COMA.
SCORE VALUE #6 IS: 1

CHOICE #7 IS: INTRACRANIAL PRESSURE
RESPONSE #7 IS: ICP: 25 mmHg AND STABLE.
SCORE VALUE #7 IS: 1

CHOICE #8 IS: PULMONARY CAPILLARY WEDGE PRESSURE
RESPONSE #8 IS: PCWP: NO SWAN HAS BEEN INSERTED.
SCORE VALUE #8 IS: -1

CHOICE #9 IS: HEMOGLOBIN LEVEL
RESPONSE #9 IS: Hgb: 12 GRAMS.
SCORE VALUE #9 IS: 0
- CHOICE #10 IS: BLOOD ALCOHOL LEVEL
  - RESPONSE #10 IS: BLOOD ETOH: RESULTS STILL PENDING.
  - SCORE VALUE #10 IS: -1

- CHOICE #11 IS: PEAK VENTILATING PRESSURE
  - RESPONSE #11 IS: PEAK PRESSURE: 30 cm H2O
  - SCORE VALUE #11 IS: 1

- CHOICE #12 IS: PATIENT INSPIRATORY FORCE
  - RESPONSE #12 IS: NIF: PATIENT UNABLE TO PERFORM
  - SCORE VALUE #12 IS: -1

- CHOICE #13 IS: STATIC PRESSURE
  - RESPONSE #13 IS: STATIC PRESSURE: 20 cm H2O
  - SCORE VALUE #13 IS: 1

- CHOICE #14 IS: ARTERIAL BLOOD GASES
  - RESPONSE #14 IS: PH 7.50, PaCO2 28, HCO3 22, PaO2 110, SaO2 96%
  - SCORE VALUE #14 IS: 1

- CHOICE #15 IS: BLOOD PRESSURE
  - RESPONSE #15 IS: BLOOD PRESSURE: 145/90 mm Hg
  - SCORE VALUE #15 IS: 1

- CHOICE #16 IS: FLOW VOLUME LOOP
  - RESPONSE #16 IS: FLOW VOLUME LOOP: UNABLE TO PERFORM
  - SCORE VALUE #16 IS: -3

- CHOICE #17 IS: MEAN EXHALED CARBON DIOXIDE
  - RESPONSE #17 IS: MEAN EXHALED CO2: NO CAPNOGRAPH IS AVAILABLE.
  - SCORE VALUE #17 IS: -1

- CHOICE #18 IS: SHUNT STUDY
  - RESPONSE #18 IS: SHUNT STUDY: PHYSICIAN NOT WILLING TO ORDER.
  - SCORE VALUE #18 IS: -1

PRIMARY BRANCH IS TO SECTION #10
BASING UPON YOUR EVALUATION YOU WOULD RECOMMEND WHICH OF THE FOLLOWING? #
(CHOICE ONLY ONE UNLESS OTHERWISE DIRECTED)

CHOICE #1 IS: INCREASE THE MECHANICAL RATE AN ADDITIONAL 2 BREATHS PER MINUTE
: RESPONSE #1 IS: PHYSICIAN DISAGREES, TRY AGAIN.
: SCORE VALUE #1 IS: -3
: BRANCH PATHWAY #1 IS: 0

CHOICE #2 IS: DECREASE THE MECHANICAL RATE BY 2 BREATHS PER MINUTE
: RESPONSE #2 IS: PHYSICIAN DISAGREES, TRY AGAIN
: SCORE VALUE #2 IS: -3
: BRANCH PATHWAY #2 IS: 0

CHOICE #3 IS: INCREASE THE F1O2 TO .6
: RESPONSE #3 IS: PHYSICIAN DISAGREES, TRY AGAIN.
: SCORE VALUE #3 IS: -3
: BRANCH PATHWAY #3 IS: 0

CHOICE #4 IS: DECREASE THE F1O2 TO .3
: RESPONSE #4 IS: PHYSICIAN DISAGREES, TRY AGAIN
: SCORE VALUE #4 IS: -3
: BRANCH PATHWAY #4 IS: 0

CHOICE #5 IS: ADD 5cm OF PEEP
: RESPONSE #5 IS: PHYSICIAN DISAGREES, TRY AGAIN
: SCORE VALUE #5 IS: -3
: BRANCH PATHWAY #5 IS: 0

CHOICE #6 IS: MAINTAIN CURRENT THERAPY
: RESPONSE #6 IS: NOTED.
: SCORE VALUE #6 IS: 5
: BRANCH PATHWAY #6 IS: 11
ONE HOUR LATER, MR. RODNEY'S VITAL SIGNS ARE ESSENTIALLY THE SAME. HIS TEMPERATURE IS 101F. HIS ICP IS 32 mm Hg AND SHOWING MORE FREQUENT SPIKES. HIS GASES ARE AS FOLLOWS: pH 7.46, PaCO2 35 torr, HCO3 23, PaO2 100, SaO2 95%. BASED UPON THIS DATA, WHAT WOULD YOU RECOMMEND? (CHOOSE ONLY ONE UNLESS OTHERWISE INDICATED.)

: CHOICE #1 IS: INCREASE THE MECHANICAL RATE AN ADDITIONAL 2 BREATHS PER MINUTE.
: RESPONSE #1 IS: RATE CHANGE IS MADE PER YOUR RECOMMENDATION.
: SCORE VALUE #1 IS: 5
: BRANCH PATHWAY #1 IS: 12

: CHOICE #2 IS: DECREASE THE MECHANICAL RATE BY 2 BREATHS PER MINUTE.
: RESPONSE #2 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
: SCORE VALUE #2 IS: -3
: BRANCH PATHWAY #2 IS: 0

: CHOICE #3 IS: INCREASE THE FiO2 TO .6
: RESPONSE #3 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
: SCORE VALUE #3 IS: -3
: BRANCH PATHWAY #3 IS: 0

: CHOICE #4 IS: DECREASE THE FiO2 TO .3
: RESPONSE #4 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
: SCORE VALUE #4 IS: -3
: BRANCH PATHWAY #4 IS: 0

: CHOICE #5 IS: ADD 5cm OF PEEP.
: RESPONSE #5 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
: SCORE VALUE #5 IS: -3
: BRANCH PATHWAY #5 IS: 0

: CHOICE #6 IS: MAINTAIN CURRENT THERAPY.
: RESPONSE #6 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
: SCORE VALUE #6 IS: -3
: BRANCH PATHWAY #6 IS: 0
A capnograph now becomes available and is calibrated and attached to the patient "Y" connector. Gases are drawn and show an arterial PaCO2 of 26 torr. The capnograph shows an end tidal value of 23 mm Hg. The ICP has been dropping since the last vent change and is now reading 22 mm Hg. As you prepare to leave the room, you notice that the ICP has quickly increased to 40 mm Hg. What would be your course of action? (Choose only one unless otherwise directed.)

1. Decrease the mechanical rate an additional 2 breaths per minute.
   - Response #1 is: Physician disagrees. Make another selection.
   - Score value #1 is: -3
   - Branch pathway #1 is: 0

2. Increase the rate and additional 2 breaths per minute.
   - Response #2 is: Physician disagrees. Make another selection.
   - Score value #2 is: -3
   - Branch pathway #2 is: 0

3. Check the ventilator for malfunction.
   - Response #3 is: None evident. Make another selection.
   - Score value #3 is: -3
   - Branch pathway #3 is: 0

4. Redraw the gases.
   - Response #4 is: A blood gas kit is being sent for. Anything else while you are waiting? (Make another selection.)
   - Score value #4 is: -3
   - Branch pathway #4 is: 0

5. Manually ventilate the patient.
   - Response #5 is: Done. ICP drops to 24 mm Hg and is stable. Patient reconnected to vent.
   - Score value #5 is: 5
   - Branch pathway #5 is: 13

6. Change the capnograph.
   - Response #6 is: No other unit is available. Try again.
   - Score value #6 is: -3
   - Branch pathway #6 is: 0
SECTION #13  TYPE OF SECTION: DECISION

MINIMAL PASSING SCORE: 13  SUM OF POINTS IN THIS SECTION: -10

SCENARIO:

OVER THE NEXT HOUR THE PATIENT CONTINUES TO SPIKE HIS ICP WITH A SUCCESSFUL RESPONSE FROM BAGGING. DURING THE LAST 2 OR 3 SPIKES, A P\textsubscript{a}CO\textsubscript{2} OF 15 WAS REQUIRED TO PRODUCE AN ICP OF AROUND 24 mm Hg. THE ABG'S SHOW A P\textsubscript{a}CO\textsubscript{2} THAT IS WITHIN 5 mm Hg OF THE END TIDAL VALUE. BASED UPON THESE FINDINGS YOU WOULD RECOMMEND WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED.)

