

CV2i+ Proposed Competency Evaluation

1. Have user install circuit, pneumotach (flow trigger), and test lung.
2. Set up vent for the following settings:
 - a. Flow-Triggered Mode: Assist Control
 - b. PIP = 20 cm
 - c. PEEP = 4 cm
 - d. RATE = 30
 - e. FiO₂ = 30%
3. Set all appropriate alarm parameters.
4. User should set Flow Trigger setting as appropriate for a test lung with NO LEAK.
 - a. User should explain how to set the flow trigger when patient is placed on the vent (and a leak around the ET tube is present).
5. When is it important to re-evaluate the Trigger Sensitivity Level?
 - a. Why?
 - b. If a patient initially has a large leak around the ET tube, and upon repositioning, now has a very minimal leak, will the vent be harder or easier to trigger?
6. What if you cannot achieve the desired Peak Inspiratory Pressure? What might you need to adjust in order to obtain a higher PIP?
7. What if at the beginning of inspiration, the PEEP level shows a negative deflection? What 2 things could cause this? How is this resolved?
8. When the vent is turned off, how do you silence the Beep? Which knobs should be turned to their minimum settings? Why?
9. How long will the battery last with a full charge with the back light on all the time?
 - a. How can the back light be turned off in order to greatly extend the battery life?
 - b. How can it be turned back on?
10. When using for nasal prong (or mask) CPAP, or when using with the Bunnell Jet Vent what mode should be used?

CV2i+ Competency Evaluation Answers

1. Ensure appropriate infant circuit is used, and exhalation valve and pressure lines are connected to the appropriate fittings.
 - a. Ensure pneumotach is connected correctly (blue cuff to blue fitting, etc.)
 - b. It is POSSIBLE to SET UP the vent without using a test lung and keeping the cap in place, however, be aware that the Exhaled Tidal Volume alarm will likely alarm due to no volume reading.
2. Note: flpws of 5-6 lpm will generally suffice for most patients and ensure that gas is not wasted excessively. Larger patients and higher peak inspiratory pressure settings may require higher flows.
3. Once settings are dialed in and vent placed on patient, AUTO SET can be used to initially SET alarm parameters. User should demonstrate how parameters can be set manually as well (Selecting and changing with ARROW keys).
 - a. Users should understand and be able to explain that the High Peak Pressure Alarm will act as a safety Pop-Off and therefore be set Higher than the SET Peak Inspiratory Pressure Setting.
 - b. Users should understand that the Low Peak Pressure alarm will act as a disconnect alarm, and thus should be set lower than the desired Peak Inspiratory Pressure.
4. With a test lung, the flow trigger should be able to be dialed down to 1 or 2 sometimes vent may autocycle at 1 due to a rebound effect of test lung, or a very small leak.
 - a. With a patient, user should be able to describe that as soon as patient is placed on vent, the Trigger level should be adjusted to FIND the point where it will auto-cycle...then should be adjusted to 2 points higher. If Autocycle occurs at 4, then adjust to 6.
5. When the position of the patient is changed (such as when patient is loaded into incubator).
 - a. Why? Because leaks around the ET tube can be very positional in nature.
 - b. It will be harder, because now the sensitivity will be set too high.
6. You may need to increase the Flow Setting on the vent.
7. In both cases, the Set Flow may need to be increased.
 - a. The trigger level may not be adjusted correctly and it is taking a greater inspiratory effort for the patient to trigger the vent.
 - b. The patient's own inspiratory effort may be greater than the SET flow (often occurs with larger infants).
8. The black button silences the Beep. The PIP (MAX PRESS) and PEEP knobs should be turned to the minimum position. This will avoid extra gas usage when vent is not in use.
9. The battery will last 2:45 minutes on a full charge with the back light on.
 - a. To turn back light OFF, touch and hold along the bar graph until the second BEEP.
 - b. Any touch on the screen will turn back light (as well as any alarm condition)
10. Constant Flow Mode and the pneumotach (Flow Sensor) should be removed.