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Life with David

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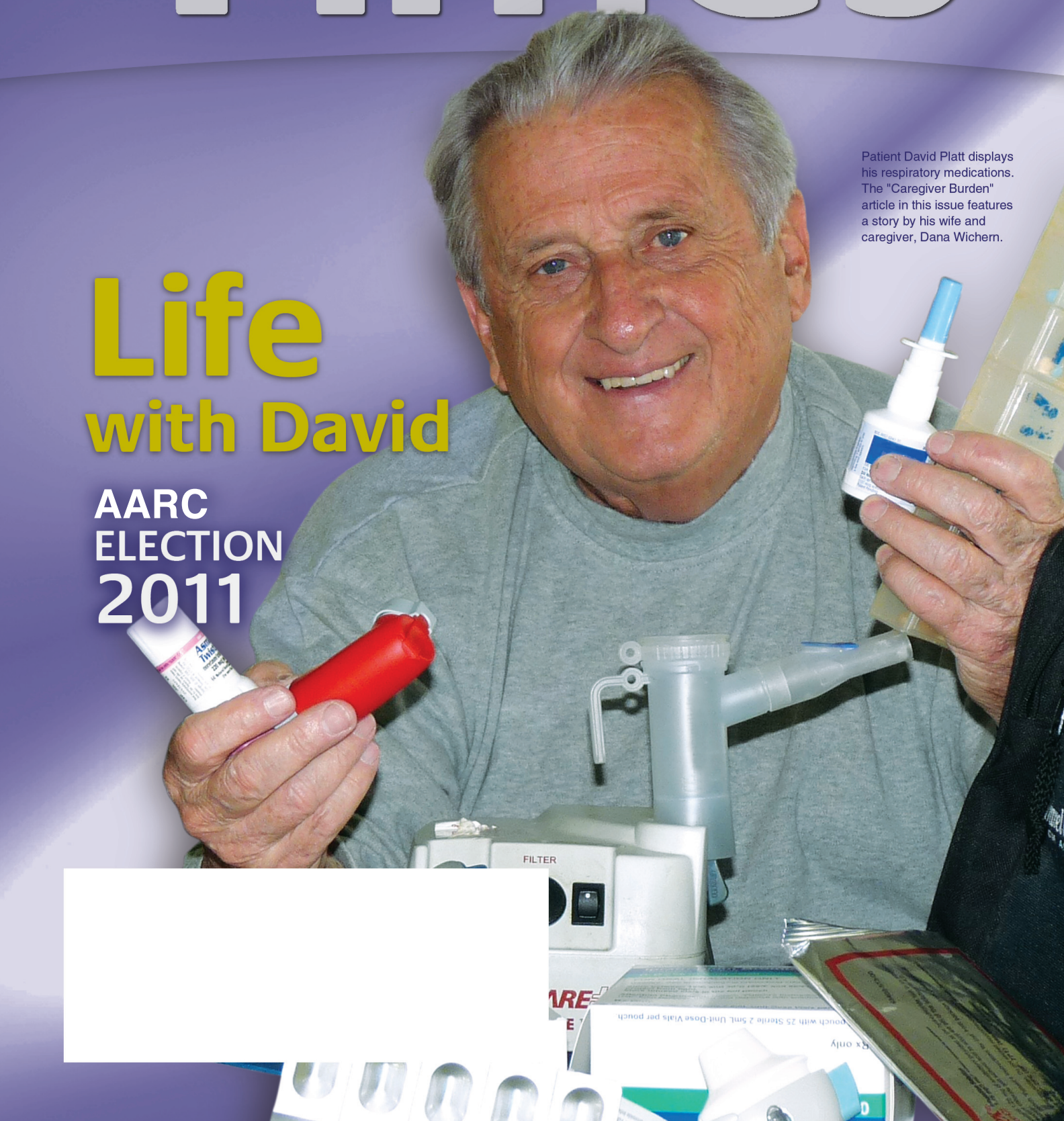

Patient David Platt displays his respiratory medications. The "Caregiver Burden" article in this issue features a story by his wife and caregiver, Dana Wichern.

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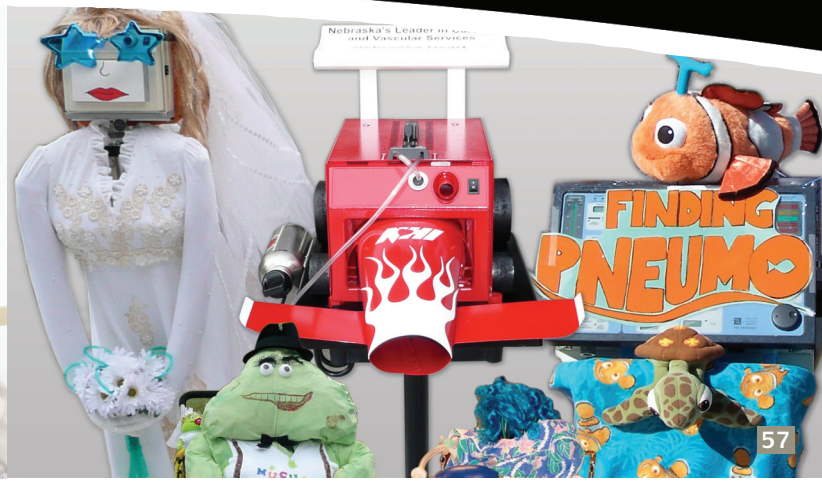

AARC Strategic Plan

AARC Vision/Mission Statement: The American Association for Respiratory Care (AARC) will continue to be the leading national and international professional association for respiratory care. The AARC will encourage and promote professional excellence, advance the science and practice of respiratory care, and serve as an advocate for patients, their families, the public, the profession, and the respiratory therapist.

AARC Strategic Objectives

• Validate the science of respiratory care and the value of the respiratory therapist (RT) in providing respiratory care by supporting, conducting, and publishing research information.

• Promote respiratory therapists as the best providers of respiratory care by assuring that the science that clarifies the value and role of the RT is provided to those stakeholders whose decisions and actions need to be guided by that information.

• Promote respiratory therapists and the American Association for Respiratory Care by developing and implementing promotion and marketing campaigns targeted to unique audiences.

• Assure the Association has the resources to meet the needs of its members and that the AARC has the needed financial, volunteer, and staff resources needed to accomplish the implementation of the strategic plan of the Association.

The complete version of the Association's Strategic Plan is available to Association members online at www.aarc.org/members_area/resources/strategic.asp.

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FOCUS ON

Allergies & Asthma

Home-based Disease Management for the Asthmatic

by David C. Shelledy, PhD, RRT, RPFT, FAARC

More than 22 million people, including 6.7 million children, suffer from asthma in the United States; and it accounts for over 460,000 hospitalizations, 1.8 million emergency department (ED) visits, and direct costs that may exceed $14 million per year.[1-3]

Asthma disease management programs (ADMP) have been suggested to improve outcomes and reduce cost in patients with moderate to severe asthma.[1,4-8] There is good evidence that ADMPs with multiple interventions can reduce asthma symptoms and improve health-related quality of life (HRQOL).[8] While there is some evidence that ADMPs can reduce ED visits and/or hospitalizations, only a limited number of studies show decreased health care utilization, and a number show no improvement.[8]

What you need to know

Who, what, where, and *when* are important questions to answer when trying to develop an evidence-based ADMP. *Who* refers to the type of health care provider(s) used to deliver the ADMP. Nurses, physicians, pharmacists, and community health care workers have all been used, though most published studies have focused on nurse or physician-led interventions.[4-7] Of the various possible providers, respiratory therapists are uniquely well prepared to deliver ADMPs.[9]

What should be included in an ADMP has been described by the National Asthma Education and Prevention Program's "Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma" and is documented in reports of successful programs.[1,8] Effective ADMPs teach patients about their disease to include avoidance of asthma triggers, signs and symptoms of asthma exacerbation, the proper use of both controller and rescue medications and related devices, symptom control, proper self-monitoring, and implementation of a written asthma care plan.[1,8] Home environmental assessment and modification can be effective in controlling allergens and should include use of allergen-proof pillow and mattress covers; clean air-conditioning and heater filters; restricting pets, smoking, or smoke from other sources (e.g., wood-burning fireplaces); and avoiding strong cleaning chemicals, fumes or sprays, plants, flowers, potpourri, and stuffed animals.[1,10-13] Steps to control cockroach, rodent, and dust-mite allergens and repair of plumbing leaks to avoid mold are also recommended.[1,11,13]

Where an ADMP should be provided is an important consideration. ADMPs have been delivered in physicians' offices, clinics, pharmacies, schools, and hospitals.[1] It may be especially beneficial to provide asthma follow-up care and assessment in the home, especially for children, where the patient and family may be more receptive and assessment of the home environment can be performed.[1,9] There is good evidence for the benefits of ADMPs provided in the patient's home for allergen control,[1,11-13] and interventions incorporating home visits have been shown to be effective in improving asthma symptoms and HRQOL.[14,15] Consequently, it would seem that home-based ADMPs are good choices to deliver asthma education and patient assessment, while providing an environmental assessment to reduce exposure to asthma triggers.

about the author...

David C. Shelledy, PhD, RRT, RPFT, FAARC, is dean of the College of Health Sciences and professor in the departments of health systems management and respiratory care at Rush University in Chicago, IL. He is also a past president of the AARC.

When refers to when and what types of patients should receive an ADMP. ADMPs can be most effective for patients with moderate-to-severe asthma whose asthma is in poor control — the so-called frequent flyer who turns up in the ED or hospital due to acute, severe asthma exacerbation.[1,8,9] ADMPs can begin in the hospital in the form of asthma education, medication review, and asthma action plan development; however, providing an ADMP that continues following discharge should be considered.[1,8,9]

Respiratory therapists and home-based asthma care

We recently published the results of a study to compare the effectiveness of a five-week, in-home ADMP provided by respiratory therapists to the same program provided by nurses and to usual care (UC).[16] We wanted to find out if an in-home program delivered by RTs could improve symptoms, patient satisfaction, and HRQOL while reducing health care utilization and cost. Adult patients who had been treated in the ED or hospitalized for an acute exacerbation of asthma were randomly assigned to one of three treatment groups: ADMP provided by an RT, ADMP provided by an RN, or UC. Goals of the ADMP were to optimize the home environment, optimize self care to include medications and monitoring, and develop a care plan to be followed by patients and their families. During each of five weekly home visits, the patient received asthma education; instruction, demonstration, and reinforcement of respiratory equipment use and inhaler technique, to include proper use of a peak flow meter; and use of an asthma symptom and peak flow diary. Patients were provided with adequate supplies to include peak flow meters, and mattress and pillow covers. An asthma action plan was developed and patients were taught what to do in case of an asthma exacerbation. An environmental assessment was completed and patients were given instructions on how to improve the home environment.

Goals of the asthma disease management program were to optimize the home environment, optimize self care to include medications and monitoring, and develop a care plan to be followed by patients and their families.

There were 159 subjects who completed the study and were included in the analysis. At six months both ADMP groups had significantly fewer ($p < 0.05$) hospitalizations and in-patient days, lower hospitalization costs, and greater HRQOL and patient satisfaction than the UC group. The ADMP-RT group also had greater peak expiratory flow rate and significantly better satisfaction scores as compared to ADMP-RN and UC. We concluded that an in-home asthma management program provided by RTs can reduce hospitalizations, in-patient days, and cost as well as improve measures of HRQOL and patient satisfaction in a population prone to asthma exacerbation. ■

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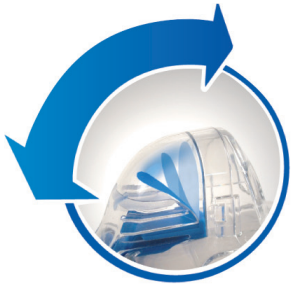

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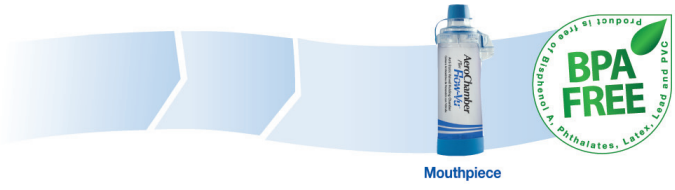

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Preparing Adults for Home Ventilator Discharges

by Timothy W. Buckley, RRT, FAARC

Preparing adults for discharge to home on mechanical ventilation presents a wide range of challenges, and the identified needs of the patient must drive the process of preparing for safe and effective home discharge. A complete and comprehensive care plan should be developed. Several sources can be used as guidelines to develop a list, including the AARC Clinical Practice Guidelines.[1] An effective discharge planning meeting will ensure that relevant issues are identified and addressed before the patient is sent home.

Discharge planning process

A discharge planning meeting brings together all of the parties necessary to address the needs of the patient. Included should be the patient (if possible), family members, the physician(s), nurses, respiratory therapists, social workers, occupational therapists, and physical therapists (if involved). It is ideal if the case manager or other representative of the insurance provider also participates. There are several resources and sets of guidelines to be used during the planning process. Guidance suggests that planning begin as early as practical.[2] The discharge planning process should always start with an assessment of the patient's needs from both a clinical and home support standpoint.

Adults going home on ventilators will demonstrate a wide variety of home situations. They may range from those who are very dependent (e.g., a high spinal cord injury) to those who are fairly independent (e.g., a nocturnal-only patient with noninvasive ventilation).

One commonly used care planning process involves identifying problems and needs and developing a realistic objective to address that need. The key planning process is developing a written plan to achieve those objectives. Plans may involve anything from a major modification of the home environment to something as simple as teaching tracheostomy care. One issue to be addressed during the discharge planning meeting is the discharge date. It is often set by the insurer based on the number of days that the patient has been in the hospital. During the meeting it should be reset to safely achieve the plan that is being created (e.g., allowing adequate time for training of caregivers).

Once the needs are identified, the home care RT can usually suggest a ventilator that can best meet the needs of the patient. Considerations include portability, battery operation, reliability, and simplicity. Home ventilators need to be simple and reliable so that they are easy to teach to caregivers who are usually not experienced with mechanical ventilators.

Some adult home ventilator patients have a tracheostomy tube, which increases the complexity of the discharge considerably. Caregivers must be taught to manage the artificial airway and ensure safety at all times. Usually a core group of caregivers who are trained and comfortable with replacing the tracheostomy tube is necessary. This will often require additional training and experience prior to the patient's discharge. Spare tracheostomy tubes, along with a tube one size smaller should always be in arm's reach of the patient not only at home, but when they travel as well. Keep in mind that many home patients may be trained to replace their own tracheostomy tube.

about the author...

Timothy W. Buckley, RRT, FAARC, is a home care respiratory therapist from Lake Forest, IL.

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The RT's involvement

Involvement of an experienced home care RT in the planning process is critical.[3] Home care RTs have experience in assessing the home environment. In some cases modifications to the home will be needed before it is safe to care for the patient (e.g., modifications to doorways or ramps). In others, the family may have to rethink where the patient stays in the home. For example, in a home with upstairs bedrooms, it may be more practical to have the patient occupy a dining room or den on the first floor to avoid having to move the patient up and down stairs several times each day. Evacuation of the patient in emergency situations, such as a fire, must also be considered.

The overall goal is to provide a safe environment for the patient at home. Rushing the discharge process may place the patient at risk. An area that should be addressed is the caregiver's health and safety. It is rare that insurance providers will pay for professional caregivers 24/7. In the best cases, a few hours per day of a home health aide, supplemented with nursing visits for assessment, are allowed. This puts the burden for patient care on family members 365 days per year. Planning should include how the patient will be cared for if caregivers become sick or disabled. Allowance should also be made for such events as the caregiver simply needing to be away from the patient for things as simple as grocery shopping or attending to personal needs. The patient is often unable to be alone unless they are able to care for themselves, including replacing a plugged tracheostomy tube.

Comprehensive planning is dynamic and ongoing. As the needs of the patient change, so should the care plan. Starting with a detailed list of the needs of the patient, you can develop a baseline to ensure safe and effective care for the adult home ventilator patient. ■

EDITOR'S NOTE

Timothy Buckley is scheduled to present two symposia: "Newer Devices for the Delivery of LTOT," and "Emergency Preparedness in Respiratory Home Care," during the AARC International Respiratory Congress in Las Vegas, NV, Dec. 6–9.

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Identifying the Patient with Obstructive Sleep Apnea

by Sheri Tooley-Peters, BS, RRT-NPS, CPFT, AE-C

It has been well documented in the medical literature for the past 20 years that obstructive sleep apnea (OSA) can be a serious health threat. How far have we come in the past 10 years in the diagnosis and treatment of OSA? Are the red flags still the same?

OSA is a sleep disorder characterized by intermittent complete and partial airway collapse resulting in frequent episodes of apnea and hypopnea.[1] The repetitive episodes of upper airway obstruction during sleep may be accompanied by sleep disruption, hypoxemia, and arterial oxygen desaturation. The obstruction or anatomical narrowing can occur at one or more locations in the upper airway and may be due to several factors, including abnormal neuromuscular tone, redundant soft tissue, or an increase in upper airway adipose tissue.[2] Over time, recurrent or prolonged arterial desaturation leads to secondary cardiac and lung abnormalities including systemic and pulmonary hypertension, cardiac rhythm disturbances and, in extreme cases, right ventricular failure.[2,3] OSA has become a common disorder in middle-aged people and is a leading cause of excessive daytime sleepiness.[4] It occurs in 2%–4% of this population and is more common in the elderly population. Publications report fewer than 10% of those who met diagnostic criteria for obstructive sleep apnea ever sought medical care or were investigated for OSA.[5-7]

about the author...

Sheri Tooley-Peters, BS, RRT-NPS, CPFT, AE-C, is a clinical educator for Masimo Inc. in Irvine, CA, and lives in Adams Center, NY. She also served the AARC as interim chair of the Sleep Specialty Section.

Risk factors

The risk factors identified as being predictive for OSA are: age, snoring history, witnessed apneas, hypertension, weight and body mass index, neck circumference, smoking, and nighttime nasal congestion.[8-10] OSA, even in its mildest form, may be associated with diabetes, hypertension, coronary artery disease, myocardial infarction, congestive heart failure, perioperative morbidity, excess mortality, stroke, and increased risk of motor vehicle accidents.[11] Studies show that people who have OSA are more likely to use health care resources before being diagnosed.

What's new?