CHOICE #1 IS: ADDING 5cm OF PEEP.
RESPONSE #1 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
SCORE VALUE #1 IS: -3
BRANCH PATHWAY #1 IS: 0

CHOICE #2 IS: INCREASE THE MECHANICAL RATE TO PRODUCE A P\textsubscript{e}CO\textsubscript{2} OF 15 mm Hg.
RESPONSE #2 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
SCORE VALUE #2 IS: -3
BRANCH PATHWAY #2 IS: 0

CHOICE #3 IS: DECREASE THE MECHANICAL RATE TO PRODUCE AN END TIDAL CO\textsubscript{2} OF 15 mmHg.
RESPONSE #3 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
SCORE VALUE #3 IS: -3
BRANCH PATHWAY #3 IS: 0

CHOICE #4 IS: INCREASE THE TIDAL VOLUME UNTIL A P\textsubscript{e}CO\textsubscript{2} OF 15 IS PRODUCED.
RESPONSE #4 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
SCORE VALUE #4 IS: -3
BRANCH PATHWAY #4 IS: 0

CHOICE #5 IS: DECREASE THE TIDAL VOLUME UNTIL A P\textsubscript{e}CO\textsubscript{2} OF 15 torr IS ACHIEVED.
RESPONSE #5 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
SCORE VALUE #5 IS: -3
BRANCH PATHWAY #5 IS: 0

CHOICE #6 IS: MAINTAIN CURRENT THERAPY
RESPONSE #6 IS: NOTED. BAGGING WILL BE DONE AS NEEDED.
SCORE VALUE #6 IS: 5
BRANCH PATHWAY #6 IS: 14
THE NEXT DAY YOU ARE ONCE AGAIN ASSIGNED TO MR. RODNEY. AT THE BEDSIDE YOU
HAVE A LITTLE TIME TO REVIEW HIS CHART. WHICH OF THE FOLLOWING WOULD YOU LIKE
TO EXAMINE? (SELECT AS MANY AS YOU FEEL ARE APPROPRIATE.)

- CHOICE #1 IS: VITAL SIGNS
  - RESPONSE #1 IS: VITAL SIGNS: PATIENT REMAINS APNEIC AND ON VENT. BP 128/75
    mm Hg, TEMPERATURE 100 F, PULSE 128 AND REGULAR.
  - SCORE VALUE #1 IS: 1

- CHOICE #2 IS: PUPILS
  - RESPONSE #2 IS: PUPILS: LEFT SLIGHTLY SMALLER THAN YESTERDAY. BOTH ARE
    REACTIVE TO LIGHT.
  - SCORE VALUE #2 IS: 1

- CHOICE #3 IS: CHEST X-RAY
  - RESPONSE #3 IS: CHEST X-RAY: ENDTUBE 3 cm ABOVE CARINA. A GENERALIZED
    INCREASE IN DENSITY IS NOTED IN BOTH LUNG FIELDS.
  - SCORE VALUE #3 IS: 1

- CHOICE #4 IS: LEVEL OF CONSCIOUSNESS
  - RESPONSE #4 IS: LOC: PATIENT REMAINS IN BARBITURATE COMA.
  - SCORE VALUE #4 IS: 1

- CHOICE #5 IS: INTRACRANIAL PRESSURE
  - RESPONSE #5 IS: ICP: 18 mm Hg WITH LESS FREQUENT SPIKES THAN YESTERDAY
  - SCORE VALUE #5 IS: 1

- CHOICE #6 IS: PULMONARY CAPILLARY WEDGE PRESSURE
  - RESPONSE #6 IS: PCWP: NO SWAN HAS BEEN INSERTED.
  - SCORE VALUE #6 IS: -1

- CHOICE #7 IS: HEMOGLOBIN LEVEL
  - RESPONSE #7 IS: Hgb: 13 GRAMS
  - SCORE VALUE #7 IS: 0

- CHOICE #8 IS: PATIENT INSPIRATORY FORCE
  - RESPONSE #8 IS: NIF: PATIENT UNABLE TO PERFROM
  - SCORE VALUE #8 IS: -1

- CHOICE #9 IS: PEAK VENTILATING PRESSURE
  - RESPONSE #9 IS: PEAK PRESSURE: 40 cm H2O
  - SCORE VALUE #9 IS: 1
CHOICE #10 IS: CURRENT VENTILATOR SETTINGS
RESPONSE #10 IS: CURRENT VENT SETTINGS: TIDAL VOLUME 500cc's, FiO2 .6, RATE OF 14 BREATHS PER MINUTE, I:E OF 1:2, THE IMV MODE IS BEING USED AND NO PEEP HAS BEEN ADDED.
SCORE VALUE #10 IS: 1

CHOICE #11 IS: STATIC AIRWAY PRESSURE
RESPONSE #11 IS: STATIC PRESSURE: 30 cm H2O
SCORE VALUE #11 IS: 1

CHOICE #12 IS: MEAN EXHALED CO2
RESPONSE #12 IS: MEAN EXHALED CO2 IS 13 mm Hg.
SCORE VALUE #12 IS: -1

CHOICE #13 IS: MOST RECENT ARTERIAL GASES
RESPONSE #13 IS: ABGS: DRAWN 30" AGO, pH 7.51, PaCO2 26, HC03 24, PaO2 58 torr, SaO2 89%.
SCORE VALUE #13 IS: 1

CHOICE #14 IS: END TIDAL CO2
RESPONSE #14 IS: PeCO2: 23 torr
SCORE VALUE #14 IS: 1

CHOICE #15 IS: SPONTANEOUS VITAL CAPACITY
RESPONSE #15 IS: VITAL CAPACITY: PATIENT UNABLE TO PERFORM.
SCORE VALUE #15 IS: -1

CHOICE #16 IS: BREATH SOUNDS
RESPONSE #16 IS: BREATH SOUNDS: SLIGHT WHEEZING AND CRACKLES HEARD THRU OUT LUNGS. BREATH SOUNDS APPEAR COARSER IN BASES.
SCORE VALUE #16 IS: 1

CHOICE #17 IS: PULMONARY ANGIOGRAPHY
RESPONSE #17 IS: PULMONARY ANGIOGRAPHY: STUDY NOT PERFORMED.
SCORE VALUE #17 IS: -3

CHOICE #18 IS: SPUTUM CULTURE
RESPONSE #18 IS: SPUTUM CULTURE: FEW GRAM NEGATIVE RODS NOTED. CULTURE AND SENSITIVITY PENDING.
SCORE VALUE #18 IS: 0

PRIMARY BRANCH IS TO SECTION #15
SECTION #15  TYPE OF SECTION: DECISION

MINIMAL PASSING SCORE: 15  SUM OF POINTS IN THIS SECTION: -1

SCENARIO:

BASED UPON THE DATA ACCUMULATED, WHAT WOULD YOU RECOMMEND? (CHOOSE ONLY ONE UNLESS OTHERWISE INDICATED.)

CHOICE #1 IS: MAINTAIN CURRENT THERAPY
RESPONSE #1 IS: END OF PROBLEM
SCORE VALUE #1 IS: 0
BRANCH PATHWAY #1 IS: -1

CHOICE #2 IS: INCREASE MECHANICAL RATE TO 16/MINUTE
RESPONSE #2 IS: END OF PROBLEM
SCORE VALUE #2 IS: -3
BRANCH PATHWAY #2 IS: -1

CHOICE #3 IS: DECREASE RATE TO 12 PER MINUTE
RESPONSE #3 IS: END OF PROBLEM
SCORE VALUE #3 IS: -3
BRANCH PATHWAY #3 IS: -1

CHOICE #4 IS: ADD 5 cm PEEP
RESPONSE #4 IS: END OF PROBLEM
SCORE VALUE #4 IS: 5
BRANCH PATHWAY #4 IS: -1

CHOICE #5 IS: INCREASE FiO2 TO .8
RESPONSE #5 IS: END OF PROBLEM
SCORE VALUE #5 IS: -2
BRANCH PATHWAY #5 IS: -1

CHOICE #6 IS: INSERT SWAN
RESPONSE #6 IS: END OF PROBLEM
SCORE VALUE #6 IS: 2
BRANCH PATHWAY #6 IS: -1
TOTAL DESIGNATED SECTIONS: 12  SECTIONS COMPLETED: 12  STATUS: FINISHED
ACCUMULATED OPTIMAL SCORES:
INFORMATION = 0  DECISION = 0
MINIMAL REQUIRED SCORES:
PROFICIENCY = 0%  EFFICIENCY = 0%
BRANCH TYPES:  0 = INTERNAL BRANCH  -1 = END OF SIM.  99 = UNUSED CHOICE

: INTRODUCTORY SCENARIO :
YOU ARE THE STAFF PRACTITIONER ASSIGNED TO THE AFTERNOON SHIFT OF A 90 BED COMMUNITY HOSPITAL. YOU RECEIVE AN ORDER TO SET UP NASAL OXYGEN AT 4 LITERS PER MINUTE. YOU CHECK THE CHART AND FIND THAT THE PATIENT IS A 56 YEAR OLD MALE NAMED JOHN TAGGETT. HE IS ADMITTED FOR CHEST PAIN. THE ORDER AS DESCRIBED IS CORRECT.
AS YOU ENTER MR. TAGGETT'S ROOM YOU NOTICE HE IS SLUMPED OVER IN BED. TO RAPIDLY ASSESS HIS OVERALL CONDITION YOU SHOULD IMMEDIATELY EVALUATE WHICH OF THE FOLLOWING ITEMS? (SELECT AS MANY AS APPROPRIATE)

