VIRTUAL VENTILATOR

GAME 5: STUDENT HANDOUT

Estimated Time: 30 minutes

Scan to Begin

Patient Name: Olivia Brooks

INSTRUCTIONS

There are three levels for you to complete in this serious game. Instructions are provided in the tabbed content area of the iPad. They are included here for added flexibility.

Note: You can access the ARISE Virtual Ventilator and other content in the tabbed iPad content throughout the serious game.

LEVEL 1: SUGGESTED VENTILATOR SETTINGS

- Given the morning ABG results, an Optimal PEEP study was done. In addition, the Provider has diagnosed this patient with ARDS.
- The Optimal PEEP study is shown here.
- Given the provided data, you must choose the most appropriate ventilator setting changes.

- If you are unable to choose the correct ventilator setting changes within 3 attempts, you are exited from the program, because changing ventilator settings isn't a game.

- If you choose correctly, you will advance to the next level and attempt to enter your setting changes on the ARISE Virtual Ventilator.

- Note: Make sure you write down your setting changes as you will need them later.

LEVEL 2: ENTER VENTILATOR SETTINGS AND ADJUST ALARMS

- You must enter the EXACT settings you chose on the last level. These are tied to programming and eventually, you will confirm that the settings you enter on the ARISE Virtual Ventilator are correct.

- Remember to check the Flow and/or I Time. When making ventilator changes these will often need changing as well. See course content for more information.

- When you think your settings are correct, press the "Test Lung" button. This will allow you to see the settings you chose "in action" and adjust the Flow or I Time to achieve the desire I:E ratio. Please refer to your mechanical ventilator course content for this information. Note: Be careful not to tap the "Apply Changes" button before adjusting the alarms. But, if you do, just tap the "Back to Ventilator" button.

- You will also need to adjust the alarms at this time according to NBRC standards. To do this press the "Alarms" button and enter the alarms area of the ARISE Virtual Ventilator. Press a "Max" or "Min" button and rotate the knob to the desired limit. The corresponding patient parameter is featured on each alarm bar. These are tied to programming and eventually, you will confirm that the alarms you enter on the ARISE Virtual Ventilator are correct.

- When you think you've selected correct patient appropriate alarms, press the "Commit Changes" button. Then, on the main screen of the ARISE Virtual Ventilator, press the "Apply Changes" button. This will take you to a final confirmation screen. If you are a little nervous and want to check your setting change and alarms one more time, press the "Back to Ventilator" button. If you're sure the settings are correct, press the "Apply Changes" button.

- Like before, you will get 3 attempts to enter the correct settings and adjust the alarms on the ARISE Virtual Ventilator. If you are incorrect, you must re-enter the Ventilator through the tabbed content area of the iPad to try again.

- If you are unable to enter the correct settings and adjust the alarms on the ventilator within 3 attempts, you are exited from the program, because entering settings on a ventilator isn't a game.
- If you choose correctly, you will advance to the next level and attempt to perform several ventilator calculations.

- You can also set a Flow or I Time. When setting these, notice the relationship between the two and relate that to your mechanical ventilator course content.

LEVEL 3: PERFORM CALCULATIONS

- The next screen displays a nearly completed Ventilator Flowsheet for your patient. It is missing the Static Compliance, Dynamic Compliance, Airway Resistance, and I:E ratio.

- Perform these calculations using the numbers provided on this flowsheet. Then, enter them onto the Ventilator Flowsheet.

- If you are incorrect, you will find the fillable ventilator flowsheet under the “Ventilator Calculations” tab on the iPad.

- Like before, you will get 3 attempts to enter the correct calculated parameters on the Ventilator Flowsheet. ALL calculations must be correct to proceed.

- If you are unable to enter the correct calculations within 3 attempts, you are exited from the program, because calculating patient ventilator parameters isn’t a game.

- If you choose correctly, you have completed this ARISE Virtual Ventilator experience.

SCORING

The iPad keeps track of how many attempts it takes you to pass each level of the serious game. FYI, you get 3 attempts on each level. So, not only do you want to complete each game, but you want to do so using the fewest number of attempts as possible. Your score will be calculated by dividing the number of attempts that are left when you finish the serious game by the total number of available attempts.

- Example: Three are 3 available attempts on each of the four levels in serious game #1 – for a total of 12 available attempts. By the end of the serious game, you used 4 attempts, which leaves 8 available attempts. 8/12 = 67%. So, you completed the game, but did not score a 75% or better.

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