OSA is recognized as a highly prevalent disease that poses a major burden on public health. The term sleep-disordered breathing (SDB) is another term now used that makes light of the fact that other sleep-related respiratory disturbances such as Cheyne-Stokes breathing and central sleep apnea also produce episodic hypoxemia. Approximately 9% of middle-aged women and 24% of middle-aged men have SDB.[3]

Inflammatory markers are now being studied to determine their role in the cardiovascular pathophysiology of OSA. These include cell adhesion molecules such as interleukin adhesion molecule-1 (ICAM-1), cytokines such as tumor necrosis factor alpha (TNF-alpha), interleukin 6 (IL-6), and chemokines such as IL-8 and C-reactive protein (CRP). Currently being studied is the hypothesis that these inflammatory markers are activated by the intermittent hypoxia seen with OSA.[12]

Evaluation of snoring severity and body mass index together can provide the respiratory therapist with a highly sensitive screening tool for predicting moderate to severe OSA.[13] Using this tool may help to determine the urgency of polysomnography testing and subsequent therapy. Screening of the pre-operative patient using this tool may prevent adverse postoperative events.

A recent study conducted at Johns Hopkins University concluded that nocturnal desaturations of as little as 2%–4% were associated with fasting hyperglycemia. These

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findings suggest that even milder cases of SDB can result in negative metabolic outcomes. This information could provide us with another diagnostic tool when treating poorly controlled or uncontrolled diabetes.[14]

Current literature suggests that 4% of middle-aged men and only 2% of middle-aged women have OSA. It is becoming increasingly evident that woman may be under-diagnosed because their symptoms are simply not the same as men. Studies show that women with polycystic ovarian syndrome, a condition characterized by irregular menstrual periods, are 30 times more likely to have OSA. This finding is independent of their weight.[15] Women are more likely to complain of pain, headache, fatigue, and depression than from excessive daytime sleepiness.[14] This is a sharp contrast from their male counterparts.

> Inflammatory markers — including ICAM-1, TNF-alpha, IL-6, IL-8, and CRP — are now being studied to determine their role in the cardiovascular pathophysiology of OSA.

The diagnosis of OSA is traditionally done by overnight polysomnography, which is costly in terms of personnel, time, and money. In 2001, there were an estimated 1,292 sleep laboratories in the United States.[16] The average wait time from patient referral to sleep evaluation varies from a few weeks to more than a year. The Centers for Medicare and Medicaid Services released a final decision on March 3, 2009, allowing reimbursement for unattended sleep studies. The study must include three or more channels.

This decision was made to allow payment for home therapy using continuous positive airway pressure based on an OSA diagnosis made from an unattended sleep study. The question of whether this decision has spurred more sleep labs to be established has arisen. The current number of accredited sleep labs can be found on the American Academy of Sleep Medicine website (www.aasmnet.org). The total number of testing facilities in the country is likely higher. It has been noted that in some areas of the country the Medicare fiscal intermediaries have refused to reimburse for sleep studies not performed in an accredited sleep facility.

Undiagnosed OSA a significant health risk

The numbers remain the same: OSA is still estimated to affect 2%–4% of the adult population. It is also currently believed that of that 2%–4% only 10% have sought treatment, and so undiagnosed OSA continues to pose a significant health risk to the population. Surgical patients with undiagnosed OSA are extremely vulnerable to perioperative and postoperative complications.[1]

We're not there yet

Much work has been done in the past decade to identify and treat OSA. New research continues to identify comorbidities that are associated with OSA. We still have a long way to go in educating the medical community as well as the public in timely and accurate diagnosis of this devastating disorder. Early detection of OSA will help decrease morbidity and mortality, as well as severity of coexisting disease processes. ■

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What Is Your Hospital's HCAHPS Score? Why It Is Important to All of Us

by Sam P. Giordano, MBA, RRT, FAARC

For many years we've heard and read a lot about a consumer-driven health care system. This conversation started decades ago, but over the past decade or so there has been a virtual explosion of information technology enabling the vast majority of patients, providers, payers, and policy makers relatively easy access to quality indicators on an institution-specific basis. The day is fast approaching when the majority of health care consumers will access even more information, comparing the effectiveness of care provided by hospitals and categorized over a wide range of quality and effectiveness metrics.

Those of you who are not employed in hospitals might think that this consumer information movement will not impact you. But think again. What we are talking about here is an attitude adjustment — indeed, we are talking about a significant change in attitude. There are fewer passive patients this year than last year and far fewer than 10 years ago. Which way do you think that trend will head in the future? As consumers come to understand the cost of care that they must pay for, passivity will be a thing of the past.

We all know that health care costs and their projected growth rate can no longer be ignored. These costs must be addressed both from the top down and also from the grass roots up. The former has been in a much better position to receive information regarding quality and effectiveness outcomes. But now, given this 21st century information age, consumers and patients are being empowered with a wealth of information concerning the quality and effectiveness of health care providers.

about the author...

Sam P. Giordano, MBA, RRT, FAARC, serves as AARC executive director. He can be reached at (972) 243-2272 or giordano@aarc.org.

The patient survey says...

In 2002, the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey was created. This nationally standardized tool is used to measure adult inpatient perceptions regarding the quality of care they received during their recent acute care hospital stay. The survey consists of 27 questions and was developed by the Centers for Medicare and Medicaid Services and the Agency for Healthcare Research and Quality. The scores for each hospital are posted on the U.S. Department of Health and Human Services website at www.hospitalcompare.hhs.gov. Anybody with Internet access can review the information posted on this site. The survey is considered accurate by many since it is standardized and will permit realistic evaluations regarding how a hospital compares to its competition. There are strict guidelines that must be followed when the survey is administered, thus assuring the comparisons are as fair and accurate as possible.

While patient or customer surveys are nothing new, many of those surveys were essentially "satisfaction" surveys that didn't measure objective outcomes. Satisfaction was in the eye of the beholder. The HCAHPS survey goes a long way to eliminate such subjectivity by focusing on core clinical quality metrics such as medication instructions and discharge education. This tool also measures the frequency of use of these clinical quality indicators; this provides another dimension previously not widely available. I encourage all of you to visit this website. If you are employed in a hospital, look up your hospital and see how it compares to others in your area. Look also at the metrics. Which ones are you more directly involved in? I

just mentioned two previously, but there are others. Use the survey as hospital leaders do. Use it to assess the effectiveness of your service and then implement tactics that can help increase your hospital's score.

I don't think I am telling you anything new when I mention that hospitals are beginning to look for ways to cut costs. For most of you who have been in health care awhile, you know that's going to translate into personnel reductions. Common sense tells us that the more we are on the same page with our employers, the more likely we will remain employed.

Pay for performance is coming

The Patient Protection and Affordable Care Act that was signed into law last March and which starts in 2013 at the beginning of the federal government's fiscal year, does establish a value-based purchasing plan. This payment plan will use hospital performance measures from 2012, and that means it will use HCAHPS. So let's get with the program and seize this opportunity to help increase our hospital reporting scores so they can maximize reimbursement and avoid having their reimbursement rates cut.

For those of you who do not work in hospitals, I encourage you to visit the website as well. You will learn what the 27 questions are. I think you are smart enough to apply the relevant questions to the services you provide. This will not only get you started on the use of objective metrics, if you haven't already, but it will also provide you with guidance regarding the development of feedback surveys you want from your patients. Your turn is coming too!

In closing, I also want to encourage you to document the differences you make regarding the interventions you adopted to help improve your employer's scores. Recognizing the need to do it is important, and doing it is very important; but without documentation, who will know what you or your profession contributed to improve clinical quality and effectiveness for our patients? ■

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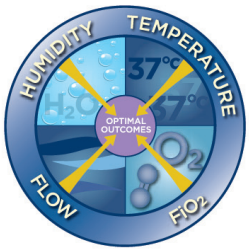

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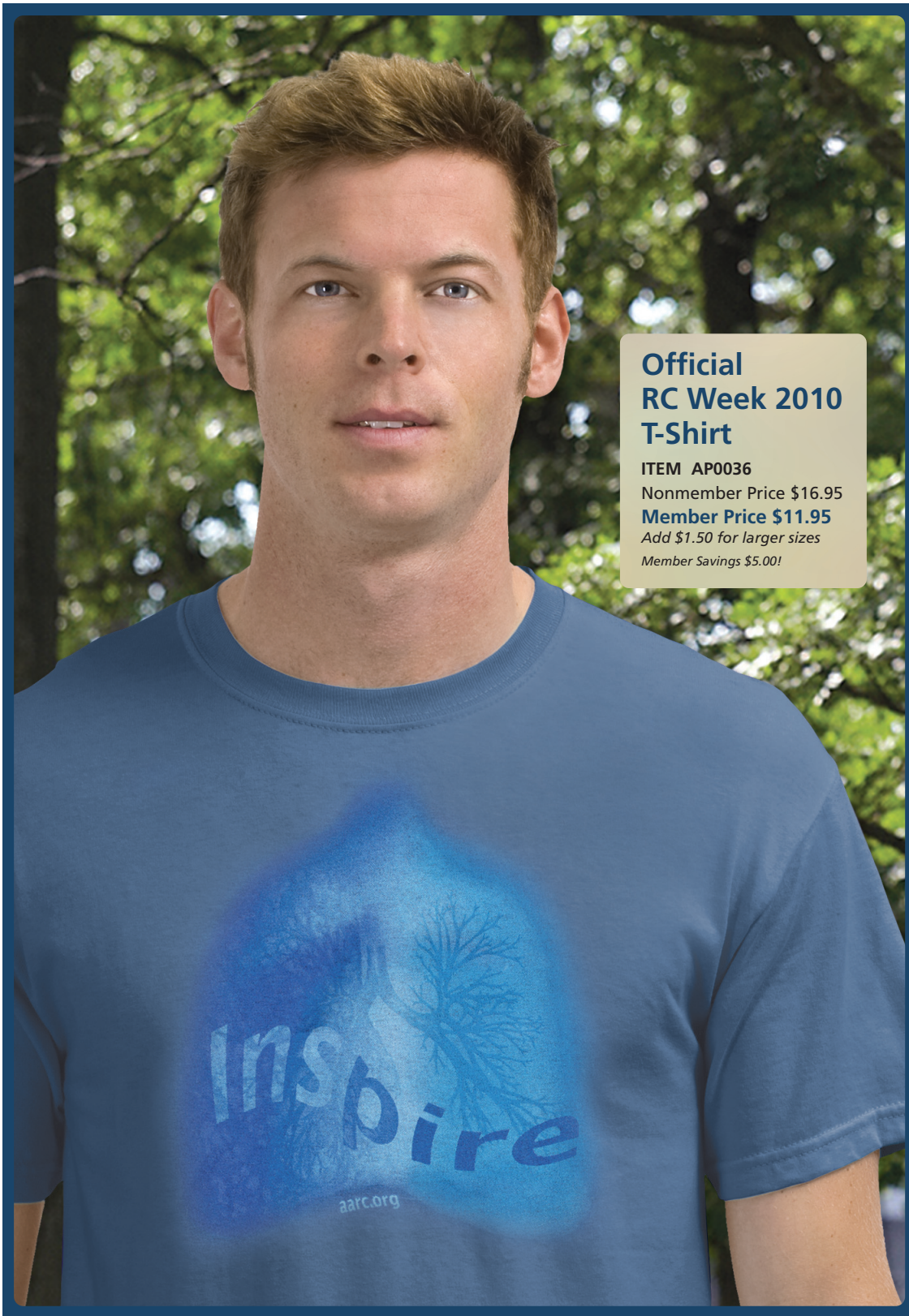

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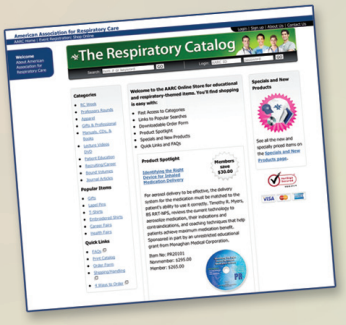

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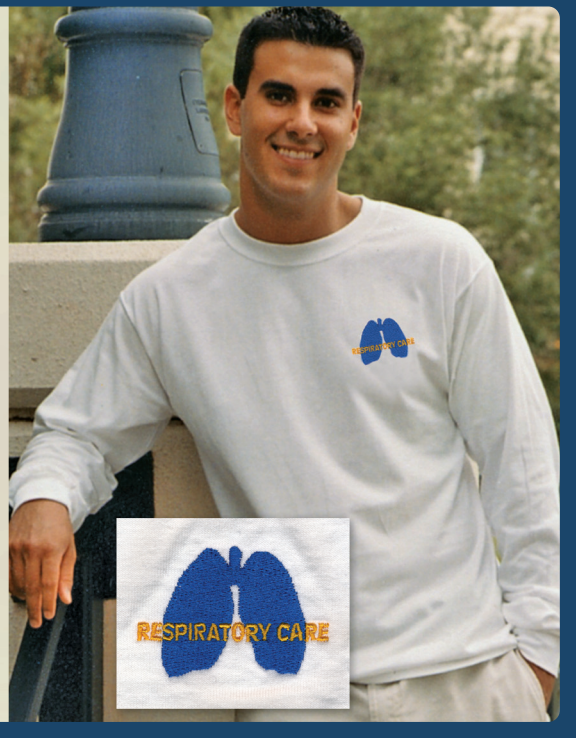

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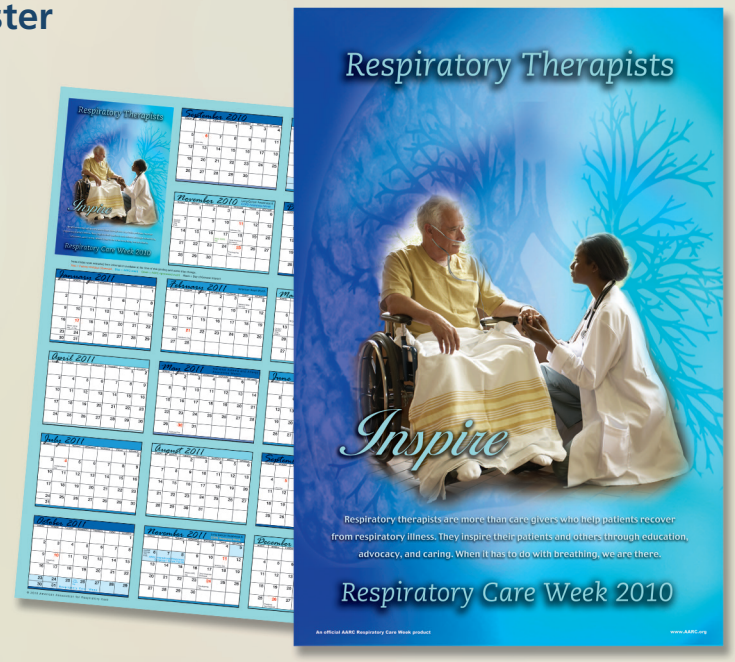

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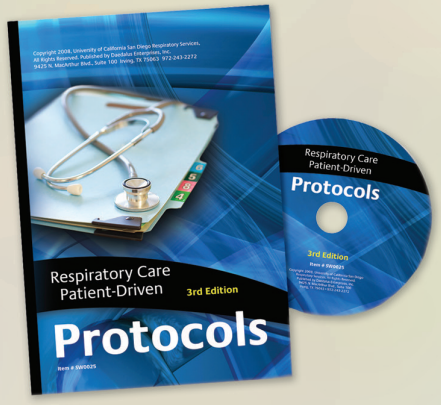

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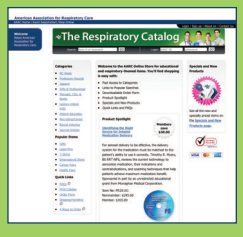

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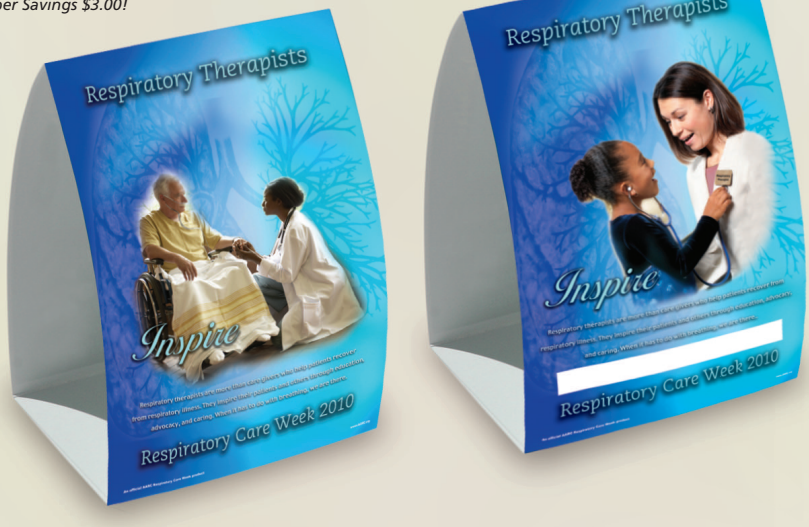

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Traveling to High Altitudes: Issues for the LTOT Patient

by Kitty Collins, RRT

Over the years working in pulmonary rehabilitation, many patients have informed me they were unaware of their lung disease until they went to a higher elevation and were either hospitalized or completely immobilized by their shortness of breath. Respiratory therapists should familiarize themselves with the physiologic responses that occur at higher altitudes and educate their patients who plan to travel. We empower our patients to have the skills to lead a better quality of life that includes activities like traveling; however, traveling with a chronic lung disease requires knowledge, preparation, and consultation with their physician in order to have a safe and enjoyable experience.

Effects of high altitude on oxygenation

As respiratory therapists we understand how barometric pressure affects inspired oxygen. We know that as altitude increases, barometric pressure decreases, which in turn decreases the partial pressure of oxygen in the atmosphere. Airplanes are pressurized to between 5,000 and 8,000 feet, which translates to 17.1% and 15.1% inspired oxygen. Putting this in perspective, a healthy person with a sea level PaO_2 of 98 mm Hg will experience a drop to about 55 mm Hg at a cabin pressure of 8,000 feet.[1]

A pulmonary rehab participant with COPD informed us during one of his sessions that he was flying to Colorado and was going to Rocky Mountain National Park. He had a personal pulse oximeter and planned to monitor his saturations, but did not wish to consult with his physician regarding his possible need for oxygen. He kept records at our request, which are shown in Table 1. Fortunately, he made it back safe and sound but did receive a firm lecture from his pulmonologist during his next office visit.

about the author...

Kitty Collins, RRT, is the manager of outpatient pulmonary rehabilitation services for Seton Family of Hospitals in Austin, TX.