**CHOICE #1 IS: DEEP TENDON REFLEXES**
- RESPONSE #1 IS: DEEP TENDON REFLEXES: ABSENT
- SCORE VALUE #1 IS: -2

**CHOICE #2 IS: TEMPERATURE**
- RESPONSE #2 IS: TEMPERATURE: 98.2 F
- SCORE VALUE #2 IS: -1

**CHOICE #3 IS: LEVEL OF CONSCIOUSNESS**
- RESPONSE #3 IS: LEVEL OF CONSCIOUSNESS: NON RESPONSIVE
- SCORE VALUE #3 IS: 2

**CHOICE #4 IS: PAIN SENSATION**
- RESPONSE #4 IS: PAIN SENSATION: UNOBTAINABLE
- SCORE VALUE #4 IS: 0

**CHOICE #5 IS: BLOOD PRESSURE**
- RESPONSE #5 IS: BLOOD PRESSURE: UNOBTAINABLE
- SCORE VALUE #5 IS: -1

**CHOICE #6 IS: CAPILLARY REFILL**
- RESPONSE #6 IS: CAPILLARY REFILL: POOR
- SCORE VALUE #6 IS: -1

**CHOICE #7 IS: CENTRAL VENOUS PRESSURE**
- RESPONSE #7 IS: CVP: NOT MEASUREABLE
- SCORE VALUE #7 IS: -2

**CHOICE #8 IS: NEGATIVE INSPIRATORY FORCE**
- RESPONSE #8 IS: NIF: ZERO
- SCORE VALUE #8 IS: -2

**CHOICE #9 IS: PULSE**
- RESPONSE #9 IS: PULSE IS ABSENT
- SCORE VALUE #9 IS: -1

**CHOICE #10 IS: VITAL CAPACITY**
- RESPONSE #10 IS: VITAL CAPACITY: PATIENT UNABLE TO PERFORM
- SCORE VALUE #10 IS: -2
CHOICE #11 IS: PATIENT COLOR
RESPONSE #11 IS: PATIENT COLOR: CYANOTIC
SCORE VALUE #11 IS: 0

CHOICE #12 IS: TIDAL VOLUME
RESPONSE #12 IS: TIDAL VOLUME: PATIENT UNABLE TO PERFORM
SCORE VALUE #12 IS: -2

CHOICE #13 IS: RESPIRATORY RATE
RESPONSE #13 IS: RESPIRATORY RATE: NO CHEST MOVEMENT
SCORE VALUE #13 IS: 2

PRIMARY BRANCH IS TO SECTION #2
AFTER EVALUATING THE PATIENTS CONDITION YOU WOULD NOW DO WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED)

CHOICE #1 IS: ADMINISTER A PRECORDIAL THUMP
RESPONSE #1 IS: NO RESPONSE TO A PRECORDIAL THUMP. MAKE ANOTHER SELECTION.
SCORE VALUE #1 IS: -1
BRANCH PATHWAY #1 IS: 0

CHOICE #2 IS: CALL FOR HELP
RESPONSE #2 IS: CALL FOR HELP: DONE
SCORE VALUE #2 IS: 3
BRANCH PATHWAY #2 IS: 3

CHOICE #3 IS: PLACE A "STAT" CALL FOR AN EKG MACHINE
RESPONSE #3 IS: EKG IS PAGED, MAKE ANOTHER SELECTION.
SCORE VALUE #3 IS: -3
BRANCH PATHWAY #3 IS: 0

CHOICE #4 IS: POSITION THE HEAD AND GIVE TWO SLOW BREATHS
RESPONSE #4 IS: PATIENT POSITIONED. BREATHS GIVEN. PATIENT VENTILATES EASILY.
SCORE VALUE #4 IS: 2
BRANCH PATHWAY #4 IS: 4

CHOICE #5 IS: BEGIN CARDIAC COMPRESSIONS
RESPONSE #5 IS: COMPRESSIONS ARE STARTED
SCORE VALUE #5 IS: -2
BRANCH PATHWAY #5 IS: 5
While awaiting assistance, you would do which of the following? # (Choose only one unless otherwise directed)

CHOICE #1 IS: POSITION THE HEAD AND GIVE TWO SLOW BREATHS
RESPONSE #1 IS: THE PATIENT VENTILATES EASILY
SCORE VALUE #1 IS: 3
BRANCH PATHWAY #1 IS: 4

CHOICE #2 IS: BEGIN CARDIAC COMPRESSIONS
RESPONSE #2 IS: COMPRESSIONS ARE STARTED.
SCORE VALUE #2 IS: -1
BRANCH PATHWAY #2 IS: 5

CHOICE #3 IS: ADMINISTER A PRECORDIAL THUMP
RESPONSE #3 IS: NO RESPONSE TO A PRECORDIAL THUMP. MAKE ANOTHER SELECTION
SCORE VALUE #3 IS: 0
BRANCH PATHWAY #3 IS: 0

CHOICE #4 IS: DRAW A "STAT" BLOOD GAS
RESPONSE #4 IS: UNABLE TO DRAW BLOOD GASES, MAKE ANOTHER SELECTION.
SCORE VALUE #4 IS: -3
BRANCH PATHWAY #4 IS: 0
A code has been called and while you are performing mouth to mouth, someone enters the room to assist by doing cardiac compressions. They begin at a rate of 80/minute and are using excellent technique. You would now: # (choose only one unless otherwise directed)

Choice #1 is: Ventilating the patient at a rate of one breath for every five compressions

Response #1 is: Ventilation is started at one breath for every five compressions

Score value #1 is: 2
Branch pathway #1 is: 6

Choice #2 is: Ventilating the patient at a rate of 2 breaths for every five compressions

Response #2 is: Ventilation at a rate of two breaths for every five compressions is started.

Score value #2 is: -2
Branch pathway #2 is: 6

Choice #3 is: Ventilating the patient at a rate of 2 breaths for every 15 compressions

Response #3 is: Ventilation at a rate of two breaths for every fifteen compressions is started.

Score value #3 is: -2
Branch pathway #3 is: 6

Choice #4 is: Ventilating the patient at a rate of 4 breaths for every 15 compressions

Response #4 is: Ventilation at a rate of four breaths for every 15 compressions is started.

Score value #4 is: -2
Branch pathway #4 is: 6
WHILE YOU ARE PERFORMING CARDIAC MASSAGE, SOMEONE ENTERS THE ROOM AND TAKES OVER FOR YOU SO YOU CAN DO MOUTH TO MOUTH, YOU POSITION THE HEAD, GIVE FOUR QUICK BREATHS AND DO WHICH OF THE FOLLOWING? (SELECT ONLY ONE UNLESS OTHERWISE DIRECTED)

**CHOICE #1 IS:** VENTILATE THE PATIENT AT A RATE OF ONE BREATH FOR EVERY FIVE COMPRESSIONS

**RESPONSE #1 IS:** VENTILATION AT A RATE OF ONE BREATH FOR EVERY FIVE COMPRESSIONS IS STARTED.

**SCORE VALUE #1 IS:** 2

**BRANCH PATHWAY #1 IS:** 6

**CHOICE #2 IS:** VENTILATE AT A RATE OF 2 BREATHS FOR EVERY 5 COMPRESSIONS

**RESPONSE #2 IS:** VENTILATION AT A RATE OF 2 BREATHS FOR EVERY 5 COMPRESSIONS IS STARTED.

**SCORE VALUE #2 IS:** -2

**BRANCH PATHWAY #2 IS:** 6

**CHOICE #3 IS:** VENTILATE THE PATIENT AT A RATE OF 2 BREATHS FOR EVERY 15 COMPRESSIONS

**RESPONSE #3 IS:** VENTILATION AT A RATE OF 2 BREATHS FOR EVERY 15 COMPRESSIONS IS STARTED.

**SCORE VALUE #3 IS:** -2

**BRANCH PATHWAY #3 IS:** 6

**CHOICE #4 IS:** VENTILATE THE PATIENT AT A RATE OF 4 BREATHS FOR EVERY 15 COMPRESSIONS

**RESPONSE #4 IS:** VENTILATION AT A RATE OF 4 BREATHS FOR EVERY 15 COMPRESSIONS IS STARTED.

**SCORE VALUE #4 IS:** -2

**BRANCH PATHWAY #4 IS:** 6
AFTER TWO MINUTES OF RESUSCITATION THE CODE TEAM ARRIVES, AN IV IS STARTED, THE PATIENT IS INTUBATED AND IS BEING MANUALLY VENTILATED VIA A HOPE-II BAG. WITH EACH BREATH IT IS BECOMING INCREASINGLY MORE DIFFICULT TO VENTILATE THE PATIENT. YOU WOULD NOW ... (CHOOSE AS MANY AS APPROPRIATE)

