HOME CARE NEEDS YOUR HELP

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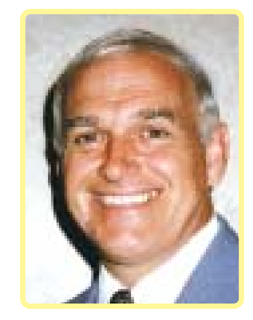

I've been doing home care visits since 1973 and since that time, there always seemed to be a disparity or division between respiratory care delivered in a hospital or healthcare facility and the home environment. It's an accepted fact that there are differences in the delivery of care based on venue, patient acuity and available resources, but in some ways, there are also a number of similarities. But it is the differences that tend to "keep apart" the respiratory therapists working in an institution from those working in the home. When asked to comment on an event that occurred or to assist with a possible miracle, the archangel Michael, in the movie by the same name, said "that's not my area."

But shouldn't the continuity of high quality patient care from hospital to home or home to hospital be everyone's area? Let's face it; healthcare is probably not the best business to be in today, especially in light of continued budget cuts, reduced reimbursement for care delivered and the shortage of competent and knowledgeable healthcare providers. Yet, despite these issues and obstacles, healthcare must be delivered to patients hospitalized, confined to special or long-term care facilities or sent home. The old adage holds true, "when the going gets tough, the tough get going" and there's probably no one tougher today than the healthcare worker regardless of employment site or specialty practiced.

Hospitals have their own set of problems as do home care companies. However, because of the smaller number of respiratory professionals working in the home setting, many feel their voices are not heard or needs understood. Home care companies need your help. Let's take a look at some of the possible ways professionals working in healthcare facilities can assist home care in providing continuity of patient care.

One major concern deals with qualifying criteria for home care equipment and related services. Home oxygen is an excellent example. The following scenario illustrates the importance of knowing current qualifying criteria for home O_2. Mrs. Brown, besides having a lovely daughter, has COPD and has been hospitalized for the past ten days. She has a room air oxygen saturation of 86% while at rest. She qualifies for home oxygen therapy under current Medicare guidelines. Her discharge is planned for tomorrow and a home care provider has been notified to deliver the oxygen equipment to the home. But, because of some personal healthcare issues, the discharge is delayed for two days. The hospital does not perform any other room air saturations believing Mrs. Brown has already qualified for home O_2. Upon discharge, the patient is using her oxygen in the home and doing relatively well. The home care provider realizes that the oxygen saturation is not valid since the test was performed 72 hours, not the required 48 hours, prior to hospital discharge. The provider now has to contact the physician to obtain a script to perform an overnight oximetry or have the patient visit the physician's office to have an oximetry performed. If neither takes place, the provider cannot bill Medicare and receive payment for the home O_2.

The above problem can be avoided in two ways. The hospital or facility can repeat the oximetry just prior to patient discharge, but this assumes that fact that the institution is fully aware of the patient qualifying criteria for home O_2, or the home care company should be aware that the current saturation value is no longer valid and request that another test be performed just prior to the actual discharge. "Physician, heal thyself" seems to apply here. However, this is not always possible, particularly on evening or weekend discharges when limited staff or on-call personnel are on duty.

Another patient scenario, that is becoming increasingly more common, involves patients going home on non-invasive positive pressure ventilation using a respiratory assist device (RAD), namely, a bi-level positive airway pressure unit. Now the fun really begins. Qualifications for home oxygen are simple compared to those for NPPV. You need a qualifying diagnosis, and in most cases, a pCO_2 and demonstration of hypoxemia (oxygen saturation of 88% or less) for five continuous minutes while the patient is breathing their usual FIO_2 or 2 LPM of oxygen, whichever is higher. Patients with restrictive defects involving progressive neuromuscular paralysis can have negative inspiratory pressures or forced vital capacities that may qualify them for NPPV in the home. RTs working in a hospital or other healthcare facilities need to be aware of these criteria before a patient can be discharged to the home setting. Yes, they can be discharged but if the patient does not qualify, the home care company is again left with the task of obtaining the qualifying data or risk not being paid for the equipment and service provided. It is essential that the personnel at any facility involved with patient discharge are fully aware of the qualifying criteria for NPPV use in the home.

It would seem that home care companies need to educate and work with their referral sources in order to insure continuity of care

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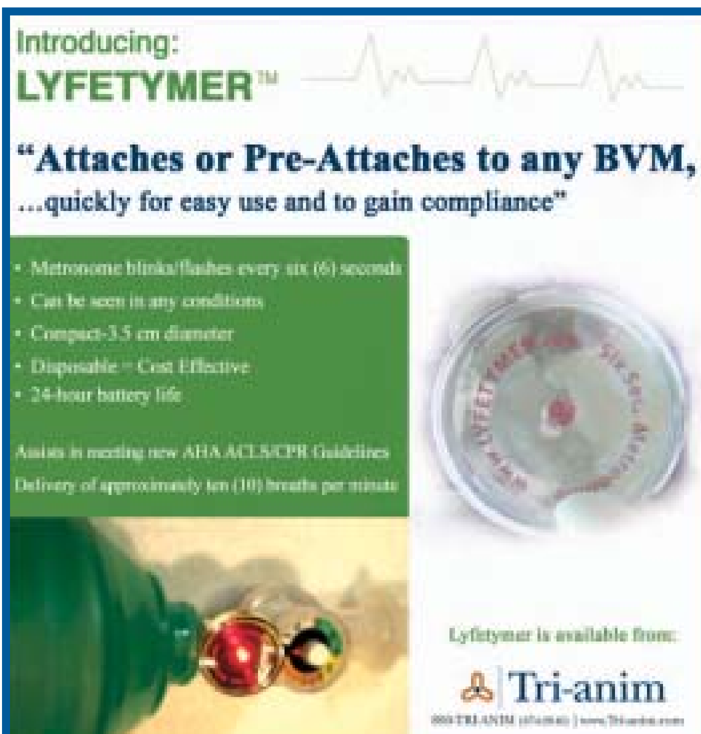