Predicting oxygen needs at high altitudes

In order to determine if oxygen is required when exposed to a higher altitude, organizations throughout the world have attempted to set guidelines. The British Thoracic Society recommendations are shown in Table 2.[2]

The hypoxia altitude simulation test (HAST) can be used to screen patients who are traveling to high altitudes and are at risk for hypoxia. The test can be performed in most hospital settings and is gaining popularity in the United States with the advent of the Federal Aviation Administration (FAA) ruling allowing portable oxygen concentrators (POCs) on airplanes. While breathing 15.1% oxygen via a tight-fitting mask or mouthpiece for 20–30 minutes, a patient's oxygen saturation is measured. Electrocardiogram monitoring is recommended to assess for arrhythmias or ectopy. An arterial blood gas is ascertained before and during the test. If the PaO_2 is > 55 mm Hg, no supplemental oxygen is needed. If PaO_2 is < 50 mm Hg, supplemental oxygen is bled in to determine what liter flow is necessary to prevent hypoxia at higher altitudes.[3]

The "gold" standard for determining oxygenation needs at high altitudes is to use a hypobaric chamber; however, there are few facilities that have access to this, which makes this option impractical. The HAST results were similar to those done in a hypobaric chamber according to an article published in Chest in 2008.[3]

The *European Respiratory Journal* recommends that COPD patients with a baseline FEV_1 < 1.5 L should be as-

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Table 1. A Pulmonary Patient's Oxygen Saturations

Location	Altitude	Saturation
Leander, Texas	1,200 ft	92%
Airplane	8,200 ft (cabin pressure)	83–87%
Rocky Mountain National Park	12,200 ft	69%

sessed to determine the need for supplemental oxygen prior to travel at high altitudes using the following calculation:[2]

Regression Equation:

$$PaO_2 \text{ (Altitude)} = \{0.519 \text{ X } PaO_2 \text{ (Sea Level)}\} + \{11.85 \text{ X } FEV_1\} - 1.76$$

Oxygen delivery devices

All of the formulas and testing will only go so far when determining a patient's oxygenation needs. In 2005 when the FAA approved certain POCs on board commercial airlines, many patients on long-term oxygen therapy (LTOT) took advantage of their new found freedom. Those who could afford it purchased their own. Others either rented or borrowed from their home medical equipment (HME) company if available. We have already determined that someone who normally may not need oxygen at sea level may need it at a higher altitude. Those who are already on oxygen will have higher requirements than they do at sea level. The liter flow someone needs at rest is often greater with ambulation. Every patient on oxygen needs to be assessed with ambulation while on their own portable system. A study done by Limberg et al at the University of California San Diego documented how often patients on LTOT are either on the wrong prescription (particularly with ambulation) or on an inadequate portable system for their oxygenation needs.[4]

If using a POC for the first time, a patient should have access to it several days before they leave to familiarize themselves with the machine, determine if the system meets their needs, and assess battery life (which will vary depending on the liter flow) and the patient's minute volume.

What happens to patients who find themselves "stranded" after traveling to a high altitude due to a decrease in their oxygenation? Linda Gunnison, a respiratory case manager at the University of Colorado Hospital in Aurora, CO, has had the opportunity to be involved with patients who have traveled from sea level and ended up in the emergency room and required hospitalizations. According to Gunnison, these patients find themselves needing to obtain a POC for their return flight on short notice. She says, "This is an upfront cost to the patient that generally costs $300–$500, as well as the cost of return shipping." There is no guarantee that one will even be available. There are still a few airlines that provide oxygen, but they must have 48 hours notice.

Pulse oximetry

Patients on LTOT who are traveling should also be educated about personal oximeters and how to use them as a tool to manage their oxygenation needs. It is important that they do not rely on this solely but learn to assess their symptoms in any given situation. A decrease in oxygen saturation that is not accompanied by other clinical signs (e.g., increased shortness of breath, fatigue, headache, or rapid pulse) may indicate that the reading is inaccurate due to poor perfusion. On the other hand, if one is experiencing an increase in clinical symptoms that do not improve or worsen and the oxygen saturation is within normal limits, they should contact their health care provider. When flying or traveling to a high altitude, it is important that patients discuss the use of a pulse oximeter with their physician for guidance on regulating their oxygen saturation.

Help your patients fly high

Six years ago flying was not an option for many patients with chronic lung disease, especially if they were on LTOT. It is imperative that we instill in our patients a

Table 2. British Thoracic Society Recommendations

Ground SpO_2	Recommendation
> 95%	No further testing or supplemental oxygen needed
92–95%	Further studies, such as HAST, to assess O_2 needs
< 92%	Travel with supplemental oxygen

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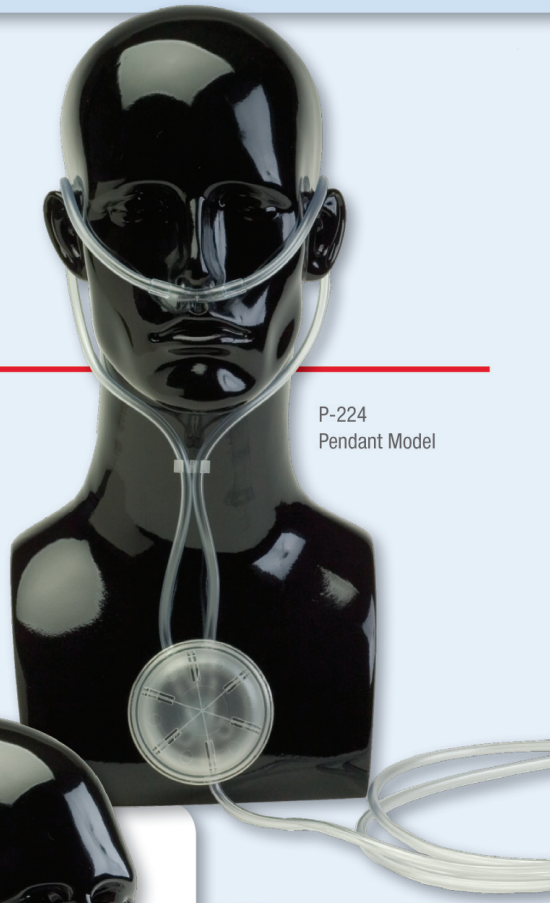

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When using a POC for the first time, a patient should get it several days before their trip to become familiar with the machine, determine if the system meets their needs, and assess battery life and their minute volume.

healthy respect for traveling safely at higher altitudes — whether they are on oxygen or not — and the importance of discussing their travel plans with their physician. Although we would love to see all of our patients have the ability to fly and/or travel anywhere they wish, the reality is that some should not fly or travel to a higher altitude due to greater oxygen needs that may not be able to be met in these situations. As experts, we can help them make the right choices. ■

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A Patient's Perspective

by Ashley P. Oliver

On Oct. 11, 2004, an EMS in Birmingham, AL, received a call that a car had lost control and pummeled 50 feet off a cliff. Upon arrival, a 22-year-old female was found lying outside of the car and appeared to have been ejected from the vehicle. The trauma patient report read: "RESPIRATORY DISTRESS, reflecting a respiratory rate of 26 breaths per minute and a systolic blood pressure of >90 mm Hg. The patient is combative with obvious head and chest pain, difficulty breathing, bilateral wheezing upon auscultation, a laceration above the right eye, and oxygen saturation (SPO_2) of 62%."

Upon arrival at the University of Alabama at Birmingham (UAB) Hospital trauma bay, doctors, nurses, and respiratory therapists worked diligently to stop the bleeding and determine which injuries were life-threatening. The patient was orally intubated and a physical assessment was initiated. She had a heart rate of 120, respiratory rate of 22 (on mechanical ventilation), BP 99/71, and a Glasgow Coma Scale value of 14. Her initial ABG values were as follows: pH 6.98, PaO_2 60, $PaCO_2$ 54, Hb 8.2, HCO_3 13.8, and BE 16.9, which revealed the patient was suffering from respiratory acidosis and metabolic acidosis.

The patient was critical and the prognosis grim. The medical team concluded that she might not even survive through the night. A chest x-ray and CT scan revealed that her injuries were severe, including bilateral hemopneumothoraces (chest tubes were inserted), left chest crush resulting in extreme flail chest with a total of 16 fractured ribs, multiple T and L transverse process spinal fractures, C2 vertebral fracture, left acetabular and sacroiliac fractures, significant right and left lung contusions, left orbital fracture, and lacerations to the spleen, liver, and kidney. Due to the extent of her injuries, the patient was placed in a medically induced coma. No surgeries were performed to repair the damage since the organs were sliced, as if cut by a razor. No physical therapy was attempted because it took the patient three weeks to stabilize. On Day 18, a PEG tube was placed and a tracheotomy was performed. Clinicians assumed this patient would be in a vegetative state if she ever regained consciousness. It was a waiting game.

After five blood transfusions, two resuscitations, ventilator-acquired pneumonia, a staph infection, multiple ice baths for spiking fevers, and 37 days in the trauma/burn ICU, the patient was discharged home with a PEG tube, a speaking valve, and routine house visits from a nurse and a physical therapist.

My name is Ashley Oliver, and the patient I just described was me. I am telling you about my story because it was this event that led me to apply to UAB's respiratory therapy program. Here is my perspective as a patient.

I will never forget my respiratory therapist

His name was Brad. He was the highlight of my day. He always smiled and spoke to me as if I were his friend. He didn't act like I was just another patient in just another room on just another day. He seemed happy to be helping me even if it was only a quick suction or to pop in for my breathing treatment. The hospital is a scary place for a patient; and every second of every day is not filled with visitors, even though that's how I would have preferred it.

about the author...

Ashley P. Oliver is a senior student in the respiratory therapy program at the University of Alabama at Birmingham School of Health Professions in Birmingham, AL, and a student member of the AARC.

I remember Brad coming in one afternoon to perform a bronchoalveolar lavage. "It's to test for pneumonia," he explained. I was very scared and begged for him to please sedate me before he began. I know as an RT you may be thinking about how uncomfortable it seems for the patient. Well, it's really not that bad. It was actually one of the least uncomfortable procedures I had to withstand. Another milestone that scared me terribly was downsizing my trach tube. I was afraid it was going to hurt, but it never did.

You may be thinking that you've had difficult patients in the past. The ones who are always so scared and don't want you to do anything because they are afraid it will hurt. Well, that was me. It is important to know that, as respiratory therapists, we should always remember to put patient compassion first. I realize that many patients are highly sedated when we enter the room and, because we may be in a hurry to finish our rounds, sometimes we don't ask if we can get them anything or make sure the blankets are pulled up or even acknowledge their presence. But I remember.

I had nightmares during my entire hospital visit. I'm sure you can imagine how bizarre a brain may function while under the influence of a drug cocktail consisting of propofol, morphine, and haloperidol, in conjunction with head trauma. While I was obtunded and comatose at times, I was not dead. A kind word was very refreshing. We often fail to realize that patients like this often can still hear. Remember to always treat them as if they are awake, like Brad did with me.

Change of direction

At the time of my accident, I had been a senior at Auburn University getting ready to apply to nursing school when I was diagnosed with ulcerative colitis. I had decided to take a couple of semesters off from school to recover when I had the accident.

Truthfully, I had never even heard of respiratory therapy until my accident. It's like the world packs each member of the hospital personnel into two categories: doctors and nurses. I soon found out that there are many more roles than just two. My time in the hospital allowed me to find my purpose in life. I am now proud to say that I am going to be a respiratory therapist.

If you are reading this and you took part in my care at UAB, then please accept my deepest gratitude. For everyone else, please remember that your role as a respiratory therapist is extremely important. You may very well be helping someone find their purpose. ■

While I was obtunded and comatose at times, I was not dead. A kind word was very refreshing. We often fail to realize that patients like this often can still hear. Remember to always treat them as if they are awake, like Brad did with me.

First, Do No Harm

by Anthony L. DeWitt, JD, RRT, FAARC

It was one of those defining moments as a therapist, and it occurred early in my career. I was working at a hospital in Northeast Missouri when we heard a code called. I went to the room, bagged the patient, and eventually a heartbeat was restored. The patient required ventilation, so I transported her to the ICU, and only then did we learn that the patient was one of the hospital family — a lovely older nurse whom everyone admired.

Within moments of arriving in the ICU, the woman's two daughters demanded that their mother be taken off the ventilator. "She wouldn't want to live like this," they said. The resident physician informed them that their mother would come off the ventilator soon, but she wasn't ready yet. The women were upset and left the ICU. Fifteen minutes later the attending physician, who had told the resident to "handle it" when the code was called, called back to tell the ICU staff to remove the ventilator.

Everyone's mouth dropped open. The patient was viable, and would likely survive the heart attack with proper definitive therapy. But extubating her and placing her on a mask was tantamount to a death sentence. The resident refused to follow the order. He told the attending if he wanted that order given, he could come extubate her himself. A few moments later, the attending directed the nurses to extubate, and the nurses refused. No one in the ICU missed hearing the language the physician used before he hung up.

Twenty minutes later the physician came in, and I was the only therapist in the ICU. He directed me to extubate the woman, and I politely declined. He told me to get an oxygen mask, which I did. He then extubated the patient, whose first words were "Oh my God, I need air!" I placed the mask on her, and within 30 minutes the woman, whose family wanted her designated as a "Do Not Resuscitate," expired after spending most of that time struggling for air. I very nearly resigned that night.

In 1993, Judge Edward D. "Chip" Robertson of the Missouri Supreme Court gave a law school lecture and described the legal analysis that went into the sentinel case of Nancy Beth Cruzan, a Missouri woman who was ultimately removed from life support after the U.S. Supreme Court upheld the Missouri Supreme Court's opinion in her case. Judge Robertson had ended his opinion in the state case in this way:

We find no principled legal basis which permits the coguardians in this case to choose the death of their ward. In the absence of such a legal basis for that decision and in the face of this State's strongly stated policy in favor of life, we choose to err on the side of life, respecting the rights of incompetent persons who may wish to live despite a severely diminished quality of life.

I wrote to Judge Robertson and told him the story of the woman who had died after being removed from life support, and told him that had the opinion been in place in 1981, when I had been involved in the case above, it might have made a difference. Judge Robertson hired me as his clerk in 1993, and I continue to work for him today as we both practice in the same firm.

The therapist's choice

A therapist has a right to refuse to perform any procedure that the therapist has a moral or legal objection to performing. In this case, I believed that extubation was tantamount to murder. I did not wish to carry that on my conscience. No

about the author…

Anthony L. DeWitt, JD, RRT, FAARC, is an attorney and a partner in the firm Bartimus, Frickleton, Robertson & Gorny, PC, and resides in Jefferson City, MO. He has also authored two books and numerous legal journal articles. This article is not a substitute for legal advice.

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administrator ever questioned my decision. If the hospital had disciplined me, I would have gone on to find another job. No job is worth being forced to do that which you find morally repugnant.

To the extent that a therapist — any therapist — is asked to do something unlawful (in violation of the civil law) or illegal (in violation of the criminal law), they not only have the right, but also the obligation to object and not to carry out the order. The defense of "I was just following orders" didn't work at the Nuremburg war crimes trials and is unlikely to work before a criminal court or state board. Importantly, if the order comes from a supervisory health care provider, like a physician, a therapist must *respectfully* refuse. If such a request comes from family, it must also be refused. That's especially true when someone manifests an interest in equipment and alarms.

Late in my career as a therapist, when I worked at one of the truly great hospitals in America, The Toledo Hospital, I had a stroke patient who had been ventilated from admission. The patient's husband had demanded that everything be done, even though much of the care being provided was medically futile. The patient's son one night asked me what would happen if their mother came off the ventilator. I told them that the alarms would sound and that someone would come to the room and fix the problem. He then asked me what controlled the alarms and if they could be turned off. I told him no, they could not be turned off. I then asked him why he wanted to know. Without answering, he asked me to take his mother off the ventilator and let her die. There were tears in his eyes. "Let her go," he pleaded. It was a heartbreaking situation. I compassionately refused the request. I also reported his request to the nurses.

Therapists have a duty to protect patients and to respect the orders that they're given even when they disagree with them, so long as they do not cause patient harm. It is never proper to choose sides where a family disagrees about a course of therapy at the end of life. The only safe thing to do is follow the directives of the person legally appointed to represent the patient. If a therapist feels a compulsion to intervene or act against those wishes, the only safe thing to do is to withdraw from the case and abstain from further treatment. The license you save may be your own. ■

EDITOR'S NOTE

Anthony DeWitt is scheduled to present two symposia: "10 Things You Can Do to Avoid the Courtroom," and "Defending Your License," during the 56th AARC International Respiratory Congress in Las Vegas, NV in December.

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Mastering the Maze of Medicare's Respiratory Assist Device Coverage Criteria for Chronic Respiratory Insufficiency

by Peter C. Gay, MD

For the most part, Medicare's local coverage determinations (LCDs) for continuous positive airway pressure (CPAP) devices and respiratory assist devices (RADs) have been around for some time, and several categories of reimbursement guidelines have been established over the years by the four regional Durable Medical Equipment Medicare Administrative Contractors (DME MACs). The policies have been updated once again, with new provisions becoming effective this year.

On Feb. 1, 2010, the addition of hypoventilation syndrome as a new coverage indication in the LCD for RADs became effective. And, on April 1, significant documentation requirements to move a patient from a CPAP device to a bi-level RAD due to ineffective therapy were added to the LCD on positive airway pressure (PAP) devices for the treatment of obstructive sleep apnea (OSA).

This article deals primarily with the criteria for RADs, although there is a brief discussion about the new documentation requirements for PAP in the OSA policy. Because repeating the coverage criteria in the LCDs would be too lengthy, you are encouraged to review them separately by accessing the links provided in the sidebar on page 36.

Current coverage criteria for CPAP and RADs

The way to approach the categories or groups of coverage in the LCDs is to realize that they are first guided by the primary diagnosis and not the subsequent criteria. There is now an overlap, with the latest CPAP and current RAD policies also explained hereafter.

As you review the local policies, you will notice a detailed process for COPD patients getting to a RAD, as that had become a cost burden to the Centers for Medicare and Medicaid Services. It is also important to realize that patients who require, or are allowed access to, a backup rate device (E0471) obtain nearly twice the monthly reimbursement than those not using a backup rate (E0470); therefore, the use of the E0471 is more restricted.

Bi-level devices were actually designed for patients who appeared to require more ventilation support than delivered by CPAP alone.[1] This required that an avenue to a bi-level PAP device be made available for patients who were either intolerant of CPAP or required more support. These needy patients are most typically those with obesity hypoventilation syndrome or the overlap syndrome.[2] The term "overlap syndrome" was introduced by Flenley to describe OSA associated with COPD. This is most often noticed in COPD patients who are hypercapnic, with the hypercapnia out of proportion to the severity of obstructive lung disease. They are often obese snorers, and they may develop headache or worsening daytime $PaCO_2$ (arterial carbon dioxide tension) after nocturnal oxygen therapy.