1. OBTAIN AN ARTERIAL BLOOD GAS
   - BLOOD DRAWN, RESULTS ARE PENDING
   - SCORE VALUE #1 IS: 0

2. USE TWO HANDS TO SQUEEZE THE BAG AND INCREASE THE DELIVERY PRESSURE
   - DIFFICULTY CONTINUES EVEN AFTER USING TWO HANDS
   - SCORE VALUE #2 IS: -2

3. PLACE THE PATIENT ON A MECHANICAL VENTILATOR
   - NO MECHANICAL VENTILATOR IS AVAILABLE AT THIS TIME
   - SCORE VALUE #3 IS: -1

4. AUSCULTATE THE CHEST
   - AUSCULTATION REVEALS MINIMAL SOUNDS ON THE RIGHT, NORMAL ON THE LEFT
   - SCORE VALUE #4 IS: 2

5. SUCTION THE PATIENT
   - PROBLEM STILL EXISTS AFTER SUCTIONING
   - SCORE VALUE #5 IS: 1

6. CHECK ENDOTUBE PILOT LINE FOR A LEAK
   - THE PILOT LINE APPEARS TO BE WORKING FINE
   - SCORE VALUE #6 IS: -1

7. CHECK THE HOPE BAG FOR A MALFUNCTION
   - HOPE BAG APPEARS TO BE WORKING FINE
   - SCORE VALUE #7 IS: 1

8. INCREASE ENDOTUBE CUFF PRESSURE
   - CUFF PRESSURE INCREASED. PROBLEM STILL EXISTS
   - SCORE VALUE #8 IS: -1

9. DECREASE THE OXYGEN FLOW TO THE BAG
   - OXYGEN FLOW DECREASED. PROBLEM STILL EXISTS
   - SCORE VALUE #9 IS: 0
CHOICE #10 IS: CHECK VITAL SIGNS
RESPONSE #10 IS: VITAL SIGNS: PULSE IS 110/MINUTE WITHOUT CPR AND IRREGULAR. THE BLOOD PRESSURE IS 85/60 MM HG AND INCREASING.
SCORE VALUE #10 IS: 1

CHOICE #11 IS: POSITION OF TRACHEA
RESPONSE #11 IS: TRACHEA FEELS AS THOUGH IT IS SHIFTED TOWARD THE RIGHT HEMITHORAX
SCORE VALUE #11 IS: 2

CHOICE #12 IS: MEASURE THE PATIENT TIDAL VOLUME
RESPONSE #12 IS: EQUIPMENT IS NOT AVAILABLE TO MEASURE TIDAL VOLUME.
SCORE VALUE #12 IS: -2

CHOICE #13 IS: RECOMMEND A STAT CHEST X RAY
RESPONSE #13 IS: X RAY SHOWS A 50% PNEUMOTHORAX ON THE RIGHT
SCORE VALUE #13 IS: 2

PRIMARY BRANCH IS TO SECTION #7
A physician now enters the room. He asks for your recommendation. You would now recommend which of the following? (Choose only one unless otherwise directed)

**Choice #1** is: Inserting a 18 gauge needle between the 2nd and 3rd rib, mid clavicular on the right side
- **Response #1** is: The patient becomes much easier to ventilate after the needle is inserted.
- **Score Value #1** is: 3
- **Branch Pathway #1** is: 8

**Choice #2** is: Placing the patient on a ventilator
- **Response #2** is: The physician disagrees about putting the patient on a ventilator. Make another selection.
- **Score Value #2** is: -2
- **Branch Pathway #2** is: 0

**Choice #3** is: Recommend continuing bag/valve ventilation and add PEEP
- **Response #3** is: The physician disagrees about continuing to bag and adding PEEP
- **Score Value #3** is: -3
- **Branch Pathway #3** is: 0

**Choice #4** is: Extubating the patient and ventilating via a face mask
- **Response #4** is: The physician disagrees about extubating the patient.
- **Score Value #4** is: -3
- **Branch Pathway #4** is: 0

**Choice #5** is: Inserting an 18 gauge needle between the 2nd and 3rd ribs, mid clavicular on the left side
- **Response #5** is: Inserting needle on the left side: physician disagrees. Make another selection.
- **Score Value #5** is: -3
- **Branch Pathway #5** is: 0
**Scenario:**

The EKG now shows a discoordinated electrical impulse and the patient has no pulse. One half mg of epinephrine has already been given. Which of the following is used next in the management of this patient? (Choose only one unless otherwise directed)

- **Choice #1** is: The physician usually stops the resuscitation effort
  - **Response #1**: Resuscitation is stopped and the patient dies.
  - **Score Value #1**: -2
  - **Branch Pathway #1**: -1

- **Choice #2** is: A bolus of lidocaine is given IV push
  - **Response #2**: A bolus of lidocaine is given. Make another selection.
  - **Score Value #2**: 0
  - **Branch Pathway #2**: 0

- **Choice #3** is: Defibrillation at 200 watt-seconds is attempted
  - **Response #3**: Defibrillation is performed.
  - **Score Value #3**: 3
  - **Branch Pathway #3**: 9

- **Choice #4** is: The chest is surgically opened for cardiac massage
  - **Response #4**: An attempt to perform open chest massage is done without access. The patient expires.
  - **Score Value #4**: -2
  - **Branch Pathway #4**: -1

- **Choice #5** is: A precordial thump is administered
  - **Response #5**: No response to a precordial thump. Make another selection.
  - **Score Value #5**: 0
  - **Branch Pathway #5**: 0
DEFIBRILLATION IS SUCCESSFUL. MR. TAGGETT'S BLOOD PRESSURE INCREASES TO 100/70, HIS PULSE IS 120 AND HE BEGINS TO SPONTANEOUSLY BREATH OVER THE NEXT FEW MINUTES. THE PHYSICIAN IN CHARGE STOPS CPR AND WANTS YOU TO "SET SOME OXYGEN UP" ON THIS PATIENT. WHICH OF THE FOLLOWING WOULD YOU RECOMMEND? (PLEASE SELECT ONLY ONE)

CHOICE #1 IS: VENTITRACH, FIO2 .28 WITH HEATED HUMIDITY
RESPONSE #1 IS: PHYSICIAN DISAGREES TO A 28% VENTITRACH WITH HEATED HUMIDITY.
SCORE VALUE #1 IS: -1
BRANCH PATHWAY #1 IS: 0

CHOICE #2 IS: VENTITRACH, FIO2 .4 WITHOUT HUMIDITY
RESPONSE #2 IS: THE PHYSICIAN DISAGREES TO A 40% VENTITRACH WITHOUT HUMIDITY.
SCORE VALUE #2 IS: -1
BRANCH PATHWAY #2 IS: 0

CHOICE #3 IS: BRIGGS "T", FIO2 1.0 VIA BALL JET NEBULIZER
RESPONSE #3 IS: THE 100% BALL JET NEBULIZER IS SET UP AS RECOMMENDED.
SCORE VALUE #3 IS: 2
BRANCH PATHWAY #3 IS: 10

CHOICE #4 IS: TRACHEOSTOMY MASK, FIO2 .6 WITH ULTRASONIC NEBULIZER
RESPONSE #4 IS: THE PHYSICIAN DISAGREES WITH USING A 60% TRACH MASK AND ULTRASONIC.
SCORE VALUE #4 IS: -2
BRANCH PATHWAY #4 IS: 0

CHOICE #5 IS: AEROSOL "T" WITH 100 CC TAIL RESERVOIR, BALL JET NEBULIZER SET AT AN FIO2 OF 1.0
RESPONSE #5 IS: THE BRIGGS "T" WITH TAIL IS SET UP AT 100% AS RECOMMENDED.
SCORE VALUE #5 IS: 3
BRANCH PATHWAY #5 IS: 10

CHOICE #6 IS: BRIGGS "T", FIO2 .4 VIA JET NEBULIZER
RESPONSE #6 IS: THE PHYSICIAN DISAGREES WITH A BRIGGS "T" AND 40% OXYGEN
SCORE VALUE #6 IS: -1
BRANCH PATHWAY #6 IS: 0
### SECTION #10 
**TYPE OF SECTION: INFORMATION**

- **MINIMAL PASSING SCORE:** 10  
- **SUM OF POINTS IN THIS SECTION:** 3

#### SCENARIO:

The next day you find that Mr. Taggett extubated himself during the midnight shift. He is currently on a nasal cannula at 4 L/M. You stop by his room, look at his chart and do a quick bedside assessment. Which of the following would you examine? (Choose as many as appropriate)

1. **Choice #1 is: Respiratory Rate**  
   - **Response #1:** Respiratory rate is 16 per minute  
   - **Score Value #1:** 1