Home Care Needs Your Help *Continued from page 46*

and payment for equipment and services delivered in a timely fashion. So before someone says, "it's not my area," please, let us work together. Webster's New World Dictionary defines the term partner as "a person who takes part in some activity common with another or other associates or as one or two or more persons engaged in the same business enterprise and sharing its profits and risks." Are hospitals and home care providers true partners based on this definition? Whether they like it or not, they are.

Hospitals need to have patients discharged to free-up needed beds and home care providers are more than willingly to accept these patients for home care services, provided they qualify. How else is either party going to stay in business. It would be a sorry day if there were only a few home companies to call on. Would these few be able to adequately care for the home care needs of an aging population? Where would all of these patients go? If not home; then perhaps long-term care would be the only option. Hospitals need to partner with home care and visa versa in a meaningful and open relationship. Besides the two scenarios presented in this article, there are other areas where hospitals and home care can work together. Reducing the "frequent flyer" pattern for many COPD patients is another instance where hospital and home care can work more closely together to effect a positive change.

It seems logical that the onus is on home care to communicate to healthcare providers working in a variety of settings the current and always changing qualifying criteria for home care equipment and/or services. However, it is equally important that these facilities are open to and will welcome their partners in patient care by making their RT, PT/OT, case management and nursing staffs available to home care personnel in order to learn about new products, services and related criteria. Technology has advanced the level of care that can now be afforded patients, whether they are cared for in the hospital, skilled nursing facility, rehab center or home. We all need to be aware of what's new for our patients. After all, quality patient care is our bailiwick. We are all in this together but do we truly believe this and are we willing to put it into practice for the sake of who we care for?

Preventing Preanalytical Error... *Continued from page 30*

is not an option for neonatal or pediatric units. In a NICU, it is common practice to use very small sample volumes. In neonatal applications, dilution errors from liquid heparin become an even greater preanalytic concern. Dry heparin products preclude the possibility of liquid heparin dilution errors, altogether. For blood gas analyzers with electrolyte capability, dry heparin offers another advantage. Liquid heparin is in the form of sodium heparin and will increase the value reported for sodium. Dry heparin is available as lithium heparin and has no affect on sodium analysis.

A second source of dilution errors is from arterial or venous line contamination. Solutions that are used to keep arterial or venous lines patent are significantly different from blood. These solutions not only alter pH, pCO2, and pO2, but will also change electrolyte and metabolite results. To avoid dilution errors, an adequate amount of waste fluid must be removed from the line prior to the analytic sample draw. A study published in Critical Care Medicine in 2003 indicated that discarding 5.5 X line deadspace yielded results with very little dilutional bias. However, as a practice, removing that much blood for frequent blood gas determinations could be detrimental to the patient. On the other hand, removing a discard volume equal to line deadspace is not a good practice either. In the same study, this method yielded results with averages biases of –0.02 pH, -3.7mmHg pCO2, + 5.0mmHg pO2, +4.5mEq Na and –0.7mEq K. Errors of this magnitude are considered unacceptable. For clinically insignificant bias, the study recommended discard volume at two times the line deadspace. Most commercial line sets specify line deadspace volume. Unfortunately, not all hospitals standardize arterial line sets, which requires extra vigilance and awareness on the part of the RT staff. It should also be noted that arterial and Swan-Ganz catheters have differing deadspace volumes from that of arterial lines. Consistent and adequate waste (2X line deadspace) removal can significantly reduce preanalytic dilution errors. Samples drawn from pulmonary artery catheters (PAC) are subject to error if samples are withdrawn too quickly or drawn from a catheter that has been advanced too far. In the case in which a PAC is too far advanced, the catheter may be inadvertently placed in the "wedge" position. Instead of drawing a sample from the venous right side of the heart, a wedged catheter sample would reflect the arterialized values of the left heart. In nearly simultaneously drawn samples, arterial and inadvertently wedged PAC samples values were reported as pH 7.31, pCO2 35 and PO2 51 for the arterial sample and pH 7.38, pCO2 32 and pO2 128 from the wedged PAC sample. These results were obviously in error. Why would the sample from the PAC sample look more "arterialized" than the arterial sample? In this instance, the PAC was wedged in an area of the lung with a high V/Q ratio, which yielded a pO2 value that was much higher than the arterial pO2. Arterial blood gas values reflect gas exchange from all areas of the lung, including shunt units. Arterial samples always have lower pH and PO2 and higher PCO2 than samples drawn from high V/Q areas of the lung. The PAC was withdrawn to the appropriate position and repeat sample was drawn. The resultant values were more consistent with pulmonary arterial results (pH 7.26, pCO2 41 and pO2 31). Rapid withdrawal of PAC samples can cause similar errors, albeit not as pronounced, by diluting the venous blood with arterialized blood. PAC errors are avoided by checking proper catheter placement and by slow sample withdrawal.

Preanalytical error is avoidable through awareness and precaution. Other sources of error are not widely known, however. We will explore those in future articles.