LCD for PAP devices for treatment of OSA

As noted above, there have been significant changes in both the RAD and CPAP policies over the last few years. For example, OSA, which was a category in the RAD policies until 2008, is now part of the PAP device coverage for OSA LCD. The criteria remain similar except for a recent addition to the documentation needs.

about the author...

Peter C. Gay, MD, is professor of medicine in the division of pulmonary, critical care, and sleep medicine at Mayo Clinic in Rochester, MN. As a researcher, he has conducted clinical trials on noninvasive ventilatory techniques for critically ill patients and for equipment and treatment plans of patients with hypoventilatory disorders.

I will not expand greatly upon the new documentation issue as it is under immediate negotiation between the DME MACs and patient advocacy representatives, and the policy may very well change. It is worth mentioning that prior to the recent revisions, CPAP (E0601) simply had to be "tried and proven ineffective" based on a therapeutic trial conducted in either a facility or in a home setting. Under the new revisions, the treating physician is now being required to document the following:

- The beneficiary tried but was unsuccessful with attempts to use the E0601 device; and
- Multiple interface options have been tried and the current interface is most comfortable to the beneficiary; and
- The work of exhalation with the current pressure setting of the E0601 prevents the beneficiary from tolerating the therapy; and
- Lower pressure settings of the E0601 fail to adequately control the symptoms of OSA or reduce the AHI/RDI (apnea-plus-hypopnea index/respiratory disturbance index) to acceptable levels.

Management: The beauty of the old requirement was that the actual criteria for CPAP having been tried and proven ineffective remained ill-defined and essentially was left to the discretion of the treating physician. The new documentation requirements changed all of this, but everyone recognized that these criteria were prohibitive in terms of successful documentation. Hopefully, these criteria will change soon and be retroactive.

LCD for respiratory assist devices

The current RAD coverage criteria are characterized in the following four clinical disorder categories or groups and apply to the *first three months* of therapy:

1. Restrictive thoracic disorders

Restrictive thoracic disorders are confusing because patients do not always have to have restrictive physiology based on pulmonary function tests. In fact, unless the patient has neuromuscular disease or a chest wall deformity, they do not qualify for equipment. Patients with interstitial lung disease and severe restrictive lung disease do not qualify unless they also have OSA or hypoventilation problems. In reviewing the specific criteria, you will notice that if the patient fits into this restrictive category, they can qualify with only a single criterion; and this is usually very easy to do and does not require polysomnography (PSG).

Management: Patients should be prescribed an E0471 device (with a backup mode) to provide necessary support during rapid-eye movement sleep, but one should not call this "central apnea or hypoventilation associated with amyotrophic lateral sclerosis." Central apnea and hypoventilation are different categories, and a DME supplier will note requirements for those coverage criteria are not met. It is crucial to use the proper vernacular and, whenever possible, use the "restrictive" category noted above.

2. Severe COPD

A COPD patient experiencing hypercapnia is the most commonly encountered situation for which a decision regarding a home-going respiratory assist device is necessary. These patients commonly come to general internists, pulmonologists, and sleep physicians after an episode of acute exacerbation in the ICU or are noted to be hypercapnic as outpatients. The patients must first be tested for hypercapnia and then be shown to have hy-

View Local Policies for CPAP and RAD Devices

To access the local coverage determinations discussed in this article, you can link to one of the Durable Medical Equipment Medicare Administrative Contractors noted below. The policies for continuous positive airway pressure and respiratory assist devices are identical among the four regional Medicare contractors.

Respiratory Assist Devices — https://www.noridianmedicare.com/dme/coverage/docs/lcds/current_lcds/respiratory_assist_devices.htm

PAP Devices for OSA Treatment — https://www.noridianmedicare.com/dme/coverage/docs/lcds/current_lcds/positive_airway_pressure_pap_devices_for_the_treatment_of_obstructive_sleep_apnea.htm ■

poxemia on an overnight oximetry. If a COPD patient is now clinically stabilized on oxygen, then an overnight oximetry should be done on 2 LPM or the patient's prescribed FIO_2 and a blood gas should be done before or soon after. If the patient is already known to be significantly hypercapnic and seems to be requiring a RAD at night in the hospital, then a decision needs to be made regarding the presence of obstructive sleep apnea. If OSA is strongly suspected, then this becomes the primary diagnosis even if they have severe COPD and a sleep study will be required. Typically, this should be done as an outpatient on the day of hospital discharge or shortly thereafter. Hospital-based polysomnography is often technically difficult to perform adequately, and then the necessary PAP therapy might not be reimbursable for Medicare patients.

Management: A patient can be prescribed an E0470 device (without a backup mode) for severe hypercapnic COPD if they are otherwise optimally treated. A DME supplier will claim that you must document that a nocturnal oximetry study on ≥ 2 LPM oxygen is available and shows desaturations for at least five minutes to ≤ 88% and no suspicion exists for OSA. When in doubt, it is probably best to get the sleep study; otherwise, references about possible OSA should be avoided in the medical record. Now, if the patient is inadequately treated with an E0470 and either shows continued desaturations during further sleep lab titration or quickly develops worsening hypercapnia ≥ 7 mm Hg from baseline, then there is access to a backup rate device earlier than 61–90 days as stated in the past.

3. Central sleep apnea or complex sleep apnea

The most common type of sleep-disordered breathing in patients with cardiac disease is actually OSA. The more challenging patients, however, have some form of central sleep apnea and must be evaluated in a sleep laboratory by a sleep specialist. This, again, is usually best done on the day of hospital discharge or shortly afterwards for inpatients or by routine consultation for outpatients. Classic Cheyne-Stokes respiration is easily recognizable in the sleep lab and can occasionally be managed by simple CPAP or oxygen but more commonly responds best to adaptive servo-ventilation (ASV).[3] There is another common form of ASV responsive central sleep apnea called complex sleep apnea. Complex sleep apnea is a form of central apnea specifically identified by the persistence or emergence of central apneas or hypopneas upon exposure to CPAP or an E0470 device when obstructive events have disappeared.

Management: Patients must first be exposed to CPAP and still have central events during an in-lab sleep study. For all patients who qualify for a respiratory assist device in any of the four categories, there is a mandatory follow-up in order to continue reimbursement. Patients must return after 61–90 days and attest that they are using the device for at least four hours nightly on 70% of the nights in a 30-day consecutive period. There must also be documentation in the medical record that the patient personally believes that there is benefit to continued use. The policy is such that the treatment is delivered on a rent-to-own basis; and after a monthly rental period of 12 months, the patient assumes ownership of the device in the 13th month but continues to receive coverage for masks and other accessories as needed.

On Feb. 1, hypoventilation syndrome was added as a new coverage indication in the LCD for RADs.

On April 1, significant documentation requirements to move a patient from a CPAP device to a bi-level RAD due to ineffective therapy were added to the LCD on PAP devices for treating OSA.

4. Hypoventilation syndrome

This category was recently added and made retroactive for services performed on or after Feb. 1, 2010. The primary purpose of these new criteria is to allow access to RADs for patients who primarily had hypoventilation syndromes that did not meet other category criteria. This category also serves those patients with any type of hypoventilation syndrome who needed a RAD with a backup rate (E0471) including newer devices like Average Volume Assured Pressure Support, or AVAPS® (Philips Respironics, Murrysville, PA), and other similar future predicate design devices. Certain patients are not adequately supported with spontaneously assisted devices; so when a backup rate was previously needed, the only alternative for these patients who fell through the cracks was a *"pressure support ventilator, with volume control, which may include pressure control, used with non-invasive interface"* (E0464) and was, of course, a bulky and more expensive portable home ventilator. The COPD patients with hypoventilation needing a backup rate are described in the criteria outlined for Group 2, Severe COPD, Situations 1 and 2 contained in the local policies.

Management: Patients coming into this category will most commonly have obesity hypoventilation and need a backup rate only after failing an E0470 device. They will all need PSG to demonstrate that residual OSA is adequately treated and persistent hypoxemia or progressive hypercapnia is occurring. Like the other categories, there is a mandatory 61–90 day follow-up in order to continue reimbursement. There must again be documentation in the medical record that the patient meets the necessary criteria.

Early focus on sleep issues needed

In conclusion, the RAD disease categories require that the clinician focus on sleep issues early on in the assessment of the patient. It is necessary to decide on the need for a sleep study, the urgency, and the design of the sleep study to effectively demonstrate the criteria and good response to the respiratory assist device. The bottom line is that one needs to know the rules to play the game — but playing the game is not gaming the system. Ironically, if the treating clinician determines that RAD criteria cannot be met but nocturnal ventilatory support is necessary, they can always prescribe a portable home ventilator with just volume control (E0450) or an E0464 with only a diagnosis of "hypoxic or hypercapnic respiratory failure" and a blood gas demonstrating this. Although pulmonologists often prescribe this equipment, sleep specialists are more typically familiar with the indications and reimbursement criteria and are readily available to help. ■

EDITOR'S NOTE

The author has recently completed or is currently working on research protocols studying the effect of respiratory-assist devices in patients with sleep-related breathing disorders from Philips Healthcare (Murrysville, PA) and ResMed Corp (Poway, CA).

Dr. Peter Gay is scheduled to present two symposia: "Sleep-disodered Breathing in COPD," and "OSA in the Acutely Hospitaolzed Patient," during the AARC International Respiratory Congress in Las Vegas, NV.

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Clinical Perspectives

Legal Ramifications of Telemedicine in the Care of Pulmonary Patients

by Jonathan Fanaroff, MD, JD

From modest beginnings, when Union Army clinicians telegraphed medical supply needs during the Civil War, to a more recent telesurgical operation during which surgeons in the United States removed a gall bladder from a patient in France using a robotic surgical arm, telemedicine has advanced almost as rapidly as the technology that allows it. For respiratory therapists, this technology will allow new ways of caring for patients in all types of environments, from home care to the ICU. From a legal standpoint, however, there are a number of relevant considerations that must be understood before care is provided.

Licensure

The practice of respiratory therapy is regulated by the state, which does so in order to protect the public. If a clinician practicing in State A were to provide telemedicine-based care of a patient in State B, they would likely be found to be practicing without a license. In fact, they would not only be subject to criminal liability in State B, they could easily be disciplined in State A for conduct that reflects badly on the profession. Many state legislatures are considering or have passed telemedicine-related laws. Until they specifically include respiratory therapists, however, it is important to be licensed in all states where a clinician engages in practice.

about the author...

Jonathan Fanaroff, MD, JD, is assistant professor of pediatrics, NICU associate medical director, and director of Rainbow Center for Pediatric Ethics at Rainbow Babies & Children's Hospital in Cleveland, OH.

Malpractice insurance

The clinician who practices telemedicine should also be sure that this activity is covered by their malpractice insurance. Several policies specifically exclude coverage for telemedicine. It is vital to read your policy and know and understand what is covered and what is not covered.

Malpractice liability

Clinicians are expected to adhere to a level of conduct. If their behavior is found to deviate from accepted standards of care and a patient is harmed as a result, then the clinicians and their employer may be sued for malpractice. These principles generally apply even when the care is provided through telemedicine. Indeed, in pediatrics, where telephone care has been provided for decades, one-half of telephone-related malpractice claims resulted in payments to the plaintiffs, higher than in non-telephone-related cases.[1]

One question that sometimes arises is whether or not a clinician-patient relationship exists for a telemedicine patient. In a situation where the therapist is called by a colleague for vague, generalized advice, there may not be a relationship established. For most telemedicine cases, however, in which the therapist "attempts to diagnose, advise, or treat a patient," a clinician-patient relationship will exist and a duty of care will be owed toward that patient.[2]

To date, there have been few malpractice and discipline cases involving telemedicine. As the field expands, however, there is no doubt that this will change. It is worth repeating that any care provided by a therapist over the telephone or via more extensive telemedicine to a patient may establish a clinical relationship with that patient. It is imperative to provide the proper standard of care for that patient as well as to ensure that proper follow-up (home-based patients) or follow-through (hospital-based patients) is arranged and documented in the record.

Minimizing liability risk

There are several ways to reduce the risk of treating patients via telemedicine.

Confidentiality — Protect patient medical information in telemedicine just as with paper records. Indeed, one of the driving forces behind the passage of the Health Insurance Portability and Accountability Act (HIPAA) was to encourage electronic information exchange in the health care system. Information about patients should be given over the phone carefully and never left on an answering machine. Video and other information held electronically should be encrypted, and computers should be password protected.

> Any care provided by a therapist over the telephone or via more extensive telemedicine to a patient may establish a clinical relationship with that patient. It is imperative to provide the proper standard of care for telemedicine patients as well as to ensure that proper follow-up is arranged and documented in the record.

Communication — Make a point of ensuring patient safety always comes first. It is critical to recognize the limitations of technology. Advances in telemedicine have led to "remote presence" technology where a robot roams the hallways from patient to patient, controlled by a clinician at a remote base station. None of this, however, completely replaces face-to-face contact and a hands-on history and physical. If a clinician does not feel the telemedicine encounter has given them enough information, they should err on the side of caution by seeing the patient in person.

Communication with the patient is critical as well, even though the circumstances are different. One key is to be sure that the telemedicine visit ends only after patients have voiced their understanding and agreement with the advice that is given. They must also be instructed "about the circumstances for which they should seek additional medical advice or care."[3]

Documentation — Document all telemedicine encounters the same as for any other patient interaction. Similarly, the degree of documentation required will vary based on a number of factors. In cases of severe illness, major changes to the plan of care, problems with communication, or where the patient disagrees or refuses to listen to the advice given, highly detailed documentation is prudent. Telemedicine encounters should become part of the patient's chart.

Adapting to change

There are a number of potential benefits to telemedicine. Ultimately, these technological tools serve to increase access, especially to rural, geographically remote, and underserved areas. Ideally they will also decrease costs while at the same time improving convenience for patients and providers alike.

Respiratory therapy as a profession is starting to increase its involvement in telemedicine. This is a welcome and necessary addition, but at the same time RTs need to be aware of a number of legal issues that may differ from those of the past. Technology has always played a major role in respiratory therapy — and undoubtedly the profession will be able to adapt, change, and embrace these new ways of connecting with patients. ■

EDITOR'S NOTE

Dr. Jonathan Fanaroff is scheduled to present two symposia: "Educator Academy: Legal Issues for RC Educators," and "Risk Management and the Respiratory Therapist," during the 56th AARC International Respiratory Congress in Las Vegas, NV, in December.

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2. King RC. Telemedicine liability. In: Sanbar SS, editor. Legal medicine & medical ethics, 8th ed. Oklahoma City OK: 2010.
3. American Academy of Pediatrics, Committee on Medical Liability. Medical liability for pediatricians, 6th ed. Chicago, 2004.

AARC Election 2011

All active and life members of the American Association for Respiratory Care will soon vote for the candidates running for 2011 officer and director positions in the AARC leadership on an online secure website.

AARC members have the important responsibility of choosing individuals to lead the profession and our professional association. All of the candidates are introduced briefly here in *AARC Times*.

Only active and life members of each specialty section may vote for the section chair or chair-elect of their respective sections.

A biographical sketch about each candidate, and their answers to questions posed by the AARC Elections Committee, are available for your review on the secure election website at www.aarc.org/member_services/election11/. The actual voting site will not be activated until **Oct. 4, 2010**, and voting will continue through **Nov. 4, 2010**. All AARC members who are eligible to vote will sign on with their member number and password.

If you don't have Internet access, contact the AARC office to request a ballot: AARC, 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706, (972) 243-2272, Fax (972) 484-2720.

The election secure website includes a ballot for you to cast your vote for each candidate. Please be sure to read through all the biographical information and questions the candidates have answered before proceeding to the ballot page for casting your votes. Your thoughtful consideration of this information before voting will help ensure the most qualified people are chosen to lead your professional association next year.

Vice President for Internal Affairs

Michael J. Hewitt, RRT-NPS, FAARC, FCCM
Director, Respiratory Care Services
St. Joseph's Hospitals
Tampa, FL

Susan Rinaldo-Gallo, MEd, RRT, FAARC
Health System User Analyst III, Respiratory Care
Duke University Health System
Durham, NC

Vice President for External Affairs

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Director, Respiratory Care
SUNY Upstate Medical University and Golisano Children's Hospital
Syracuse, NY

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Managing Director
Valley Inspired Products, Inc.
Apple Valley, MN

Secretary-Treasurer

Michael Tracy, BA, RRT-NPS, RPFT
Neonatal-Pediatric Pulmonary Function Specialist
Rainbow Babies and Children's Hospital
Cleveland, OH

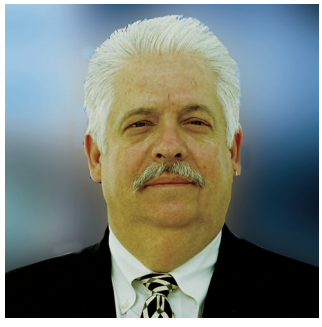
Linda I. Van Scoder, EdD, RRT, FAARC
Program Director, Respiratory Therapy
Clarian Health and Affiliated Universities
Indianapolis, IN

All AARC election candidate information is available beginning Sept. 15 at www.aarc.org/member_services/election11/. Vote online at this secure election site and make a difference in your profession!

Director-at-Large

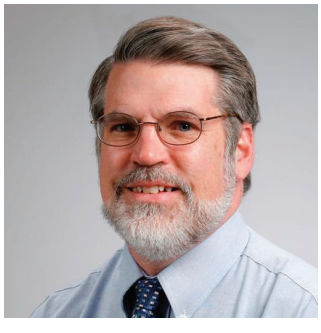
Harold Frederick (Fred) Hill, Jr., MA, RRT
Respiratory Therapist
Springhill Medical Center
Mobile, AL

Denise Johnson, BS, RRT
Director, Cardiopulmonary Services
University of Minnesota Medical Center/Amplatz Children's Hospital
Minneapolis, MN



John W. Lindsey, Jr., MEd, RRT-NPS
Director, Respiratory Care/Sleep Lab
St. Joseph's Mercy Health Center
Hot Springs, AR

Camden J. McLaughlin, BS, RRT, FAARC
CEO/President
MEDIAS, Inc. Sleep Medicine Services
Blacksburg, VA



Albert W. Moss, MA, RRT
Program Director, Respiratory Care
Kalamazoo Valley Community College
Kalamazoo, MI

Gary Wickman, BA, RRT
Director, Respiratory Care Services
Providence Regional Medical Center Everett
Everett, WA

Adult Acute Care Section Chair-elect

Keith D. Lamb, RCP, RRT
Respiratory Therapist 2
Christiana Care Health System
Newark, DE

Diagnostics Section Chair-elect

Matthew J. O'Brien, BA, RRT, RPFT
Manager, Pulmonary Diagnostic Lab
University of Wisconsin Hospital and Clinics
Madison, WI

James Sullivan, BA, RPFT
Supervisor, Pulmonary Laboratories
Memorial Sloan-Kettering Cancer Center
New York, NY

Education Section Chair-elect

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Chairman, Department of Respiratory Therapy Education
SUNY Upstate Medical University
Syracuse, NY

Keith A. Terry, MS, RRT, RN
Assistant Professor
Saint Mary's/Marshall University's
Huntington, WV

Management Section Chair

Roger L. Berg, RCP, RRT-NPS
Manager, Respiratory Therapy, Sleep Lab, Cardiology
Ridgecrest Regional Hospital
Ridgecrest, CA

Bill Cohagen, BA, RRT, RCP, FAARC
Director, Respiratory Care Services
Banner Thunderbird Medical Center
Glendale, AZ

Neonatal-Pediatrics Section Chair-elect

Tiffany G. Mabe, RRT-NPS, RCP, CICP
Clinical Manager
UNC Hospitals
Chapel Hill, NC

Cynthia C. White, BA, RRT-NPS, AE-C
Respiratory Therapist III — Research
Cincinnati Children's Hospital Medical Center
Cincinnati, OH

NOW ONLINE!