2. **Choice #2 is: Most Recent Blood Gases**  
   - **Response #2:** Drawn this morning, pH 7.35, PCO2 45, HCO3 24, PO2 42, SO2 73%  
   - **Score Value #2:** 1

3. **Choice #3 is: CAT Scan**  
   - **Response #3:** No report of a CAT scan on the patient's chart.  
   - **Score Value #3:** -2

4. **Choice #4 is: EKG Report**  
   - **Response #4:** The EKG reveals a sinus rhythm, slight S-T elevation. Interpreted as a "stable post MI".  
   - **Score Value #4:** 0

5. **Choice #5 is: Capillary Refill**  
   - **Response #5:** Good response to capillary refill  
   - **Score Value #5:** 0

6. **Choice #6 is: Blood Pressure**  
   - **Response #6:** Blood pressure is 128/86  
   - **Score Value #6:** 1

7. **Choice #7 is: Patient Color**  
   - **Response #7:** Patient color is normal  
   - **Score Value #7:** 1

8. **Choice #8 is: Allen's Test**  
   - **Response #8:** Good perfusion via left ulnar artery as detected by Allen's test.  
   - **Score Value #8:** 0

9. **Choice #9 is: Pulse**  
   - **Response #9:** The pulse is 71/minute, regular and strong.  
   - **Score Value #9:** 1
CHOICE #10 IS: CARDIAC ENZYMES
RESPONSE #10 IS: THE CARDIAC ENZYMES RESULTS ARE PENDING.
SCORE VALUE #10 IS: 0

CHOICE #11 IS: BREATH SOUNDS
RESPONSE #11 IS: BREATH SOUNDS ARE EQUAL AND CLEAR.
SCORE VALUE #11 IS: 1

CHOICE #12 IS: VITAL CAPACITY
RESPONSE #12 IS: VITAL CAPACITY IS WITHIN NORMAL LIMITS.
SCORE VALUE #12 IS: -2

CHOICE #13 IS: ELECTROLYTES
RESPONSE #13 IS: ELECTROLYTES ARE WITHIN NORMAL LIMITS.
SCORE VALUE #13 IS: 0

CHOICE #14 IS: TEMPERATURE
RESPONSE #14 IS: TEMPERATURE IS 98.8 F AS MEASURED ORALLY.
SCORE VALUE #14 IS: 0

CHOICE #15 IS: PATIENT CHIEF COMPLAINT
RESPONSE #15 IS: NO COMPLAINT IS OFFERED. "I'M FEELING FINE."
SCORE VALUE #15 IS: 1
Based upon your evaluation, which of the following would you recommend? # (Select only one unless otherwise directed)

- **CHOICE #1 IS: REINTUBATING THE PATIENT**
  - RESPONSE #1 IS: THE PHYSICIAN DISAGREES WITH REINTUBATION. TRY AGAIN.
  - SCORE VALUE #1 IS: -3
  - BRANCH PATHWAY #1 IS: 0

- **CHOICE #2 IS: INCREASING THE FLOW OF THE NASAL OXYGEN TO 6 LITERS PER MINUTE**
  - RESPONSE #2 IS: THE PHYSICIAN DISAGREES WITH INCREASING THE FLOW OF OXYGEN. MAKE ANOTHER SELECTION.
  - SCORE VALUE #2 IS: -2
  - BRANCH PATHWAY #2 IS: 0

- **CHOICE #3 IS: REDRAWING THE BLOOD GAS**
  - RESPONSE #3 IS: THE PHYSICIAN IS RELUCTANT BUT IS WILLING TO TRY AND DRAW ANOTHER BLOOD GAS.
  - SCORE VALUE #3 IS: 1
  - BRANCH PATHWAY #3 IS: 12

- **CHOICE #4 IS: PLACING THE PATIENT ON A NON REBREATHING MASK SYSTEM**
  - RESPONSE #4 IS: THE PHYSICIAN DISAGREES WITH SETTING UP A NON REBREATHING MASK SYSTEM.
  - SCORE VALUE #4 IS: -3
  - BRANCH PATHWAY #4 IS: 0

- **CHOICE #5 IS: IPPB WITH A BETA-2 DRUG**
  - RESPONSE #5 IS: THE PHYSICIAN DISAGREES WITH ADMINISTERING IPPB.
  - SCORE VALUE #5 IS: -2
  - BRANCH PATHWAY #5 IS: 0

- **CHOICE #6 IS: GETTING A STAT CHEST X RAY**
  - RESPONSE #6 IS: THE PHYSICIAN DISAGREES WITH OBTAINING A STAT CHEST X RAY.
  - SCORE VALUE #6 IS: -3
  - BRANCH PATHWAY #6 IS: 0
SECTION #12 TYPE OF SECTION: DECISION
MINIMAL PASSING SCORE: 12 SUM OF POINTS IN THIS SECTION: -6

SCENARIO:
The physician's reluctance involves the difficulty in doing the puncture. His real interest is in evaluating Mr. Taggett's oxygenation status. What techniques are available to help the physician gather the desired data yet minimize the cost and invasiveness? Only one unless otherwise directed.

CHOICE #1 IS: CAPNOGRAPHY
RESPONSE #1 IS: The physician disagrees with using capnography. Make another selection.
SCORE VALUE #1 IS: -2
BRANCH PATHWAY #1 IS: 0

CHOICE #2 IS: OXIMETRY
RESPONSE #2 IS: End of problem
SCORE VALUE #2 IS: 3
BRANCH PATHWAY #2 IS: -1

CHOICE #3 IS: TRANSCUTANEOUS MONITORING
RESPONSE #3 IS: End of problem
SCORE VALUE #3 IS: 1
BRANCH PATHWAY #3 IS: -1

CHOICE #4 IS: MASS SPECTROMETRY
RESPONSE #4 IS: A mass spec is not available at this hospital, make another selection.
SCORE VALUE #4 IS: -2
BRANCH PATHWAY #4 IS: 0

CHOICE #5 IS: SWAN GANZ CATHETERIZATION
RESPONSE #5 IS: The physician disagrees with the idea of using a Swan. Make another selection.
SCORE VALUE #5 IS: -3
BRANCH PATHWAY #5 IS: 0

CHOICE #6 IS: PLACEMENT OF AN ARTERIAL LINE
RESPONSE #6 IS: The physician disagrees with inserting an arterial line. Make another selection.
SCORE VALUE #6 IS: -3
BRANCH PATHWAY #6 IS: 0
YOU ARE THE RESPIRATORY THERAPIST ASSIGNED TO THE PULMONARY MEDICINE FLOOR OF A 400 BED HOSPITAL. THE PHYSICIAN ON DUTY, DR. HOWARD, CALLS TO INFORM YOU THAT MR. BOB NELSON HAS JUST BEEN ADMITTED TO THE UNIT FROM THE ER WHERE HIS CHIEF COMPLAINT WAS SHORTNESS OF BREATH. DR. HOWARD ALSO STATES THAT SHE IS UNABLE TO SEE MR. NELSON RIGHT NOW AND SHE WANTS YOU TO ASSESS HIS CONDITION AND REPORT BACK TO HER.
SECTION #1

MINIMAL PASSING SCORE: 1

SUM OF POINTS IN THIS SECTION: 4

SCENARIO:

UPON ENTERING MR. NELSON'S ROOM, YOU WOULD ASSESS WHICH OF THE FOLLOWING? (CHOOSE AS MANY AS YOU FEEL ARE APPROPRIATE.)

CHOICE #1 IS: PULSE
RESPONSE #1 IS: PULSE: 110/MINUTE
SCORE VALUE #1 IS: 2

CHOICE #2 IS: GAG REFLEX
RESPONSE #2 IS: GAG REFLEX: INTACT AND NORMAL
SCORE VALUE #2 IS: -1

CHOICE #3 IS: BLOOD PRESSURE
RESPONSE #3 IS: BLOOD PRESSURE: 140/90 MM HG
SCORE VALUE #3 IS: 1

CHOICE #4 IS: DEEP PAIN RESPONSE
RESPONSE #4 IS: PAIN RESPONSE: NORMAL
SCORE VALUE #4 IS: -2

CHOICE #5 IS: BABINSKI REFLEX
RESPONSE #5 IS: BABINSKI: WITHIN NORMAL LIMITS
SCORE VALUE #5 IS: -1

CHOICE #6 IS: URINE OUTPUT
RESPONSE #6 IS: URINE OUTPUT: NONE SINCE ADMISSION
SCORE VALUE #6 IS: 0

CHOICE #7 IS: APPEARANCE OF CHEST
RESPONSE #7 IS: CHEST: BARREL CHESTED WITH HOOVERS SIGN PRESENT
SCORE VALUE #7 IS: 1

CHOICE #8 IS: PUPILLARY REACTIONS
RESPONSE #8 IS: PUPILLARY RESPONSE: REACTIVE TO LIGHT
SCORE VALUE #8 IS: -1

CHOICE #9 IS: OCULAR PRESSURE
RESPONSE #9 IS: OCULAR PRESSURE: WITHIN NORMAL LIMITS
SCORE VALUE #9 IS: -2

CHOICE #10 IS: GENERAL APPEARANCE
RESPONSE #10 IS: APPEARANCE: WHITE OVERWEIGHT MALE WITH DIAPHORESIS AND DYSPNEA
SCORE VALUE #10 IS: 1
**CHOICE #11 IS: NEGATIVE INSPIRATORY FORCE**
- RESPONSE #11 IS: NIF: EQUIPMENT NOT AVAILABLE
- SCORE VALUE #11 IS: -1

