CLINICAL BULLETIN

June 15, 2005

To: **Newport HT50 Ventilator Users**

SUBJECT: **Breathing Circuit Guidelines for Ensuring the Safest Use of the Newport HT50 on all Sizes of Patients**

1. **NEVER** use the white topped disposable exhalation valve or the crystal clear topped, light blue colored disposable exhalation valve from Allegiance/Airlife (ref: MKPB012003).
2. Newport recommends using the Newport HT50, disposable "J" circuit for all patients ventilated with the HT50 Ventilator (p/n 51006000 or p/n 51006700, see approved circuit list MKPB122704 for additional details).
3. Whenever using a heated (water reservoir) humidifier, put a tee adapter on the dry side-inlet port of the humidifier and connect the patient end of the proximal line to that tee. If you are using the Newport blue reusable exhalation valve, you will need to plug the proximal port on the valve when you do this (ref: MKPB091102).
4. **Never use 15 mm ID tubing for any part of the breathing circuit between the ventilator and exhalation valve.** Breathing circuit tubing should always be 22 mm ID. Then, for small patients, use pediatric-sized, low deadspace tubing/connectors from the exhalation valve to the patient for a single limb circuit and from the wye connector to the patient for a "J" circuit (Newport "J" Circuit p/n 51006000).
5. If you ever see a tidal volume reading in the message window that reads 20, 20, 20, repeatedly, either the pressure control or the pressure support breaths (or both) are cycling off early. Many times this results in a low minute volume alarm and back up ventilation. Early cycling off is caused by using 15 mm tubing, which you should definitely NOT be doing, or from having too short of a circuit on a small child (make it longer between the ventilator and the humidifier) or from dys-synchrony from too long of an inspiratory time setting in pressure control (shorten it).
6. When using an HME instead of a heated humidifier, especially in volume control with no PEEP, connect the proximal pressure line between the patient and HME to improve the disconnect alarm function. In volume control with no PEEP, there will be no auto-triggering (because of no PEEP) when the circuit is disconnected and therefore you will not be able to rely on a high minute volume alarm as a secondary alarm for disconnect. Moving the proximal pressure line to the patient side of the HME improves the security of the Low Pressure Alarm for disconnect situations even when the HME has increased resistance due to secretions.
7. Always do an exhalation valve calibration when you install a new circuit/exhalation valve. It is essential as a leak check and a check for flaws in disposable breathing circuit components. Undetected circuit problems will result in irregular ventilator operation.
8. Always use a proximal filter, even with an HME and even if you have the proximal line connected onto the inlet port (dry side) of the humidifier (see item number 2).
9. Never use the Newport blue reusable HT50 exhalation valve at the end of a "J" or two limb circuit. It is for single limb circuit use only.
10. If you are not using heated wire inspiratory limb circuits, but are using a heated humidifier in the home environment, wrap the breathing circuit tubing with pipe insulation or plastic sandwich wrap to minimize water rainout in the tubing and keep humidity up.

If you have any questions about this information please contact Newport Clinical Education: 1.714.427.5811 ext 218 or email: clinical@newportnmi.com.

1620 Sunflower Ave • Costa Mesa, California 92626 • 1.714.427.5811 • 1.714.427.0489 Fax