Enhance Your Skills as a

COPD EDUCATOR

With the **AARC COPD Educator Course**, you will learn more about diagnosis, assessment, treatment, oxygen therapy, medication, and disease management. Plus, you will learn how to teach your patients better self-management skills.

Course includes a panel discussion with COPD patients that'll help you:

- Understand why patient education is important to the COPD patient.
- Learn how to better communicate with the patient.
- Understand the value you bring from the patients' perspective.

This course covers:

- Age and cultural-appropriate education techniques.
- Smoking cessation intervention.
- Key components of pulmonary rehabilitation.
- Managing patient care from admission to discharge to the home environment.
- Resources available to the educator and patient.
- Proper medication use and dosing, including long-term oxygen therapy.

WHY IS COPD DISEASE MANAGEMENT IMPORTANT?

- COPD is the fourth leading cause of death in the U.S.
- Reducing rates of rehospitalization has attracted attention from policymakers as a way to improve quality of care and reduce costs.[1]
- COPD is the third most frequent reason for hospital readmissions.[1]
- Research shows that supportive palliative care can reduce rehospitalization and increase patient satisfaction.[2]
- There is a quality deficit in routine care of COPD patients, suggesting that increased focus on routine management of COPD care is warranted.[3]
- By teaching patients self management, the clinician can help to decrease the number of readmissions and emergency department visits.[4]

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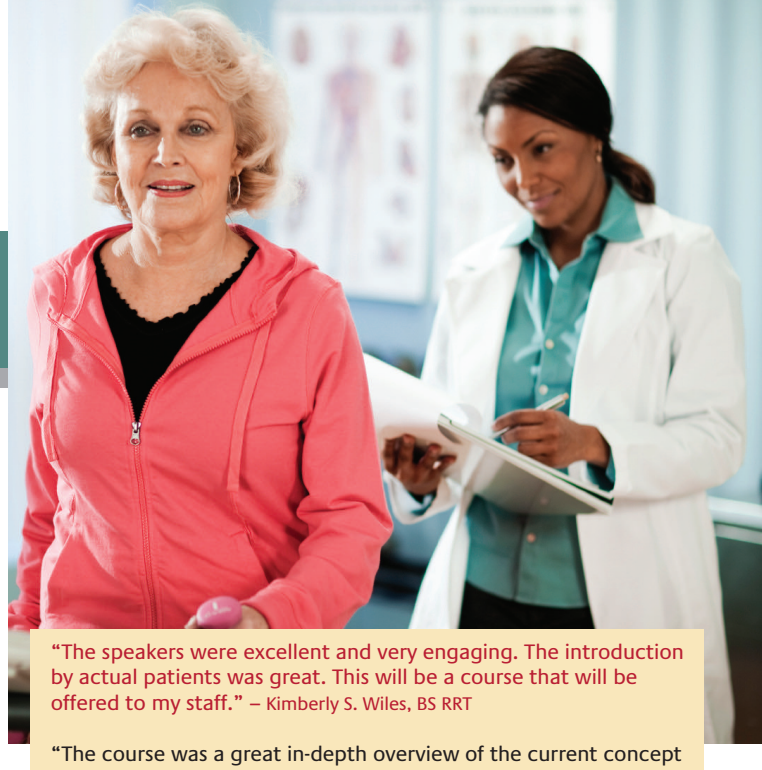

"The speakers were excellent and very engaging. The introduction by actual patients was great. This will be a course that will be offered to my staff." – Kimberly S. Wiles, BS RRT

"The course was a great in-depth overview of the current concept in COPD and management." – Tim Buckley, RRT FAARC

"Really covers all the essentials for being a very good COPD Educator.The Panel Discussion provided great insights on the patient-provider relationship and how strong this influences and impacts real psycho-social needs." – Kevin Ryan BS RRT

"The inclusion of a dietician, nurse, respiratory therapist, physician, and patients provides both depth and breadth for this program." – Garry W. Kauffman, MPA FACHE RRT FAARC

This online course is facilitated by leading clinicians in respiratory/pulmonary care:

Robert A. Sandhaus MD Phd FCCP
Bill Galvin MSEd RRT CPFT AE-C FAARC
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Karen L. Gregory MS APRN-BC CNS RRT AE-C
Patricia B. Koff MEd RRT
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Visit http://www.aarc.org/education/copd_course/ for more information.

Nonmember Price $225

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10 Hours of CE Credit

Earns CRCE and Continuing Nursing Education Credit

This course earns CRCE credit from the American Association for Respiratory Care. Participants must view all modules. No partial credit given.

This continuing nursing education activity was approved by the Illinois Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

American Association for Respiratory Care
9425 North MacArthur Blvd. Suite 100, Irving, TX 75063
(972) 243-2272 Fax (972) 484-2720
info@aarc.org

This course is jointly sponsored by the COPD Foundation and the AARC.

5 Ways AARConnect Can Help Your Career

With the AARC's new social media site, you're just a click away from professional development

Networking with respiratory colleagues across the nation and around the world just got a whole lot easier.

Log on to http://connect.aarc.org and start making new connections today.

When four Harvard University students launched Facebook back in 2004 as an online community for college students, few people would have predicted that by 2010 the site would be populated by everyone from middle schoolers to grandparents. But social media has indeed taken the world by storm. *Now the AARC is getting into the act with a social media site all its own.*

AARConnect debuted last spring and is quickly becoming one of the Association's most popular benefits. Through our members-only site, users can engage in discussions with a wide range of groups, access resources, and much, much more. It all adds up to new ways to boost your career potential. Here's a closer look at the top five:

1. Making contacts

AARConnect is first and foremost a virtual community for AARC members, and as such, each and every member has a profile page on the site. That's where you let your fellow members know a little something about yourself by entering your educational background, work information, a brief biography, your professional areas of interest, and your hobbies. You can also upload a photo of yourself. What you do with your profile is up to you — you decide how much or how little information to share, ensuring your security at all times.

Once you have your profile the way you want it, it's time to connect with your colleagues across the country. You can invite them to connect with you — or accept their invitations to connect with them. Either way, you'll end up with a Facebook-like list of AARC contacts with whom you can share ideas and information. Finding people to connect with is easy — simply click on "Directory" in the top menu and then "Find a Member" to search by member name, location, hospital, professional interests, and more. Locating individual members can be invaluable when you're seeking specific resources, looking for a new job, or just want to know who's working where.

2. Help Line

The AARC's go-to source for quick answers to tough questions is now an integral part of AARConnect. Simply click on the "Help Line" tab on the top menu and you'll be right where you need to be to post a message, see what others have posted, search for a discussion topic, or contact previous posters to offer your own expertise. Use this tool whenever you want to tap into the collective knowledge of your fellow AARC members.

Online Security a Top Priority

The AARC recognizes the need for online security in a social media environment, and AARConnect has been designed specifically with that in mind. Through the "My Preferences" link you can control not only how you will receive messages via the site but also what information in your profile is visible to which groups of people — and that ranges from making your profile visible to everyone to making it visible to no one. ■

AARConnection...

Early Users Give AARConnect a Thumbs Up

Here's what your fellow AARC members are saying about AARConnect:

"Kudos for getting this site up and running. I think it will be a great tool!"
– Terry Cunningham, MBA, RRT, Indianapolis, IN

"I like the new format. Congrats to the AARC."
– Alan Roth, MS, RRT, RPFT, FAARC, Modesto, CA

"Thank you for setting this up. I especially like how easy it appears to be to reply to just the sender. My mailbox can get flooded, and when it does, I do not have time to read each, so I archive or delete them. This should diminish overloading."
– Arthur Taft, PhD, RRT, FAARC, Augusta, GA

"I was concerned our institution's filtering software would not allow this through since it blocks any social networking. But it seems to be working fine. Thanks for all of your efforts."
– Jack Albert, MEd, RRT, CPFT, Pittsburgh, PA

"The new platform for discussion that AARC has started is really very nice. In this way I can understand better the way RTs work in the United States."
– Andreas Batzakis, physiotherapist, Athens, Greece

"I like this very much. Easy to set up and use, visual enough, and very searchable."
– Paul Dalby, MBA, RRT-NPS, RPFT, Richmond, VA

"Man, I am really digging this new site. It looks great and I can't wait to watch it grow."
– Richard Zimmerman, RRT-NPS, CCEMTP, C-NPT, Corpus Christi, TX

"I was recently invited to be a contact by one of my colleagues and had no idea this was being implemented. Once I accepted to be a contact, a whole new world opened up. This is a very exciting change and a move in the right direction!"
– Karen Powers, RRT-NPS, Jonesboro, GA

3. Discussion lists

The AARC has supported numerous discussion lists for many years now, but with the advent of AARConnect they are all available in one place and significantly easier to use. You can manage all of your lists from the "Discussions" tab on the top menu, choosing to receive messages in real time or as a daily digest. And when messages come your way, you can view specific discussion threads, view postings by individual members, easily reply back to the whole group or just the sender, and download resources attached to the message. The AARC discussion lists are your best bet when looking for targeted information or seeking answers to specialty-related questions regarding your patients and your practice.

4. Resource libraries

One of the best things about AARConnect is the fact that every network or community on the site comes complete with a Resource Library all its own. Basically souped-up versions of the "Swap Shops" operated by some of the Specialty Sections over the years, Resource Libraries automatically download all the resources shared by members of the community in question. That means the protocol your colleague in Missouri just attached to his Management Section post this morning can quickly and easily be located a month from now simply by going to the Management Section Resource Library. With this wealth of information available 24/7,

you'll be able to access everything from PowerPoint presentations to photographs. Our scoring system lets users rate the value of the resources, so you'll be able to see which ones are getting top marks, and the site also tells you which resources have been viewed most often as well.

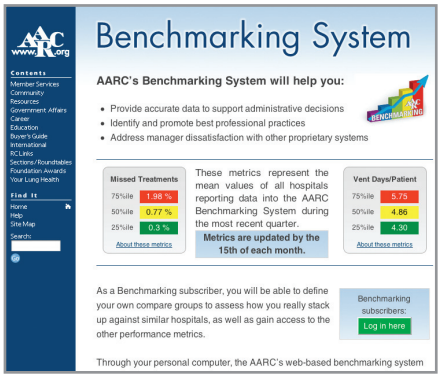
5. Finding like-minded souls in all communities

Yes, the AARC supports Specialty Sections and Roundtables to provide members with the opportunity to engage in discussions about specific areas of the profession. But what if you just want to talk about CPAP compliance or going back to school for your master's degree? AARConnect allows users to set up communities of their own, and the sky's the limit as far as topics are concerned (within the confines of professional decorum, of course). So if 10 members from California want to set up a network just to talk about NICU care in San Jose, they can go for it. If five managers from one health system want to chat about their organization's experience with Six Sigma, no problem. The topic doesn't even have to be respiratory-related. Members can form networks to discuss anything from their favorite hobbies to their plans for retirement, if they want to. ■

3 More Ways AARC Delivers a Competitive Edge

AARConnect is a great new way to enhance your career, but professional development doesn't end there at the AARC. Here are three more tools you can use to get out ahead of the pack:

Find all these tools on www.aarc.org.



1. Webcasts: The Association hosts one or two webcasts every month, with **free CRCE credit** for those who take part in the live sessions. These informative programs cover the hottest topics in the field and are presented by some of the most well known names in the business. Take advantage of these presentations on a regular basis and you're guaranteed to stay up-to-date on the latest thinking in the profession. In many cases, you can earn enough CRCE credit to fulfill requirements for your state license as well.

2. Benchmarking: AARC Benchmarking provides accurate data to support administrative decisions, identifies and promotes best professional practices, and addresses manager dissatisfaction with other proprietary systems. Through Benchmarking, managers can define their own compare groups and gain access to other performance metrics, all from the comfort of their own computer screens.

3. Job Bank: Our Job Bank helps your career on two fronts: Job seekers can quickly and easily locate opportunities throughout the country via our search function, and managers who need staff can post an ad in the bank, knowing they'll be targeting AARC members all over the nation. ■

The Year of the Lung

As a key partner in the 2010 Year of the Lung campaign, the AARC is raising awareness about the conditions you treat.

Now it's your turn to get involved.

For most people, breathing is easy and automatic. Unfortunately, it isn't so easy for millions of people around the world. This year, leading respiratory professional organizations decided to join forces to raise awareness of the lung conditions that take our breath away by supporting the International Year of the Lung.

Spearheaded by the Forum of International Respiratory Societies — a group consisting of the Asociación Latinoamericana del Tórax, the American College of Chest Physicians, the American Thoracic Society, the Asian Pacific Society of Respirology, the European Respiratory Society, the International Union Against Tuberculosis and Lung Disease, and the Pan African Thoracic Society — the year-long event has attracted partners from a wide range of groups and organizations. And the AARC has been right in the thick of things. As a Year of the Lung partner, the Association has supported the campaign with monthly postings on www.AARC.org aimed at linking the event to lung health awareness days and months throughout the year. These postings feature tools you can use to take the lung health message out into your communities, resources you can tap into to improve your own knowledge of respiratory conditions, and information you can share with other health care providers and your patients.

See the monthly postings on www.AARC.org for lung health awareness days and months throughout the year.

OCTOBER		
HEALTHY LUNG MONTH, OCTOBER	CHILD HEALTH DAY, OCT. 4	WORLD SPIROMETRY DAY, OCT. 14

AARC JOINS INTERNATIONAL COLLEAGUES IN PROMOTING LUNG HEALTH

Our Association has also tied key respiratory messages to the Year of the Lung through press releases circulated by the AARC state societies, letting local communities throughout the country know that respiratory therapists care about lung health. And in October, we'll be hosting World Spirometry Day @ the State Capitol to provide lung health screening and information to state legislatures. Organized by our state societies, these events provide respiratory therapists with the opportunity to educate legislators and their health staffs about lung disease and the important role respiratory therapists play in the care of these patients.

If you have yet to get involved in a Year of the Lung activity, the coming months offer many great opportunities to team up respiratory health with the international event:

NOVEMBER

NATIONAL RESPIRATORY CARE WEEK, OCT. 24–30	LUNG HEALTH DAY, OCT. 27	NATIONAL COPD AWARENESS MONTH, NOVEMBER	LUNG CANCER AWARENESS MONTH, NOVEMBER	WORLD PNEUMONIA DAY, NOV. 2	WORLD COPD DAY, NOV. 17

Resources for Year of the Lung

You can find a wealth of resources to help plan your Year of the Lung events at www.AARC.org. Just select the Year of the Lung button on our home page to access all the resources listed below. There is also additional information on the international website at www.2010yearofthelung.org.

World Spirometry Day @ the State Capitol is Thursday, Oct. 14, and our state societies will be hosting and holding World Spirometry Day events, including performing COPD spirometry tests and distributing educational materials about COPD and the profession in your state capitol or state department of health building. On the AARC Web link you will find the following to help plan your events: FAQs about planning and execution, a generic press release, reproducible photos and graphics, and step-by-step instructions for assembling your display.

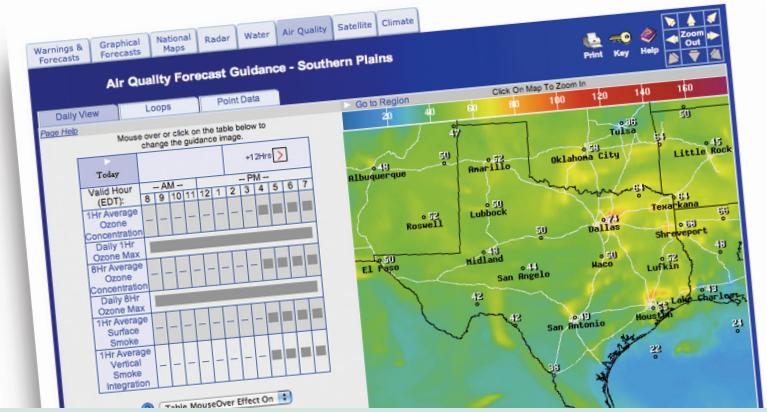
Learn more online at AIRNow (http://airnow.gov). The U.S. Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration's National Weather Service (NOAA), NASA Earth Science, and many tribal, state, and local agencies developed the AIRNow website to provide the public with easy access to national air quality information.

A comparison of air quality in different states, counties, and cities is on the **EPA website** at www.epa.gov/aircompare.

Air pollution information from the Centers for Disease Control and Prevention is at www.cdc.gov/nceh/airpollution.

Air quality forecast from NOAA (www.weather.gov/aq) includes interactive maps divided by regions, states, and cities.

Download a color or black-and-white flyer about air quality — "How Do You Deal with 'Bad Air' Days?" — and post it where your patients can see it.



Press Releases

A series of four press releases are being released to your local newspapers written by the AARC and modified by your state society with quotes from AARC members in your state. **"Asthma Giving You Trouble?"** and **"Air Quality in the 'Year of the Lung,'"** have already been released. **"Back to School Without the Bugs,"** will go out this month, and **"Raising COPD Awareness in the 'Year of the Lung.'"** will be released in time for National COPD Awareness Month in November.

Here are some facts from the Year of the Lung website (www.2010yearofthelung.org) that illustrate why more needs to be done to spread the word about lung conditions and the toll they take on society:

Leading respiratory professional organizations have joined forces to raise global awareness of lung conditions by supporting the International Year of the Lung.