**CHOICE #12 IS: COLOR OF NAILBEDS**
- RESPONSE #12 IS: NAILBED COLOR: MILDLY CYANOTIC, CLUBBING ALSO NOTED
- SCORE VALUE #12 IS: 2

**CHOICE #13 IS: RANGE OF MOTION OF EXTREMITIES**
- RESPONSE #13 IS: RANGE OF MOTION: WITHIN NORMAL LIMITS
- SCORE VALUE #13 IS: -1

**CHOICE #14 IS: RESPIRATORY RATE AND PATTERN**
- RESPONSE #14 IS: RESPIRATORY RATE: 24 BREATHS PER MINUTE, SHALLOW WITH USE OF ACCESSORY MUSCLES
- SCORE VALUE #14 IS: 2

**CHOICE #15 IS: PATIENT AGE**
- RESPONSE #15 IS: PATIENT AGE: 57 YEARS OLD
- SCORE VALUE #15 IS: 1

**CHOICE #16 IS: PEDAL EDEMA**
- RESPONSE #16 IS: PEDAL EDEMA: PRESENT AND RATED AS 2+
- SCORE VALUE #16 IS: 1

**CHOICE #17 IS: PATIENT HEIGHT AND WEIGHT**
- RESPONSE #17 IS: HEIGHT AND WEIGHT: 69 INCHES, 240 POUNDS
- SCORE VALUE #17 IS: 1

**CHOICE #18 IS: BREATH SOUNDS**
- RESPONSE #18 IS: BREATH SOUNDS: COARSE CRACKLES HEARD THROUGHOUT WITH DECREASED AERATION AT BASES.
- SCORE VALUE #18 IS: 2

**CHOICE #19 IS: BOWEL SOUNDS**
- RESPONSE #19 IS: BOWEL SOUNDS: WITHIN NORMAL LIMITS
- SCORE VALUE #19 IS: -1

**CHOICE #20 IS: SMOKING HISTORY**
- RESPONSE #20 IS: SMOKING HISTORY: 2 PACKS PER DAY FOR 27 YEARS
- SCORE VALUE #20 IS: 1

**CHOICE #21 IS: COLOR OF URINE**
- RESPONSE #21 IS: COLOR OF URINE: NORMAL
- SCORE VALUE #21 IS: -1

**CHOICE #22 IS: HISTORY OF CARDIOPULMONARY DISEASE**
- RESPONSE #22 IS: HISTORY: NEVER HOSPITALIZED PREVIOUSLY BUT HE DOES COMPLAIN OF FREQUENT COLDs WITH INCREASED SPUTUM PRODUCTION
- SCORE VALUE #22 IS: 1
CHOICE #23 IS: TEMPERATURE
RESPONSE #23 IS: TEMPERATURE: 99 F
SCORE VALUE #23 IS: 0

CHOICE #24 IS: DEEP TENDON REFLEXES
RESPONSE #24 IS: DEEP TENDON REFLEXES: NORMAL RESPONSE
SCORE VALUE #24 IS: -1

PRIMARY BRANCH IS TO SECTION #2
SECTION #2  TYPE OF SECTION: DECISION

MINIMAL PASSING SCORE: 2  SUM OF POINTS IN THIS SECTION: -8

SCENARIO:

YOU CONTACT DR. HOWARD AND REPORT YOUR FINDINGS. SHE ASKS FOR YOUR RECOMMENDATION REGARDING MR. NELSON'S CARE. WHICH OF THE FOLLOWING WOULD YOU RECOMMEND? # (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED)

CHOICE #1 IS: NO TREATMENT IS INDICATED AT THIS TIME
RESPONSE #1 IS: DR. HOWARD DISAGREES. MAKE ANOTHER SELECTION
SCORE VALUE #1 IS: -3
BRANCH PATHWAY #1 IS: 0

CHOICE #2 IS: ADMINISTER O2 VIA NASAL CANNULA AT 2 L/M
RESPONSE #2 IS: DR. HOWARD AGREES AND YOU SET UP THE EQUIPMENT AS ORDERED.
SCORE VALUE #2 IS: 2
BRANCH PATHWAY #2 IS: 5

CHOICE #3 IS: ADMINISTER OXYGEN VIA NASAL CANNULA AT 6 L/M
RESPONSE #3 IS: DR. HOWARD COMPLIES WITH YOUR REQUEST. THE EQUIPMENT IS SET UP AS ORDERED.
SCORE VALUE #3 IS: -1
BRANCH PATHWAY #3 IS: 4

CHOICE #4 IS: ADMINISTER O2 AT 28% VIA VENTURI MASK
RESPONSE #4 IS: DR. HOWARD AGREES. THE EQUIPMENT IS OBTAINED AND SET UP.
SCORE VALUE #4 IS: 2
BRANCH PATHWAY #4 IS: 5

CHOICE #5 IS: ADMINISTER OXYGEN VIA NON-REBREATTHING MASK AT 10 L/M.
RESPONSE #5 IS: DR. HOWARD COMPLIES WITH YOUR REQUEST. THE EQUIPMENT IS SET UP AND THE FLOW ADJUSTED AS REQUIRED.
SCORE VALUE #5 IS: -3
BRANCH PATHWAY #5 IS: 3

CHOICE #6 IS: INTUBATE THE PATIENT AND TRANSFER TO THE INTENSIVE CARE UNIT.
RESPONSE #6 IS: DR. HOWARD DISAGREES. MAKE ANOTHER SELECTION.
SCORE VALUE #6 IS: -5
BRANCH PATHWAY #6 IS: 0
Fifteen minutes later you observe that Mr. Nelson is becoming more drowsy and his respirations are slowing. It also appears that he is not breathing as deep as he was earlier. Upon speaking to Mr. Nelson you find that he is not as coherent as he was earlier. You call Dr. Howard and recommend which of the following? # (Choose only one unless otherwise directed).

Choice #1 is: Continue present therapy and observe the patient.
Response #1 is: Dr. Howard disagrees. Make another selection.
Score value #1 is: -3
Branch pathway #1 is: 0

Choice #2 is: Decrease the oxygen level to 2 L/M via nasal cannula
Response #2 is: Dr. Howard agrees. The change is made as recommended.
Score value #2 is: 0
Branch pathway #2 is: 5

Choice #3 is: Administer 28% oxygen via venti mask
Response #3 is: Dr. Howard agrees. The change is made per your recommendation.
Score value #3 is: 0
Branch pathway #3 is: 5

Choice #4 is: Set up oxygen at 6 L/M via nasal cannula
Response #4 is: Dr. Howard disagrees. Make another selection.
Score value #4 is: -2
Branch pathway #4 is: 0

Choice #5 is: Increase the oxygen level to 100%
Response #5 is: Dr. Howard disagrees. Make another selection.
Score value #5 is: -3
Branch pathway #5 is: 0
TWENTY MINUTES LATER YOU OBSERVE THAT MR. NELSON IS BECOMING DROWSY AND HIS RESPIRATIONS ARE SLOWING AND BECOMING MORE SHALLOW. YOU CONTACT DR. HOWARD AND SUGGEST WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE INDICATED.)

**CHOICE #1 IS:** CONTINUE PRESENT THERAPY AND OBSERVE THE PATIENT.
**RESPONSE #1 IS:** PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
**SCORE VALUE #1 IS:** -3
**BRANCH PATHWAY #1 IS:** 0

**CHOICE #2 IS:** DECREASE THE OXYGEN TO 2 L/M VIA NASAL CANNULA.
**RESPONSE #2 IS:** DR. HOWARD AGREES WITH YOUR RECOMMENDATION. THE CHANGE IS MADE.
**SCORE VALUE #2 IS:** 0
**BRANCH PATHWAY #2 IS:** 5

**CHOICE #3 IS:** ADMINISTER 28% OXYGEN VIA VENTI MASK.
**RESPONSE #3 IS:** DR. HOWARD COMPLIES WITH YOUR IDEA. THE EQUIPMENT IS SET UP AS RECOMMENDED.
**SCORE VALUE #3 IS:** 0
**BRANCH PATHWAY #3 IS:** 5

**CHOICE #4 IS:** INCREASE THE OXYGEN TO 10 L/M VIA NON REBREATHTING MASK.
**RESPONSE #4 IS:** DR. HOWARD COMPLIES WITH YOUR REQUEST AND THE CHANGE IS MADE AS RECOMMENDED.
**SCORE VALUE #4 IS:** -3
**BRANCH PATHWAY #4 IS:** 3

**CHOICE #5 IS:** INTUBATE THE PATIENT AND BEGIN BAGGING.
**RESPONSE #5 IS:** DR. HOWARD DISAGREES. MAKE ANOTHER SELECTION.
**SCORE VALUE #5 IS:** -4
**BRANCH PATHWAY #5 IS:** 0
TEN MINUTES LATER MR. NELSON IS RESTING MORE COMFORTABLY. HIS PULSE IS 96 PER MINUTE AND HIS RESPIRATORY RATE IS 16 WITH DECREASED ACCESSORY MUSCLE USE. DR. HOWARD NOW WANTS YOU TO RECOMMEND FURTHER STUDIES TO HELP WITH MR. NELSON'S MANAGEMENT. WHICH OF THE FOLLOWING STUDIES WOULD YOU RECOMMEND? (CHOOSE AS MANY AS APPROPRIATE.)

