Dr. Bach responded: For people who want to understand why BiPAP is suboptimal, that is, since you cannot turn off the EPAP, and the IPAP is rarely set high enough to fully rest the inspiratory muscles, ventilators like the LTV series, Trilogy and Newport can be recommended. Any ventilator without EPAP is more appropriate.

BiPAP would be OK at settings of IPAP 22 to 30 and EPAP minimum. But because of the EPAP, it is less comfortable this way, and it cannot be used for air stacking. This is discussed in my book, “Management of Patients with Neuromuscular Disease” available at www.doctorbach.com

Ventilator-Assisted Living asked the three recommended ventilator manufacturers to elaborate on what features of their product(s) address this issue.

Roxanne Venard, RRT, Manager, Clinical Services, Alternate Care, CareFusion, roxanne.venard@CareFusion.com

The LTV series ventilators can provide rest of the respiratory muscles, but the selection of a breathing mode, such as assist/control (A/C) or synchronized intermittent mandatory ventilation (SIMV), depends on the amount of support the patient requires to rest those muscles.

In the A/C mode, a breath rate and tidal volume or pressure are set to meet the patient's ventilatory requirements. (Tidal volume is the amount of air and/or oxygen that is delivered with each breath. A pressure breath is a specified amount of pressure that is delivered with each breath.) The ventilator guarantees a minimum number of machine-delivered volume- or pressure-controlled breaths. The patient may trigger additional assisted breaths of the same set volume or pressure.

If the SIMV mode is selected, the breath rate, a tidal volume or pressure, and pressure support are set. Pressure-support breaths are patient-triggered breaths for which the tidal volume is not set, and the breath ends by either a decrease in set percent of the breath peak flow or a specified time, whichever comes first. In SIMV mode, machine, assist and patient breaths may be given. For the first patient-triggered breath detected within a breath period, an assist breath is given. For all subsequent patient-triggered breaths within the same breath period, pressure support breaths are given. At the beginning of a breath period, if no triggered breaths were given in the previous breath period, a machine breath is given.

Cyndy Miller, RRT, Clinical Education Manager, Newport Medical Instruments, Inc., CMiller@nmitkb.com

The Newport HT70 and HT50 ventilators offer the clinical capabilities needed to provide partial or full inspiratory muscle rest for people who need to use assisted ventilation due to neuromuscular disorders including post-polio syndrome, ALS and muscular dystrophy.

At night, noninvasive HT70 users are ventilated through a mask using the A/C or SIMV modes, and either pressure-control or volume-control ventilation. The range of pressures and volumes available is high enough to ensure that the ventilator does the breathing work, and the
Barbara Rogers Awarded Pfrommer Memorial Lecture

Barbara Rogers, president of the National Emphysema/COPD Association, was awarded the 2010 Margaret Pfrommer Memorial Lecture in Long-Term Ventilation from the American College of Chest Physicians (ACCP).

The lecture, entitled “Behind Closed Doors: Confessions of a Ventilator User,” featured Rogers’ own case history as a ventilator user and partnerships with physicians regarding her health care. Preliminary data from her survey of ventilator users and video clips of ventilator users around the world were also presented.

Alan Goldberg, MD, and his wife Eveline Faure, MD, established the lecture in 1999 to encourage the “patient perspective” at ACCP meetings to ensure that individuals who use mechanical ventilation can work more effectively as partners with their health care team.

“Margaret Pfrommer was a polio survivor and was assisted by mechanical ventilation for more than 45 years,” said Goldberg. “She was our friend and teacher who made us listen and understand her situation.”

The Margaret Pfrommer Memorial Fund is administered by the CHEST Foundation, the philanthropic arm of the ACCP whose mission is to provide resources to advance the prevention and treatment of diseases of the chest.

www.chestfoundation.org