- Lung diseases, including asthma and COPD, cause more than 4 million deaths each year, yet most lung disease is preventable.
- Four million people die every year and one-in-three newborn deaths result from pneumonia.
- In the United States, the leading respiratory killers are vascular disease and lung cancer.
- As communities and households share the same air, lung disease can quickly spread among individuals, causing infection or even death.
- Lung health can be improved by avoiding smoking, exercising regularly, and avoiding pollutants when possible.
- In high- and middle-income countries, tobacco smoke is the biggest risk factor for COPD.

- Nearly half the world's population lives in or near population centers with poor outdoor air quality.
- No new anti-TB agents have been introduced since the 1970s.
- Diagnosis and treatment for lung disease is historically under-funded.
- Even in high-income countries where medicines are available, they are not always affordable.
- Almost 40% of TB cases are not properly detected and treated.
- Most pneumonia cases are detected only when the infection has grown to an advanced state.
- As of June 20, 2007, only 148 countries out of 193 WHO Member States had ratified the Framework Convention on Tobacco Control.
- In 2009, the U.S. National Heart, Lung, and Blood Institute estimated that the cost of providing health care related to all respiratory conditions, excluding lung cancer, was $113 billion.
- Lung disease leads to a reduction in income, owing to loss of productivity caused by illness or death.
- Measured in disability-adjusted life years, the burden of chronic respiratory diseases was projected in 2005 to account for 4% of the global burden and 8.3% of the burden of chronic diseases.
- By 2020, 11.9 million of the 68 million deaths worldwide will be caused by lung disease. ■

Congress Preview:

You probably don't have this back home – explore Las Vegas at www.visitlasvegas.com/.

When the AARC International Respiratory Congress convenes in Las Vegas, NV, this Dec. 6–9 (Monday–Thursday), attendees from around the world will have before them four days of lectures and symposia guaranteed to provide the kind of information they need to add value to their respiratory care departments back home.

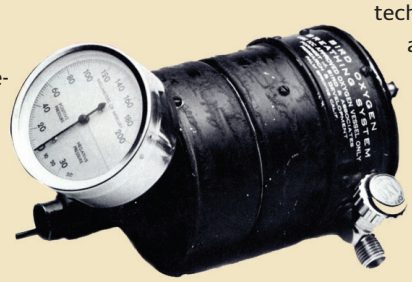
Sessions *Not* To Be Missed

In this edition of "Sessions Not To Be Missed," we zero in on another five standout presentations:

Mechanical Ventilation Then, Now, and Beyond

The history of mechanical ventilation will take center stage during this year's 37th Donald F. Egan Scientific Memorial Lecture, as Robert M. Kacmarek, PhD, RRT, FAARC, director of respiratory services at Massachusetts General Hospital in Boston and professor at Harvard Medical School, reviews the past, present, and future of the profession's most complicated treatment. Starting with the simply designed machines of the 1950s, Dr. Kacmarek will show how ventilators progressed through the years to become the complex and sophisticated microprocessor-driven devices used in hospitals today. From there, he'll provide a provocative look at where these devices are likely to head in the years to come.

"In this presentation I will review the historical development of the mechanical ventilator from a clinical perspective, identifying the changing philosophies of ventilator management stimulating the technical advances seen on ventilators," says Dr. Kacmarek. "I will also establish where we are today regarding ventilator development and discuss what we can expect as the maturation of mechanical ventilators continues into the 21st century."



The first respiratory therapist to present the prestigious Egan Lecture, Dr. Kacmarek is well versed for the topic, having authored numerous studies on mechanical ventilation. His current research interests include: trending of physiologic variables during ventilatory support to identify patients with a high probability of adverse events; lung recruitment techniques and their physiologic impact, as well as their impact on lung injury; changes in lung volume with various ventilatory techniques and during weaning; and approaches to ventilation during cardiopulmonary resuscitation. He is also involved in an international randomized control trial of approaches to the management of acute respiratory distress syndrome (ARDS).

Ventilation *Hot Topics at 2010 Respiratory Congress*

Mitigating the Risks and Costs of Invasive Ventilation

The sickest — and most costly — patients in the hospital are those in the ICU on mechanical ventilation, and improving this life-saving care is paramount to both reducing morbidity and mortality and making the most of every dollar spent. The AARC Congress will hear from a leader in the profession when Neil MacIntyre, MD, FAARC, chief of clinical services in the department of medicine, pulmonary, allergy, and critical care medicine division, at Duke University Medical Center in Durham, NC, takes the podium to update attendees on the latest thinking on invasive ventilation.

"The need for invasive mechanical ventilation continues to grow as the population ages and aggressive medical/surgical therapies keep patients alive longer," says Dr. MacIntyre. "Invasive mechanical ventilation effectively provides respiratory life support but is not without its complications. Research is clearly needed to provide this support with less risk for lung injury, less need for sedation, less risk of infection, and lower costs."

Duke University Medical Center is part of the National Institutes of Health's ARDS Network, a consortium designed to perform multicenter trials on acute respiratory distress syndrome. Dr. MacIntyre has published extensively on mechanical ventilation and respiratory failure and is currently working on projects ranging from patient-ventilator interactions during modes of support that require patient activity to a prototype aerosol-generating catheter that can be directly inserted into the airways.

Arguing the Best Methods for Lung Protective Ventilation

The jury is pretty much in on lung-protective ventilation: It is the right way to manage patients with acute lung injury–acute respiratory distress syndrome (ALI-ARDS). But how to best achieve that goal is still way up in the air, as researchers continue to assess the methods. The debate will continue in "Controversies in Mechanical Ventilation of Adults with Acute Respiratory Distress Syndrome." This "pro/con" session will feature some of the biggest names in respiratory care today, who will argue both sides of these statements:

- Airway pressure release ventilation has important advantages over conventional volume-targeted ventilation for managing ALI-ARDS.
- Higher positive end-expiratory pressure (PEEP) is better in managing ALI-ARDS.
- PEEP should be set using esophageal pressure measurements in managing ALI-ARDS.
- High-frequency oscillatory ventilation should be part of your institution's armamentarium for managing severe ALI-ARDS.

See the latest equipment and groundbreaking technology in Exhibit Hall 2010.

Home Safe? Risk-reduction Strategies for the Home Care RT

A lot is being said and written about the importance of keeping patients safe while they're in the acute care hospital. But in reality, the hospital is a fairly controlled environment, where health professionals can and do try to minimize patient safety issues.

What happens when these patients go home on some of the same medical technology they received in the hospital? Patient safety issues abound, and there are no health professionals on hand 24/7 to minimize the risks.

That's where the home care respiratory therapist comes into play, and during their symposium on "Patient Safety in Home Care," David A. Gourley, MHA, RRT, FAARC, and Timothy W. Buckley, RRT, FAARC, will delve into the issue by addressing common safety risks in the home, emergency preparedness in respiratory home care, and what to do when patients won't cooperate with patient safety instructions.

"Patient safety is not just a concern in hospitals," says Gourley. "RTs in home care have unique challenges with patient safety. Attendees will learn the high-risk areas and risk-reduction strategies for the home care therapist."

Speakers Bring a World View to the AARC Congress

The AARC Congress truly is an "International Respiratory Congress," attracting attendees from all over the world. But diversity makes its way behind the podium as well, as speakers from abroad travel to the meeting to address their colleagues.

This year's session in Las Vegas will be no different. Among the internationally recognized presenters already lined up for the four-day event are:

- Stefano Nava, MD, from Pavia, Italy, who will speak on "Noninvasive Ventilation" and "NIV for ARDS"
- Adel Bougatef, MD, from Brussels, Belgium, who will address "HFPV – High Frequency Percussive Ventilation"
- Jesus Villar, MD, PhD, from the Canary Islands, Spain, who will talk on "What Is ARDS?" ■

Need-To-Know Info About CoARC's Revised Standards

Preparing the next generation of respiratory therapists is a tall order, and RC educators must meet a comprehensive set of standards from the Commission on Accreditation for Respiratory Care (CoARC) to ensure they are covering all the bases. Recent changes to the standards are intended to strengthen educational programs in the profession, but like all changes, they have resulted in their fair share of questions as well.

In "Contemporary Topics in Programmatic Accreditation," CoARC representatives will examine some of the more perplexing components of the new standards, with an eye toward bringing everyone up-to-speed. "This symposium will provide the attendee with a better understanding of CoARC's new accreditation standards and policies and their impact on programs and future graduates," says CoARC Executive Director Thomas R. Smalling, PhD, RRT, RPFT, RPSGT, FAARC. "Don't miss this opportunity to learn more about the new CoARC from those directly involved with the organization." ■

What happens in Vegas... you'll want to take home!

Log on to www.AARC.org/education/meetings for more information.

Regular registration deadline is Oct. 31.

RTs "Push That Vent" TO BENEFIT LUNG HEALTH

ARCF COMPETITION GROWS IN POPULARITY ACROSS THE COUNTRY

Want to have fun and raise money and awareness for lung health at the same time? Then the ARCF Ventilator 5K is for you.

by Debbie Bunch

When the first teams entered the first track back in 2007, the idea of having respiratory therapists dress up ventilators and push them around parks and parking lots to raise money and awareness for lung health was still pretty far-fetched. After all, aside from tossing a random lab coat over a stored ventilator, most RTs had never even considered decking out these machines in anything but the requisite tubing, let alone taking them outdoors for a race.

But here it is three years later, and the American Respiratory Care Foundation's (ARCF's) Ventilator 5K competition is going strong. As we head into prime season to host a Vent 5K (the cool, crisp days of fall are ideal for the event), we wanted to look back at a few of the 2009 events to show everyone just how much fun the whole thing can be.

LINCOLN PULMONARY & CRITICAL CARE, LINCOLN, NE

Supporting local needs

Kathleen Geier-Craft, RRT, a therapist at Lincoln Pulmonary & Critical Care in Lincoln, NE, organized the first-ever Vent 5K in her community after learning that funds raised by the event could come back to help local lung patients. "On a daily occurrence, I encounter patients who cannot afford medications, pulmonary rehab, and other life-changing and improving measures," says the AARC member. "The idea of raising money for a cause, knowing the money could be directly applied to those in our community, was what drew me to support the ARCF event."

The competition included four teams from local hospitals, a pulmonary rehabilitation program, and her own pulmonary clinic. Together they raised $2,230, with 100% of the proceeds going to the ARCF thanks to generous donations from the community that helped offset the costs involved with hosting the event. "We had refreshments and breakfast donated by two home care companies, and prizes were also donated for our own 'best dressed' vent of the event," says Geier-Craft. "One of the hospitals donated ear warmers as well, which was a good thing because it was a bit chilly that morning." She and her colleagues also set up an

educational display with lung health information, and an RT was there throughout the event to hand out the materials and answer questions.

The funds raised by the Nebraska contingent have already done exactly what Geier-Craft hoped they would. "We were so excited to hear that our first grant request to the ARCF was approved for a patient to use for pulmonary rehab," says the therapist. "We know the process works!"

Plan Your Own Vent 5K Today

How can you host your own Ventilator 5K? It's easy. Just go to **www.arcfoundation.org** and click on the "Vent 5K" button to learn everything you need to know to put on a winning event. ■

STEVENS-HENAGER COLLEGE, MURRAY, UT

Fun service project

Respiratory therapy students at Stevens-Henager College in Murray, UT, hosted their inaugural Vent 5K on a nice Saturday last October. "As the director of clinical education, I thought that it would be a worthwhile experience for our respiratory therapy students to get involved in a service project and have fun while doing it," says AARC member Vicky Robbins, BS, RRT. "The event was held in our school's parking lot, with six Stevens-Henager College respiratory therapy student teams participating."

The students set up their 5K course with stops along the way for patient care simulation stations where the students demonstrated CPR on a simulation manikin, a small volume nebulizer treatment, isolation technique for gown and gloves, and other respiratory-related tasks. "We probably had about 50 people who participated, which included students and their family members," says Robbins. "The Murray City Fire Department came with a fire truck, as well."

Robbins says the students had a great time hosting the event and raised $400 for the ARCF. "I would recommend the Vent 5K to other RC programs as a service project for their students," she says.

Vent 5K Funds Support Ohio Girl Scout Lung Health Project

Teresa A. Volsko

The key goal of the ARCF's Vent 5K is to raise funds that can go back into local communities to support lung health concerns. A recent grant issued to Teresa A. Volsko, MHHS, RRT, FAARC, respiratory therapy program director at Youngstown State University (YSU) in Youngstown, OH, illustrates how the Foundation is putting the money to good use.

"The Girl Scout Asthma Awareness Patch Project is a collaborative initiative aimed at improving the health of residents within a quad-county area of Northeastern Ohio," explains the AARC member. "Youngstown lies in the midst of Mahoning County and is one of seven Ohio metropolitan areas that are ranked in the top 100 most-challenging places to live with asthma in the United States.

"She and her colleagues at the Bitonte College of Health and Human Services and certified asthma educators from the Community Outreach, Education and Support Center at Akron Children's Hospital Mahoning Valley are working to develop asthma education materials that can be incorporated into the Scouts' existing Asthma Awareness Patch program. "The funds from the Vent 5K were used in part to develop a portion of the asthma materials, and partly for other costs associated with the event," says Volsko. "We are using this project as a research project, assessing the effectiveness of the knowledge gained by the Girl Scouts who participate in our asthma education program."

The one-day program will take place at YSU and will consist of two parts. During the first half of the day, older scouts will be trained to partner with RC students and certified asthma educators in the presentations made to younger scouts. The second half of the day will consist of those presentations. "We would like to empower Girl Scouts as leaders to take charge of their own health, involve them in asthma education activities within their communities, identify those with asthma, and provide these children, young adults, and their families with the tools needed to control this chronic respiratory condition and live fully active lives." The group is hoping the program can eventually be rolled out to the entire Northeastern Ohio Region. ■

About the American Respiratory Care Foundation

The American Respiratory Care Foundation is a not-for-profit organization that supports research, education, and charitable activities.

Some of the activities of the ARCF include the funding of clinical and economic research education recognition awards, educational activities, literary awards, and scholarly publications. The ARCF is committed to health promotion, disease prevention, and improving the quality of the environment, and it seeks to educate the public about respiratory health, as well as assists in the training and continuing education of health care providers.

The Foundation seeks to ensure a better, healthier future for all by promoting prevention, quality treatment, and management of respiratory diseases. For more information about the ARCF, log on to **www.arcfoundation.org**. ■

Three-time winner

Last year represented the third year in a row students at Weber State University (WSU) in Ogden, UT, hosted a Vent 5K — and the third time the students came out on top in the overall competition.

Faculty member Janelle Gardiner, BS, RRT, says it feels great to be a three-time winner, though she admits the competition is getting fiercer all the time and it might be hard to keep up the trend. But her students certainly enjoy the challenge. Gardiner says she initially decided to get her students involved to give them a service-learning opportunity. "Rather than having each student perform their own individual project, I was able to organize their efforts and put the first Vent 5K together. Since that time, I have watched as each student takes on something they feel they would be good at and is able to contribute to making a successful event. The competitive spirit keeps them going."

All three of the WSU events have taken place at the Ogden River Parkway, which makes it easy to host the runners invited to participate along with the Vent 5K teams. A large pavilion on the site facilitates pre-event registration and provides a venue for the awards ceremony that takes place after the race is completed. A raffle is also scheduled in conjunction with the event, which increases the money raised. Last year WSU raised $2,500 for the ARCF. ■

Janelle Gardiner accepting award – a home ventilator – at the AARC Congress from Steve Nelson (left), AARC associate executive director, and Ed Coombs of Draeger.

WEBER STATE UNIVERSITY OGDEN, UT

Q+A with NASCAR® Driver Danica Patrick

NASCAR® driver Danica Patrick

tells AARC President Timothy Myers why she's so passionate about the DRIVE4COPD campaign to screen more people for COPD.

The DRIVE4COPD campaign kicked off last February to raise awareness of chronic obstructive pulmonary disease (COPD) among the general public. Supported by celebrities Danica Patrick, Patty Loveless, Bruce Jenner, Michael Strahan, and Jim Belushi, the campaign is working to identify the "missing millions" who may have COPD but don't know it, by using a five-question "pop screener" located on the campaign website, www.drive4copd.com. As a key campaign partner, the American Association for Respiratory Care launched its own DRIVE4COPD initiative in late July to recruit the 50,000 members of the Association to each screen 10 members of the public using the DRIVE4COPD screener.

To help get the event started, AARC President Timothy R. Myers, BS, RRT-NPS, recently spoke with "Race Ambassador" Danica Patrick about why she got involved in the DRIVE4COPD program and how she believes AARC members can make a difference and spread awareness. That conversation is excerpted here. To listen to this interview via archived podcast, go to www.aarc.org/headlines/10/07/drive4copd.

Read more about the campaign
DRIVE4COPD on the Web
www.aarc.org/headlines/10/07/drive4copd.com

Myers: We really want to get our members jazzed up to help with this screening mechanism so that we can spread the word about the risks of COPD. It's something that we've been pushing very heavily as a national organization over the last two or three years; and we think this is a great opportunity for patients and families, as well as our professional organization, to partner with our colleagues in the DRIVE4COPD campaign.

So, I guess the first question I have for you, Danica, is, why are you involved with this DRIVE4COPD campaign?

Patrick: My grandmother had COPD. She passed away at a pretty young age. She was only in her 60s. It's really difficult to see someone close to you in a wheelchair with an oxygen mask on, receiving oxygen 24 hours a day. So, anything I can do to get the awareness out so other families and other people don't have to suffer like this is a great opportunity for me.

Myers: What do you hope to see come out of this campaign to screen a million people in the United States?

Patrick: Our hope, while it might not be immediate, is that we see a change and more people being healthy — in years to come. It's not feasible to reverse the disease and regain lung function. But it is possible to do something about it and to stop the progression of the disease and give yourself a chance for a more normal lifestyle… to be able to grow old and do normal things with your family and your kids and your grandkids. So we just hope over the next few years that we'll really start to see the awareness translate into healthier people.

Myers: This is obviously something very near and dear to your heart and something that you're very passionate about. We can hear it in your voice. There is a personal involvement.

Patrick: Absolutely. If I can help at all to avoid that in any other family situation, that's what I want. This doesn't have to get hold of you. You can do something about it. And it doesn't just affect you, it affects your whole family, you know?

Myers: Your grandmother was diagnosed very young, in her 60s, so obviously it left a lasting impression on you through your childhood. Maybe you can tell our members, who obviously work with these patients each and every day, the flip side of the perspective. In growing up, how did you see it impact her day-to-day life?