CHOICE #1 IS: CATT SCAN
RESPONSE #1 IS: CATT SCAN: DR. DISAGREES
SCORE VALUE #1 IS: -2

CHOICE #2 IS: PULMONARY STRESS TEST
RESPONSE #2 IS: PULMONARY STRESS: PHYSICIAN DISAGREES
SCORE VALUE #2 IS: -1

CHOICE #3 IS: ARTERIAL BLOOD GASES
RESPONSE #3 IS: ABGS: PH 7.34, PCO2 56, HCO3 28, PO2 61, SAO2 91%
SCORE VALUE #3 IS: 2

CHOICE #4 IS: CLOSING VOLUME STUDIES
RESPONSE #4 IS: CLOSING VOLUME: PHYSICIAN DISAGREES.
SCORE VALUE #4 IS: -1

CHOICE #5 IS: FEV1 BEFORE AND AFTER BRONCHODILATOR.
RESPONSE #5 IS: FEV1 BEFORE 48% OF PREDICTED, AFTER BRONCHODILATOR IT INCREASED TO 62%.
SCORE VALUE #5 IS: 1

CHOICE #6 IS: ECG
RESPONSE #6 IS: ECG: NORMAL SINUS RHYTHM WITH OCCASIONAL PVC'S
SCORE VALUE #6 IS: 1

CHOICE #7 IS: ANGIOGRAM
RESPONSE #7 IS: ANGIOGRAM: DR. HOWARD DISAGREES
SCORE VALUE #7 IS: -2

CHOICE #8 IS: BASAL METABOLIC RATE
RESPONSE #8 IS: BMR: PHYSICIAN DISAGREES.
SCORE VALUE #8 IS: -2

CHOICE #9 IS: CHEST X RAY
RESPONSE #9 IS: CXR: REVEALS HYPERINFLATION WITH FLATTENED DIAPHRAGMS. AN INFILTRATE IS SEEN IN THE LEFT LOWER LOBES.
SCORE VALUE #9 IS: 2
CHOICE #10 IS: URINE ANALYSIS
RESPONSE #10 IS: URINE ANALYSIS: WITHIN NORMAL LIMITS
SCORE VALUE #10 IS: -1

CHOICE #11 IS: CARDIAC OUTPUT
RESPONSE #11 IS: CARDIAC OUTPUT: DR. HOWARD AGREES.
SCORE VALUE #11 IS: -1

CHOICE #12 IS: ELECTROLYTES
RESPONSE #12 IS: "LYTES": WITHIN NORMAL LIMITS
SCORE VALUE #12 IS: 0

CHOICE #13 IS: SWEAT TEST
RESPONSE #13 IS: SWEAT TEST: DR HOWARD DISAGREES
SCORE VALUE #13 IS: -1

CHOICE #14 IS: UPPER GI SERIES
RESPONSE #14 IS: UPPER GI: PHYSICIAN DISAGREES
SCORE VALUE #14 IS: -2

CHOICE #15 IS: SPUTUM CULTURE
RESPONSE #15 IS: SPUTUM CULTURE: OBTAINED. THE RESULTS ARE PENDING.
SCORE VALUE #15 IS: 0

CHOICE #16 IS: GLUCOSE TOLERANCE TEST
RESPONSE #16 IS: GLUCOSE TOLERANCE: PHYSICIAN DISAGREES.
SCORE VALUE #16 IS: -1

CHOICE #17 IS: LUNG SCAN
RESPONSE #17 IS: LUNG SCAN: DR. HOWARD DISAGREES
SCORE VALUE #17 IS: -2

CHOICE #18 IS: IVP STUDY
RESPONSE #18 IS: IVP: PHYSICIAN DISAGREES.
SCORE VALUE #18 IS: -2

CHOICE #19 IS: VITAL CAPACITY
RESPONSE #19 IS: VC: MEASURED AT 3.2 LITERS (75% OF PREDICTED)
SCORE VALUE #19 IS: 1

CHOICE #20 IS: HEMOGLOBIN AND HEMATOCRIT
RESPONSE #20 IS: HB/HCT: 17 GRAMS, 52%
SCORE VALUE #20 IS: 1

PRIMARY BRANCH IS TO SECTION #6

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SCENARIO:

YOU CONTACT DR. HOWARD AND RELAY THE RESULTS OF THE TESTS. DR. HOWARD ASKS FOR YOUR RECOMMENDATIONS REGARDING THE APPROPRIATE THERAPY. YOU WOULD RECOMMEND WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE INDICATED)

CHOICE #1 IS: CONTINUOUS ULTRASONIC NEBULIZER WITH NORMAL SALINE
RESPONSE #1 IS: THERAPY STARTED PER YOUR RECOMMENDATION.
SCORE VALUE #1 IS: -2
BRANCH PATHWAY #1 IS: 7

CHOICE #2 IS: AEROSOL WITH 2.5 MG ALBUTEROL, Q4 HOURS
RESPONSE #2 IS: STARTED PER YOUR RECOMMENDATION.
SCORE VALUE #2 IS: 3
BRANCH PATHWAY #2 IS: 9

CHOICE #3 IS: IPPB WITH .3m1 OF ALUPENT QID
RESPONSE #3 IS: TREATMENT STARTED PER YOUR RECOMMENDATION.
SCORE VALUE #3 IS: -1
BRANCH PATHWAY #3 IS: 8

CHOICE #4 IS: INCREASE THE OXYGEN TO 6 L/M VIA NASAL CANNULA.
RESPONSE #4 IS: PHYSICIAN DISAGREES. MAKE ANOTHER SELECTION.
SCORE VALUE #4 IS: -2
BRANCH PATHWAY #4 IS: 0

CHOICE #5 IS: DISCONTINUE THE OXYGEN
RESPONSE #5 IS: DR. HOWARD REQUESTS THAT YOU NO LONGER HANDLE THIS PATIENT.
SCORE VALUE #5 IS: -5
BRANCH PATHWAY #5 IS: -1

CHOICE #6 IS: AEROSOL THERAPY QID WITH NORMAL SALINE
RESPONSE #6 IS: DR. HOWARD DISAGREES, TRY AGAIN!
SCORE VALUE #6 IS: -2
BRANCH PATHWAY #6 IS: 0
SECTION #7

MINIMAL PASSING SCORE: 7
SUM OF POINTS IN THIS SECTION: -9

SCENARIO:

TWENTY MINUTES AFTER STARTING THERAPY, MR. NELSON BECOMES INCREASINGLY SHORT OF BREATH. ON AUSCULTATION YOU NOTE EXPIRATORY WHEEZING THROUGHOUT ALL LUNG FIELDS. YOU WOULD NOW DO WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE INDICATED.)