Patrick: Well, the bluntness of it was that she had an oxygen mask on her face. I mean, you couldn't really even talk with her. It makes it even hard to eat. She was losing a lot of weight and was very thin. It's just really hard to see. And not only do you experience that as a person, but then there are the people around you who have to help you. Her husband had to change her oxygen tanks and make sure that the cord never was pinched so she would have a steady flow of the oxygen to her mouth… things like that. It's an everyday, all-day kind of thing that is something you can do something about. And it's just important that we get the awareness out there. We figure COPD affects about 24 million people, and about half of them don't even know it. This is the fourth leading cause of death in this country, and I would venture to say that a lot of people don't even know what COPD stands for.

Myers: I think you're absolutely correct, and being a child with a father who has COPD himself and is now O_2 dependent, I see what he goes through on a daily basis and what my mother goes through on a daily basis as his main caretaker. It has a huge impact on the family's lifestyle. I see it with my parents. I know how that impacts my sister and me, and even my children don't get to spend the kind of time they would like with their grandparents.

Patrick: When my grandmother's disease was really progressing, I was in my later teen years and was off racing in England and doing my own thing. So the sad part is that while I knew her when I was young, and we used to go over to her house all the time and she would buy us ice cream and pay us to clean the weeds out of the flower bed and give us a dollar a bucket — those kinds of things — I'll never get to know her as an adult. I'll never get to have adult conversations with her because she went too early. So I didn't get a chance to experience that part of her and hear the old stories and gain the wisdom that I was too young to really care as much about when I was 10 or 15 years old.

Myers: At that age you just don't think about what a disease like COPD can do to an individual, and you don't expect them not to be there tomorrow, so it obviously had a very lasting impression that led you to throw yourself into this campaign.

The AARC has challenged its 50,000 members to each screen 10 members of the public based on the demographics and the pop screener. That would add a half million people to the DRIVE4COPD screening numbers by the end of the year. What kind of message would you like to give us to take back to our members to incentivize them and really get them geared up to take this campaign home through December?

Patrick: That would be a really huge accomplishment, and I hope that happens — not only to see the program succeed but also to get those people thinking about their health.

My message would be, first and foremost, that the screener is so simple and so quick and so easy. It gives you something that you can print off and have in your hand and take to your physician and talk about, because sometimes we're not honest with our physician, sometimes we write off COPD symptoms to just getting older or not being fit or "just a little cough." That's not true. You might have something really serious. So opening up a dialogue with your physician about that kind of thing is really important. The physician is there to help you live the best life that you can and be as healthy as possible. So, it's easy to do, and it gives you something that you can speak about with your physician and then do something about it.

Even if you don't care, I bet your family does. So do it for them if nothing else.

Myers: I think that's wonderful advice, and it's similar to what we've been pushing with AARC members for several years. Eighty percent of our workforce is in the acute care setting, and they're used to seeing people in sickness and in desperation with exacerbations. This is an opportunity to get out with what we consider the "well public" to do some disease management, some education, some teaching, and also lend a lot of credence to a very good screening tool that may actually tip some people off before they're even aware of it themselves.

Patrick: Exactly, and that's what we need to do. Like I said, a lot of people just write off these symptoms to old age and not being fit. But they're real symptoms, and you should be able to live a really good lifestyle and be able to do the things you want for almost your whole life if you work at it. So it's important to tell them to just answer the five questions and give themselves the best chance at a healthy life.

Myers: I will wrap this up with one last question. Obviously, since you've had a loved one with COPD and you've now joined this campaign, you've received a lot of information and education about the disease. The question I want to leave with our audience is, do you wish you'd been supplied with more information about this condition at an earlier time, not only for yourself, but also potentially for your family members who obviously were also impacted by having a loved one with COPD?

The COPD Screener... is so simple, quick, and easy. It gives you something that you can print off and take to your physician to talk about. We're not always honest with our physician–sometimes we write off COPD symptoms to just getting older or not being fit or "just a little cough."

Patrick: Absolutely. There is so much awareness of other diseases, like cancers and all kinds of other things that are constantly checked and we're more knowledgeable about; but this is something that we just don't know enough about yet, which is why we're working so hard to make people aware of the symptoms and get to the physician and do something about it. I have no doubt that if my grandmother would have been aware of it, and if my family and I would have been aware of it, we could have pushed her to do something about it, and she would have lived longer. Then I might have gotten to experience in adult life conversations with my grandmother that I never got to have. ■

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The Caregiver Burden

by Debbie Bunch

Caring for a chronically ill loved one can take its toll

It's hard enough having family members or close friends in the hospital. But when it's time to go home, the stress multiplies exponentially for those charged with overseeing their care.

As a respiratory therapist, you've witnessed "discharge day" at the hospital more times than you can count. The scene is always fairly similar: The flowers are crammed onto a cart, the patient is helped into the wheelchair, the family is hovering nearby, ready to make their escape from these antiseptic halls full of strange and not-always-so-pleasant experiences, and that's that.

Of course, that is not that. The patient may have left the building, but for many — particularly those with chronic respiratory conditions or complex medical needs — the care is just changing locations. Now it will be delivered in the patient's home, and that means someone in the home will be assuming the responsibility of primary caregiver. How will that caregiver hold up under the strain? Unfortunately, in many cases, not so well.

Overwhelming demands

According to Norma Braun, MD, a clinical professor of medicine at St. Luke's-Roosevelt Hospital in New York, NY, who works closely with ventilator-dependent patients in the home, caregivers contribute about $350 billion in unpaid labor to the U.S. economy every year, and that figure is only going to rise with the aging of the population and other factors. "Medical advances allow us to live longer, so we're more apt to get to the stage where we need a caregiver," she says. "Third-party pressure to reduce length of stay also means you're going to get people with complex comorbidities home sooner." More sophisticated EMS services, ICU care, and technologies such as those that are allowing injured soldiers to survive what would previously have been fatal wounds, are adding to the growing numbers as well.

Q+A:

Diane Walsh Shares Insights from the COPD Foundation's Caregiver's Information Line

As the wife of COPD Foundation President John Walsh and co-founder of the Foundation's Caregiver's Information Line, Diane Walsh has a special perspective on the challenges that come with caring for a loved one with COPD. In the following interview, she shares some of the insights she's gained by networking with her fellow caregivers.

***AARC Times*:** How does COPD affect spouses and family members of those afflicted with the condition?

Diane Walsh: The role that the person with COPD once played as a family member becomes greatly altered; and in many cases, other family members need to take on more responsibility. In the case of the elderly, if no children are available to help, keeping the household together falls on the spouse, partner, or other family members. If the person with COPD was the main financial contributor, the spouse/partner must become the caregiver and financial provider. The caregiver should become educated in all aspects of the patient's illness to know what signs to be concerned with, arrange appropriate doctor visits, and administer medications correctly, all while keeping the patient motivated and involved, and guarding and building self-esteem.

***AARC Times*:** COPD takes a physical and emotional toll on patients. How does this transfer to the caregiver as well?

Diane Walsh: Patients deal with the emotional tolls of the illness, such as anger and frustration, and may suffer from a lack of information. The caregiver suffers these same emotional tolls, usually to a greater degree. Treating the emotional effects of the disease is critical to providing a positive outlook, which directly affects not only the quality of life, but the quantity as well. The happier the patient, the happier the family.

***AARC Times*:** Why is it important to address the caregiver burden?

Diane Walsh: Statistically, caregivers work 40 hours per week in their career and at least another 20 hours in a caregiver role. The more education, support, and resources that a caregiver has, the better quality of life for the COPD patient. Caregivers can also reach a natural resentment for their new role. It is important that caregivers care for themselves and not jeopardize their own health.

***AARC Times*:** What is the COPD Foundation doing to address caregiver needs?

Diane Walsh: We have established a C.O.P.D. Information Line for COPD patients and COPD caregivers, and have sent more than 16,000 fulfillment packages, including 7,500 COPD Caregiver Kits provided by Dey Pharma. We have also distributed COPD caregiver information and resources at COPD patient conferences, health fairs, and other events. We provide a Continuous Caregiver Program to address the various needs of the caregiver, including education and support, and to serve as an outlet for the emotional needs. The *COPD Digest* will be publishing an article that defines a COPD caregiver as well. We find caregivers don't seem to realize who they are — people assume that a "caregiver" is a doctor, nurse, or someone else who is paid for their services. ■

Taking care of these patients is not only an uncompensated task — it's a highly complicated one. "There is no formal training requirement for caregivers," says Dr. Braun. "But they still have to assume many tasks, including unfamiliar clinical skills, good judgment about what they do and how they do it, time management, and interacting with third-party payors." At hospitals such as hers, training these caregivers is a top priority, and the team approach is used to ensure all the bases are covered. But at the end of the day, these caregivers are largely on their own, and the significant physical and emotional demands can be overwhelming.

Diane and John Walsh support COPD patients and their caregivers through their work with the COPD Foundation.

Angela King, BS, RRT-NPS, RPFT, a member of the Medical Advisory Board for the National Emphysema/COPD Association and senior director of clinical ventilation, Americas, at ResMed Corp, says all this adds up to what is known in the literature as the "caregiver burden." While many patients and even some caregivers don't like the term because "burden" conveys a negative concept, studies suggest it is the right way to characterize the situa-

tion. King cites findings from a 1999 landmark study published in *JAMA* to illustrate. "This was an amazing study and is what got me interested in this area in the first place," says King.

The research was conducted among 400 caregivers and 400 non-caregivers who were divided into four groups: spouse not disabled, spouse disabled but respondent not providing care, spouse disabled and respondent providing care but reporting no strain, and spouse disabled and respondent providing care and reporting strain. When mortality risk was compared between the groups, no elevated risk was found for those in the first three. But those in the fourth group — caregivers who were reporting strain — had a 63% higher mortality rate than the controls.[1]

Respiratory research follows suit

King says other studies conducted among the caregivers of both adult and pediatric respiratory patients paint much the same picture:

■ A 2007 study published in *Respiratory Medicine* measured physical and mental functioning in COPD patients and their caregivers, and asked them to rate the quality of their relationship on a scale from one to four. "You would think the more severe the COPD, the more severe the caregiver burden; but that was not found to be true in this particular study," says King. "It was all about how the individual caregiver felt — some felt burdened regardless of what particular GOLD level the patient was at." As for rating the relationship, patients gave it a higher score than caregivers.[2]

■ A 1998 study published in the *Journal of Neurological Sciences* found major resentment of ventilator responsibilities among caregivers of seven ALS patients. While successful adjustment did occur for many over time, initially these caregivers were unhappy that their loved one had chosen ventilation over death. "Interestingly, none of the patients regretted the decision to be on a ventilator," reports King, pointing out the gulf that can sometimes develop between caregiver and patient in these situations.[3]

■ A 2006 report in *Mental Health Nursing* found more than half of females caring for medically complex children had scores indicating depression, despite the fact that most of the families were educated, intact, and receiving home nursing support.[4]

■ A 2003 study in the *Archives of Otolaryngology Head and Neck Surgery* conducted among caregivers of children with tracheostomies linked caregiver burden to severity of the illness and increasing costs. "These mothers at home are watching the clock on costs," notes King. "They know what their lifetime cap is, they know where they are in relation to that lifetime cap, and that is a worry for them."[5]

■ And a study in a 2003 edition of CHEST suggests even a few days on a ventilator during a hospitalization is enough to shake the world of many caregivers. "Almost 50% had some form of depression when their loved one was discharged from the hospital; and at six months, 15% were still severely depressed," says King.[6]

Where Caregivers Can Find Support

These organizations offer caregiver support:

- COPD Foundation, www.copdfoundation.org
- National Emphysema/COPD Foundation, www.necacommunity.org
- National Alliance for Caregiving, www.caregiving.org
- Family Caregiver Alliance, National Center on Caregiving, www.caregiver.org
- National Family Caregiver Association, www.thefamilycaregiver.org/index.cfm
- AARP, www.aarp.org/families/caregiving

Finding solutions

Dr. Braun believes respiratory therapists can help physicians head off some of these problems before they get to the critical stage through home visits using telemedicine technologies. "The physician can schedule a 'virtual' visit using remote communication with an RT," she explains. The therapist can assess the patient and report what is working and what is not working to the physician, who can then give direct orders for any changes. This not only helps to stop the revolving door of readmissions, it also gives the therapist — and the physician — the chance to visit with the caregiver about his or her own physical and emotional health, family stress, financial stress, and time management issues.

King notes several tools are available to assist the physician in evaluating caregiver stress. The Center for Epidemiologic Studies Depression Scale (CES-D), for example, is a 20-question survey to help someone determine how they have been feeling about things in the past week. The Zarit Burden Interview includes 22 questions specifically addressing the caregiver burden, and the Caregiver Strain Index does the same using a 13-question quiz. Incorporating these short questionnaires into a home visit can go a long way to identifying caregivers who need extra support.

What can be done to help caregivers on the verge of burning out? Dr. Braun says solutions range from acquiring respite care for the patient so the caregiver can get out and spend time with friends and family or just take care of personal needs like visiting the beauty parlor, to arranging for a short nursing home stay for the patient so the caregiver can take a vacation. "The objective is to improve quality of life for both the patient and the caregiver," says the physician. It's also important to give caregivers credit for the good things they are doing for their loved ones and to encourage them to look after their own health. Support groups where caregivers can talk about their issues with other caregivers are invaluable as well. (See "Where Caregivers Can Find Support" for a list of organizations offering caregiver support.)

No magic combination

Taking care of a chronically ill loved one is a significant challenge for even the most self-sacrificing friend or relative, and as respiratory therapists, you have the opportunity to help by assessing your patients' caregivers along with your patients. "Do we know the magic combination that makes some people stressed by the role?" asks King. "No, we do not." But she emphasizes that doesn't mean an effort should not be made to identify those who need more support and then find ways to provide it. ■

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The Caregiver Perspective

Life with Karah

by Danielle M. Tyler-Barry

What if you were told your baby would die before you? And even worse, statistics showed that as many as 80% of these children died by the age of two?

What would you do? This is what daily life is like, living and beating the odds with a child who has spinal muscular atrophy (SMA) Type 1.

In March 2007, we welcomed a seemingly healthy baby girl named Karah Elyse into our fast-growing family. Karah joined older siblings Alyssa (who at the time was just three) and Sean (18 months). By the time Karah turned three months old, we felt she was not reaching normal milestones. Like many families, our initial calls to our primary care physician were written off as developmental delays. One month later, at Karah's four-month well check up, we were immediately given the referral to see neurology at Cincinnati Children's Hospital Medical Center.

A few weeks later, we got the news that they suspected Karah had SMA Type 1. With SMA, there is neither a cure nor treatment. We were devastated that she would never walk, crawl, or hold up her head. Over time, SMA robs children of their movement as the atrophy sets in. SMA, a motor neuron disease, affects everything from Karah's ability to swallow, to movement in every part of her body, to her ability to breathe and even smile. SMA, however, does not affect the brain. Many children with SMA are considered extremely social and even smarter than the average child of the same age, and we would agree. We are also very fortunate that Karah is strong enough to verbalize. Karah's ability to communicate verbally is her one true joy and the only thing she is able to achieve independently.

About the Author

Danielle M. Tyler-Barry and her family live in Burlington, KY. Karah beat the two-year life expectancy for SMA Type 1 patients last March when she turned three.

Life adjusts

Most SMA Type 1 kids lose the ability to swallow by age one. In October 2007, just two months after her official diagnosis and at the age of seven months, we opted to have a G-tube placed and have a Nissen fundoplication. We knew that through early intervention, children with Type 1 SMA

Karah keeps her family busy, but the pay-back comes in the form of beating the SMA odds.

were living happily outside of hospital walls and past the age of two. We wanted to give her the best quality of life we could.

Because SMA affects every muscle in the body, Karah has no effective cough, and secretions can become stuck deep inside her lungs, which quickly turns to pneumonia. The set pressures of her bi-level PAP help expand her lungs properly and also help her exchange the proper gas levels. A cough-assist machine enables her to cough. On a "well" day, Karah receives cough assist three to four times. When she is sick, we may do this as frequently as every two hours around the clock. Prior to the cough assist, we use the "vest." She is placed in her vest and "shakes" for 24 minutes. The vest helps loosen the secretions on all four lobes of her lungs, making it easier to pull them out once we administer the cough-assist treatment.

Karah receives physical, occupational, and speech therapies weekly to help her maintain her current baselines. She requires skilled care 24/7, which is achieved solely by my husband and myself. I can certainly say life has changed drastically for us. There will never be any quick trips to the grocery store or the mall. A vacation would require weeks of planning for a family like ours, locating and prepping every hospital along the way in case we encountered an emergency, and making sure our hotel could accommodate Karah's needs. With three small children and all Karah's equipment, on a good day it takes us about three hours to get everything and everyone packed in the van.

Life also has to adjust with each hospital stay. On average, Karah spends four months a year in the hospital, much of that in the pediatric ICU. With that comes juggling home, kindergarten, babysitters, dinners, my husband's job, and somehow never leaving Karah unattended at the hospital. Over the years we have devised a plan that works like a well-oiled machine. I spend the days at the hospital with Karah, and my husband spends the nights. I then return home and do the "Mommy" thing, all the while lining things up for the next day.

Holding on to hope

Many people say we are "lucky" that Alyssa and Sean are not affected — as if they somehow are not affected by watching their sister attached to tubes and machines 24 hours a day or as we frantically call 911 because she is blue. Many mornings they wake to find Karah has been rushed to the hospital at 3 a.m. due to respiratory failure. You can never say siblings of terminally ill patients are not affected, no matter what their age.

What I do know is my children are more tolerant than most of others with disabilities. They are very protective of their sister and only show compassion, because to them, she is not dying, she is just Karah, their little sister.

As the parent of a child with a serious medical condition, you soon find yourself thrust into the hospital lifestyle, advocating for your child, searching for answers, educating even the physicians at times, and praying for just "one more time" to take her home as you hold onto the only thing you have — *hope*. We are no different than most families; we just happen to have a child who requires more critical care than most. We have had a crash course in advanced health and biology and are essentially unpaid nurses, respiratory therapists, and SMA educators, who get paid with smiles, kisses, and SMA milestones. Our family is not defined by spinal muscular atrophy. We define it as each new year that begins with Karah in it! ■

The Caregiver Perspective

Life with David

by Dana Wichern

I'm married to a man who has COPD. At 75, David Platt still has way more hair than most 50-year-olds. He isn't connected to tubes and machines, at least in the daytime…

David Platt displays the many medications he relies on to treat his respiratory and other conditions.

And he isn't confined to a wheelchair. He can still manage stairs, and on most days, he doesn't look too bad.

But what you can't see is that he has COPD. He also has CVID (common variable immune deficiency), because his blood is missing both IgA and IgM factors. Every four weeks he has to have an infusion that costs about $6,000. In addition, he has GERD (the acid reflux disease), and that, along with so many years of severe bronchial infections, has impacted his voice. Two throat surgeries have somewhat alleviated the situation.