CHOICE #1 IS: CONTINUE WITH PRESENT THERAPY
RESPONSE #1 IS: THE PATIENT REFUSES TO CONTINUE. MAKE ANOTHER SELECTION.
SCORE VALUE #1 IS: -2
BRANCH PATHWAY #1 IS: 0

CHOICE #2 IS: CONTACT DR. HOWARD AND SUGGEST DISCONTINUING THE PRESENT THERAPY AND SUBSTITUTING AEROSOL Q4 WITH 2.5mg ALBUTEROL.
RESPONSE #2 IS: THE THERAPY IS CHANGED PER YOUR RECOMMENDATION.
SCORE VALUE #2 IS: 1
BRANCH PATHWAY #2 IS: 9

CHOICE #3 IS: CONTACTING DR. HOWARD AND SUGGESTING DISCONTINUING THE PRESENT THERAPY AND SUBSTITUTING IPPB WITH .5cc OF BRONKOSOL Q4 WHILE AWAKE.
RESPONSE #3 IS: 8
SCORE VALUE #3 IS: 0
BRANCH PATHWAY #3 IS: 8

CHOICE #4 IS: ADMINISTER 2 INHALATIONS OF A BECLOVENT MISTOMETER.
RESPONSE #4 IS: THE PATIENT REFUSES TO ALLOW YOU. MAKE ANOTHER SELECTION.
SCORE VALUE #4 IS: -2
BRANCH PATHWAY #4 IS: 0

CHOICE #5 IS: CONTACTING DR. HOWARD AND SUGGESTING THE CURRENT THERAPY BE DISCONTINUED AND IPPB WITH 50% ETHYL ALCOHOL BE STARTED STAT.
RESPONSE #5 IS: DR. HOWARD DISAGREES, MAKE ANOTHER SELECTION.
SCORE VALUE #5 IS: -4
BRANCH PATHWAY #5 IS: 0

CHOICE #6 IS: CONTACTING DR. HOWARD AND RECOMMENDING THAT A BRONCHODILATOR BE ADDED TO THE ULTRASONIC NEBULIZER.
RESPONSE #6 IS: DR. HOWARD DISAGREES. MAKE ANOTHER SELECTION.
SCORE VALUE #6 IS: -2
BRANCH PATHWAY #6 IS: 0
SECTION #8

MINIMAL PASSING SCORE: 8
SUM OF POINTS IN THIS SECTION: -11

SCENARIO:

TEN MINUTES AFTER STARTING THERAPY, MR. NELSON BEGINS COMPLAINING ABOUT FEELING "FUNNY". HIS HEART RATE HAS INCREASED FROM 96 TO 123/MINUTE. HE IS COMPLAINING ABOUT FEELING LIGHT HEADED AND HIS COLOR HAS TAKEN ON AN ASHEN APPEARANCE. HE IS BECOMING VERY ANXIOUS AND DOES NOT WANT TO CONTINUE THE TREATMENT. BASED UPON HIS CHANGE IN CONDITION, YOU WOULD NOW DO WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE DIRECTED.)

1. CONTINUING WITH THE PRESENT THERAPY WHILE CAREFULLY MONITORING THE PATIENT.
   RESPONSE #1 IS: MR. NELSON IS NOW IN A COMPLETE CARDIAC ARREST. HE HAS JUST DIED.
   SCORE VALUE #1 IS: -5
   BRANCH PATHWAY #1 IS: -1

2. STOP THE TREATMENT AND CONTACT DR. HOWARD TO SEE IF ATROPINE CAN BE SUBSTITUTED FOR THE EXISTING MEDICATION.
   RESPONSE #2 IS: DR. HOWARD DISAGREES, MAKE ANOTHER SELECTION.
   SCORE VALUE #2 IS: -1
   BRANCH PATHWAY #2 IS: 0

3. STOP THE TREATMENT AND CONTACT DR. HOWARD TO SEE IF MUCOMYST CAN BE SUBSTITUTED FOR THE EXISTING MEDICATION IN THE IPPB.
   RESPONSE #3 IS: DR. HOWARD DISAGREES, MAKE ANOTHER SELECTION.
   SCORE VALUE #3 IS: -2
   BRANCH PATHWAY #3 IS: 0

4. STOP THE THERAPY AND CONTACT DR. HOWARD TO SEE IF THE TREATMENT CAN BE CHANGED TO AN AEROSOL TREATMENT WITH 2.5MG OF ALBUTEROL.
   RESPONSE #4 IS: DR. HOWARD AGREES WITH YOUR ACTION AND CHOICE. THE THERAPY IS CHANGED AS RECOMMENDED.
   SCORE VALUE #4 IS: 1
   BRANCH PATHWAY #4 IS: 9

5. INCREASE THE F102 DURING THE TREATMENT
   RESPONSE #5 IS: DR. HOWARD DISAGREES, MAKE ANOTHER SELECTION.
   SCORE VALUE #5 IS: -2
   BRANCH PATHWAY #5 IS: 0

6. STOP THE TREATMENT AND CONTACT DR. HOWARD TO SEE IF AN ULTRASONIC CAN BE ADDED "IN LINE" WITH THE IPPB.
   RESPONSE #6 IS: DR. HOWARD DISAGREES, MAKE ANOTHER SELECTION.
   SCORE VALUE #6 IS: -2
   BRANCH PATHWAY #6 IS: 0
SECTION #9

TYPE OF SECTION: INFORMATION

MINIMAL PASSING SCORE: 9
SUM OF POINTS IN THIS SECTION: 6

SCENARIO:

You have gathered all the equipment needed, entered the patient's room and introduced yourself. You are beginning your treatment and need to evaluate the patient. Which of the following would you examine as you are caring for Mr. Nelson? (Choose as many as you feel are appropriate.)

• Choice #1 is: Pre Treatment Pulse
  Response #1 is: Pre treatment pulse: 93/minute
  Score Value #1 is: 1

• Choice #2 is: Pre Treatment Respiratory Rate
  Response #2 is: Pre tx respiratory rate: 23/minute
  Score Value #2 is: 1

• Choice #3 is: Pre Treatment Breath Sounds
  Response #3 is: Pre tx breath sounds: Crackles throughout with expiratory wheezing
  Score Value #3 is: 1

• Choice #4 is: Pre Treatment Blood Pressure
  Response #4 is: Pre tx BP: 135/80
  Score Value #4 is: 0

• Choice #5 is: Pre Treatment Oximetry
  Response #5 is: Pre treatment sao2: 94%
  Score Value #5 is: -1

• Choice #6 is: Pre Treatment Volumes
  Response #6 is: Pre treatment VC: 3.2 liters
  Score Value #6 is: 1

• Choice #7 is: Pre Treatment Peak Flow
  Response #7 is: Pre treatment peak flow: 4.1 liters (50% of predicted)
  Score Value #7 is: 0

• Choice #8 is: Pulse During Treatment
  Response #8 is: Pulse during treatment: 89/minute
  Score Value #8 is: 1

• Choice #9 is: Respiratory Rate During Treatment
  Response #9 is: Respiratory rate during tx: 18/minute
  Score Value #9 is: 1
11160ICE
#10 IS: BREATH SOUNDS AFTER TREATMENT
RESPONSE #10 IS: BS AFTER TX: DECREASED CRACKLES AND WHEEZING
SCORE VALUE #10 IS: 1

#11 IS: BLOOD PRESSURE AFTER TREATMENT
RESPONSE #11 IS: BP POST TX: 133/86
SCORE VALUE #11 IS: 0

#12 IS: OXIMETRY POST TREATMENT
RESPONSE #12 IS: SAO2 POST TX: 95%
SCORE VALUE #12 IS: -1

#13 IS: VOLUMES AFTER TREATMENT
RESPONSE #13 IS: POST TX VC: 3.4 LITERS (80% OF PREDICTED)
SCORE VALUE #13 IS: 1

#14 IS: POST TREATMENT FLOWS
RESPONSE #14 IS: POST TX PEAK FLOW: 4.8 L/SEC, (INCREASED 17%)
SCORE VALUE #14 IS: 0

PRIMARY BRANCH IS TO SECTION #10
SECTION #10  TYPE OF SECTION: DECISION

MINIMAL PASSING SCORE: 10  SUM OF POINTS IN THIS SECTION: -7

SCENARIO:

YOU COMPLETE YOUR TREATMENT OF MR. NELSON. AS YOU ARE CHARTING AT THE NURSING STATION, DR. HOWARD APPROACHES YOU TO FIND OUT HOW MR. NELSON IS DOING. YOU WOULD REPORT WHICH OF THE FOLLOWING? (CHOOSE ONLY ONE UNLESS OTHERWISE INDICATED.)

CHOICE #1 IS: MR. NELSON NEEDS HIS OXYGEN LEVEL CHANGED.
 RESPONSE #1 IS: END OF PROBLEM
 SCORE VALUE #1 IS: -2
 BRANCH PATHWAY #1 IS: -1

CHOICE #2 IS: MR. NELSON NEEDS HIS MEDICATION CHANGED.
 RESPONSE #2 IS: END OF PROBLEM
 SCORE VALUE #2 IS: -2
 BRANCH PATHWAY #2 IS: -1

CHOICE #3 IS: MR. NELSON NEEDS A BLOOD GAS DRAWN AS SOON AS POSSIBLE.
 RESPONSE #3 IS: END OF PROBLEM
 SCORE VALUE #3 IS: -2
 BRANCH PATHWAY #3 IS: -1

CHOICE #4 IS: MR. NELSON NEEDS A CONTINUOUS AEROSOL ADDED TO HIS THERAPY.
 RESPONSE #4 IS: END OF PROBLEM
 SCORE VALUE #4 IS: -2
 BRANCH PATHWAY #4 IS: -1

CHOICE #5 IS: MR. NELSON HAD A GOOD RESPONSE TO THERAPY.
 RESPONSE #5 IS: END OF PROBLEM
 SCORE VALUE #5 IS: 3
 BRANCH PATHWAY #5 IS: -1

CHOICE #6 IS: MR. NELSON WOULD BENEFIT FROM IPPB THERAPY.
 RESPONSE #6 IS: END OF PROBLEM
 SCORE VALUE #6 IS: -2
 BRANCH PATHWAY #6 IS: -1