Eleven years ago he was diagnosed with stage-three bladder cancer as well. Surgery to remove the bladder was very successful, and today he wears a bag that has to be changed every two-to-four days. He can't change the bag himself; so as the caregiver, I have to be there when the seal breaks. That seal has broken in the middle of meetings, during concerts, at dinner, at night, and once, on a boat.

But of all these afflictions, the most frightening is COPD. Not being able to breathe is emotionally terrifying. Patients who don't know whether they can get their next breath are very, very scared.

Lessons learned

Caregiving is not a role I chose or was trained to assume; it came with the territory.

About the Author

Dana Wichern and David Platt are both retired from the Fort Wayne Community Schools in Fort Wayne, IN, where Wichern served as director of communications and Platt as director of program development and evaluation. Today Wichern is a freelance writer and editor. She is also the mother of Angela King, BS, RRT-NPS, RPFT, who is featured in "The Caregiver Burden" in this issue.

Dana Wichern says caregiving just "came with the territory."

What have I learned during my 24-year journey with David's lung disease? First, I learned that COPD is real. I didn't always think he was ill. I knew he had chest colds, bronchitis, high fevers, chills, and loss of energy. I knew he had asthma. But I really didn't believe the man was all that sick. Some days he was great. And then in 10 minutes, boom, something happened.

It took years, but I finally accepted COPD, asthma, and all of their symptoms as real diseases and not as figments of somebody's imagination. I grew to believe this because several times a day my husband would seem to lose all of the air in his lungs. His face would turn beet red, and he couldn't breathe. I was frightened.

David quit smoking more than 20 years ago and began using nebulizers twice a day and relying on a couple of different kinds of puffers. The number of red-face, no-breathing episodes lessened radically. The cost of his prescription drugs, however, even with supplementary insurance, escalated. And still he got the "molca" — which is his word for the incidences when he's really incapacitated because of COPD. That led me to another understanding about being a caregiver. I learned that some conditions are chronic. In this society, we expect to go to the pharmacy, take a pill, get a shot, and get well. With COPD you take a pill, get a shot, and you just keep on having COPD. All you can do is try to manage it.

Finally, caregiving has taught me that I am David's backup. Whatever he's involved in — and David, who has multiple academic degrees, is involved in many things, from the Rotary Club to the Fort Wayne Quest Club to mentoring schoolchildren — I have to know about and be able to fill in for him. If he's planning a speech, I have to know it well enough to deliver it in case his voice is too compromised. If he is traveling on club business, I have to be there in case he has a problem.

Many years ago David was the incoming president of the Fort Wayne Rotary and we flew to Nice, France, for the Rotary International Convention. Unfortunately, he got the "molca" on the plane. Thankfully, we had anticipated the possibility and had antibiotics. But while he moaned and groaned, I attended the conference for him, lunching with men in turbans and caftans and driving a rental van through those tiny streets where everyone seemed to be jaywalking.

The philosophical crux

Caretakers gradually realize that COPD impacts lifestyle. The world becomes increasingly smaller as we get older, but with COPD it gets smaller faster. We put up Christmas lights in October before the weather worsens. We choose activities based on crowd size. In high flu season we do not go to malls, concert halls, or movie theaters. Before we visit our grandson, we call to make sure he's not ill, because Grandpa can't be around Max if Max has a temperature.

These lifestyle changes impact caregiver as well as patient. And here is the philosophical crux of the thing: How much freedom can caregivers have? How much should they have? One of my biggest concerns is deciding how much time and energy to give to the things that I, personally, want to do. Should I pursue my own dreams and goals? Should I compromise them or give them up entirely to be the caretaker? Is it a sacrifice I will resent later? And what price will I pay in terms of the relationship if I don't?

Here is where the term "burden" comes into the picture. The role of the caregiver carries much responsibility and it can be a burden even when it's performed lovingly. So I don't like it when someone says caregiving is not a burden. Yes, it is. And unless you've done it, you can't understand that. It doesn't mean you wouldn't do it or do it lovingly. But it is a burden. ■

Industry Watch

Inspire Pharmaceuticals reports good results for CF drug

Data from Inspire Pharmaceuticals Inc.'s first Phase 3 clinical trial of denufosol tetrasodium, an investigational therapy for cystic fibrosis, suggest the inhaled ion channel regulator may ameliorate the accelerated loss of lung function in CF patients during adolescence. Results of the study were presented at the European Cystic Fibrosis Society meeting in June.

OxySure receives GSA contract

OxySure® Systems Inc. has been awarded a multi-year contract by the General Services Administration to supply its portable oxygen products to all branches of the U.S. federal government. The products are used to supply short-term respiratory support in military situations or anywhere an emergency need for oxygen may arise. "We have always believed that OxySure is perfect for use in various Army, Navy, Air Force, Coast Guard, and other homeland security applications," says OxySure Chair and CEO Julian Ross. "Our GSA contract opens the doors for immediate acquisition and deployment."

Kimberly-Clark strikes deal for oral care kits

Kimberly-Clark Health Care reports it has received a new national agreement from Premier Purchasing Partners L.P. for its KimVent™ Oral Care products. KimVent 24-Hour Oral Care Kits are designed to help health professionals reach protocol compliance and specifically address the risk factors associated with ventilator-associated pneumonia. Kimberly-Clark recently took its Healthcare-Associated Infection Education Bus to the 2010 National Teaching Institute-Critical Care Exposition in Washington, DC.

Palatin Technologies: preclinical results for new asthma drug

Palatin Technologies Inc. has announced the results of preclinical studies in respiratory tissue with its PL-3994, a proprietary peptide mimetic that binds and activates natriuretic peptide receptor A and may have a role to play in asthma treatment. In rat, guinea pig, and human tissues, PL-3994 produced potent relaxation of isolated airway smooth muscle, indicating it may be a potent bronchodilator in humans. The company has filed a request for a meeting with the FDA to discuss an Investigational New Drug application for clinical trials with PL-3994 in asthmatic patients.

Masimo releases new technology to monitor respiration

Masimo has announced the full market release of Masimo Rainbow Acoustic Monitoring™. According to the company, it provides a continuous and noninvasive measurement of respiration rate. The technology is designed to help clinicians detect respiratory compromise and patient distress earlier. "We now have an accurate monitor that continuously displays respiratory rate — the neglected vital sign — from a sensor that is unnoticeable to the patient," notes Michael Ramsay, MD, chief of the department of anesthesiology and pain management at Baylor University Medical Center in Dallas, TX. "The digital signal is transmitted to the caregiver and serves as an early warning signal of respiratory compromise."

Positive results for Peregrine treatment

Peregrine Pharmaceuticals Inc. has announced positive data from a Phase II clinical trial treating frontline non-small cell lung cancer patients with bavituximab in combination with paclitaxel

and carboplatin. Forty-three percent of the patients achieved an objective tumor response, and median progression-free survival was 6.1 months. The company says these results are superior to data showing an objective response rate of 19% in a similar patient population receiving the same treatment regimen of carboplatin and paclitaxel alone. The study results were highlighted during a poster presentation at the recent American Society of Clinical Oncology meeting.

Preparing for H1N1 season

Research comparing the effectiveness of three commercial multiplex respiratory virus polymerase chain reaction assays and conventional assays for detection of respiratory viruses and 2009 H1N1 influenza virus in children demonstrated that Seeplex® diagnostic technology from Seegene had increased sensitivity in comparison to direct fluorescent antibody testing and viral culture. The company reports the results also showed the test provided excellent specificity; and for the detection of respiratory viruses from positive specimens, Seeplex consistently outperformed competitive PCR assays. "Multiplex testing offers rapid, comprehensive viral respiratory detection in a single test with high sensitivity and specificity," noted the authors in a poster presented at the Pan American Society for Clinical Virology meeting.

Northeastern professor lands NIH grant to study TB

Northeastern biology professor Kim Lewis has received a three-year, $1.16 million grant from the National Institutes of Health to lead the development of new treatments against tuberculosis. Lewis, director of Northeastern's Antimicrobial Discovery Center, and Ekaterina Gavrish, senior scientist at the center, will collaborate with Northeastern biology professor Slava Epstein and Amy Spoering, a researcher at NovoBiotic Pharmaceuticals, based in Cambridge, MA. The goal of the project will be to identify new species of bacteria that produce compounds that can kill Mycobacterium tuberculosis.

bitop announces results of Ectoin® study

According to bitop AG, its Ectoin significantly reduces nanoparticle-induced inflammatory reaction in rat lungs, one of the animal models for COPD. Given locally with or before the application of nanoparticles, Ectoin reduced neutrophil influx by about 30% and prevented CNP-induced increase in cinc-1 release. Cinc-1 is the rat homologue of human IL-8, a cytokine that mediates CNP-induced influx of neutrophil granulocytes. Pretreatment with Ectoin also reduced CNP-induced release of other major pro-inflammatory cytokines that play a critical role in the induction of lung fibrosis and the pathogenic cascade leading to asthma.

Apnex Medical's OSA treatment passes first test

According to Apnex Medical, preliminary data from a first-in-man clinical study of its Apnex HGNS™ System showed significant improvements in sleep for people suffering from OSA. The system activates an upper airway muscle during sleep, which opens the airway, allowing patients to breathe and remain asleep. Study author Peter Eastwood, PhD, notes the results demonstrate potential benefits for OSA patients who have problems tolerating CPAP therapy. "In most patients, the Apnex HGNS System reduced the severity of their OSA condition, allowing them to sleep better and feel better." The study was presented at the 2010 American Thoracic Society International Conference.

Discovery Laboratories announces study results

Results from Discovery Laboratories Inc.'s previously conducted Phase 2a feasibility study of Aerosurf®, the company's aerosolized KL4 surfactant for the prevention of RDS in premature infants, were published in the May issue of the *Journal of Aerosol Medicine and Pulmonary Drug Delivery*. The company also announced that data from a preclinical study using its KL4 surfactant (lucinactant) in an established porcine model of lung transplantation demonstrated a potentially important protective role in a newly transplanted lung, reducing ischemia-reperfusion injury often seen after lung transplantation. These data were presented at the 2010 American Thoracic Society International Conference.

Teenager wins first place for nicotine addiction project

A project using cutting-edge computer modeling to identify potential new medications for nicotine addiction won first place at the annual Addiction Science Awards at this year's Intel International Science and Engineering Fair, the world's largest science competition for high school students. The award went to Ameya Ashish Deshmukh, a 16-year-old junior at Upper Arlington High School in Upper Arlington, OH.

Brief submissions and photos for this column may be sent to Marsha Cathcart, *AARC Times* editor, at cathcart@aarc.org. ■

Marketplace

Featuring information on products and equipment from manufacturers

▶ You can receive information on the products listed in this section by contacting the manufacturers using one of two easy methods.

1. **Circle the respective "Cir #" on the Advertiser Index in this issue and fax today.**
2. **Send your request electronically via the AARC website at www.aarc.org/resources/ (click on Reader Service Program).**

Diagnostic Catheter Kit

CareFusion's new AirLife™ Diagnostic Catheter features a complete kit to help clinicians obtain lower respiratory tract samples to accurately diagnose lung infections. The kit relies on advanced "mini" bronchial-alveolar lavage (mini-BAL) technology, a diagnostic procedure of washing a sample of cells and secretions from the bronchial airspaces to obtain a specimen from the lower respiratory airway at a patient's bedside. www.carefusion.com PI#86

Home Oxygen Filling System

The UltraFill home oxygen filling system from Philips Respironics combines a stationary oxygen concentrator, cylinder filling station, and standard or long-lasting dispensing cylinders to cost-effectively meet the needs of a wide range of oxygen patients, including those who are highly active or require continuous flow oxygen. UltraFill's high-capacity cylinders operate at 3,000 PSI and may offer patients more than 40% more oxygen than comparably sized 2,000 PSI cylinders. The system is compatible with EverFlo, EverFlo Q, and Millennium M10 oxygen concentrators and most CGA-870 type oxygen conserving devices and regulators.

www.respironics.com PI#87

Nutritional Software on the Web

SureRecipes™ from SureQuest Systems Inc. offers the restaurant industry an easy compliance tool to meet new Nutritional Publication requirements contained in recently enacted health care legislation. A complete and efficient recipe standardization and nutritional documentation tool, SureRecipes eliminates the need for costly and time-consuming nutritional food analysis from third-party laboratories. Through SureRecipes' Web-based software, nutritional information can be immediately accessed and published from any Internet connection, whether on a laptop, desktop, tablet, or an intranet. www.surequest.com PI#88

Personal Item Belt

Overton Enterprises' SPIbelt™, an acronym for "Small Personal Item Belt," helps people with health conditions like asthma conveniently stow away asthma inhalers and other personal belongings without interfering with their active lifestyles. Worn around the waist, the SPIbelt helps keep medications easily accessible while leaving hands free to enjoy everyday life. Available in a variety of colors for both adults and children. www.spibelt.com PI#89

RC Currents

IN THE NEWS

It's Official: Hawaii Becomes 49th State To Pass Respiratory Therapy Licensure

Respiratory therapists throughout the state of Hawaii marked a major milestone on June 28, as Gov. Linda Lingle signed their hard-fought-for licensure bill into law. With the addition of the Hawaii law, 49 states, the District of Columbia, and Puerto Rico now regulate the profession of respiratory care through licensure. Alaska is the only state without a law on the books.

"The Hawaii Society for Respiratory Care (HSRC) and its therapists are some of the most passionate about their patients and their profession that I have come across in my 25 years in the profession, and it was only a matter of time until they achieved this goal," says AARC President Timothy Myers, BS, RRT-NPS. "The 50,000+ members of the AARC are proud of Hawaii's efforts and hard work."

HSRC members (top row, from left), Carol Agard and Joan Loke, join fellow member Ed Borza (bottom row, left), and June and Renwick "Uncle Joe" Tassill (patient) in celebrating the licensure victory.

HSRC members pushed through numerous obstacles over the years to reach this victory. "This latest effort took two intense years," says Ed Borza, BA, RRT-NPS, CPFT, HSRC president. "However, the original effort began about 25 years ago." That first attempt made it all the way to the governor's desk, only to be vetoed for procedural reasons. A mid-1990s bill languished at the committee level for four years but never went any further.

Carol Agard, BS, RRT, RPFT, FAARC, who headed up the HSRC Legislative Committee along with Diane Brenessel, EdD, RRT, AE-C, says the most recent effort came about when HSRC RTs were introduced to Renwick Tassill, a patient who credits his life in part to Joan Loke, RRT, who helped treat him for respiratory failure at Kaiser Permanente. When "Uncle Joe," as he came to be known by the state society, found out RTs were not licensed, he became their biggest supporter. In January 2009, he and Loke visited legislators to tell his story, and those legislators urged the HSRC to introduce a bill upon very short notice.

Despite this progress, the legislation was unsuccessful in 2009; but key senators quickly introduced a new bill, SB 2600, in 2010, which was ultimately signed into law. Agard believes having "Uncle Joe" as an advocate made a big difference. "During this legislative process, we recognized how invisible respiratory therapists are to the public at large," she says. "Uncle Joe is an example of many of our respiratory patients, who after experiencing a life-threatening situation of not being able to breathe, will never forget the vital role RTs play in saving lives."

Borza agrees "Uncle Joe" was a huge help, and he also credits the victory to the guidance the HSRC received from AARC Director of Government Affairs Cheryl West, MHA, and its state lobbyist, the COPD Coalition of Hawaii, and the many physicians, nurses, RTs, and respiratory therapy students throughout the state who went to bat for the legislation. Successful negotiations with the local sleep society played a big role as well, as exception language was devised to satisfy both groups. The law did not come a moment too soon, says the state society president. "The very future of our profession in Hawaii depended on the passage of this bill," he says, noting Hawaii was becoming a haven for RTs who had lost their licenses in other states. "We also came to realize that our lack of a license caused complications on several different levels — pharmacy regulations, reimbursement, even our ability to participate in disaster relief teams was adversely affected by our 'unofficial' status."

Says Borza, "We have worked to protect the people of Hawaii and have helped our profession nationally by gaining licensure. I am proud of our profession and very proud of the HSRC and all its members." ■

Summer Forum Delivers Hot Topics in the Tropics

The AARC held its Summer Meetings once again in the beautiful, lush, tropical paradise of Marco Island, FL, July 16–18. Many RTs were glad to be in Florida to escape the searing heat that was prevalent across the rest of the country; but while the white sand beaches and glimmering pools of the Marco Island Marriott beckoned, AARC Summer Meetings attendees were doing what they came for — attending their sessions for the AARC Management and Education Section programs, a real testament to the quality of this year's programming.

The meetings started early in the week with the "2015 and Beyond" conference and public forum to evaluate the needs of our profession and the health care marketplace. This group is considering the role of the respiratory therapist of the future and how our profession can best be prepared to meet the health care needs of the future.

Good interaction there set the stage for a Summer Forum punctuated with short blasts of excitement. A video clip of "The Office" in an Education Section lecture helped illustrate the need for planning.

"Attending this AARC conference is a must for all respiratory care professionals. The ability to learn, share, and experience our organization with peers is invaluable to my development as a therapist, manager, and leader," said attendee Ramon Hollander, MBA, RRT.

On Friday and Saturday a mini-exhibit hall allowed publishers to showcase their offerings. Several of the AARC's Corporate Partners were also represented there. AARConnect had a booth in the exhibit hall, giving attendees the chance to ask questions and get started on the social networking system.

Also being launched at this meeting was the AARC DRIVE4COPD project. Representatives of the DRIVE4COPD program were on hand to describe the project and the AARC's role in helping raise COPD awareness throughout the United States.

"The abstract presentations were again very good this year, with much follow-up discussion. For many attendees, this was their first Summer Forum, so if you need justification to attend next year, consider submitting an abstract of your educational research or your hospital education program with the learning outcomes that resulted. This is a great way to network and ask questions of other educator members of the AARC," said Education Section Chair Lynda T. Goodfellow, EdD, RRT, FAARC.

Many attendees liked the loose format of the Summer Meetings because so many had made this into a vacation destination. Their families enjoyed the pool and beach, and then attendees enjoyed a long lunch break so they could get out and enjoy as well.

A mechanical ventilator course covering pediatric and adult needs capped off the Summer Meetings, sending people home with new knowledge to implement in their institutions.

"This conference has helped build my knowledge and confidence as a department manager," noted Terri Brewis, RRT, AE-C of Mims, FL. "Many of the topics discussed applied to issues and problems I am currently facing. The networking and tools that I bring back to my organization are invaluable." ■

Call for Volunteers: RTs Needed To Serve the Profession and the AARC

by Karen Stewart, MSc, RRT, FAARC
2010 AARC President-elect

In planning for my two-year term as AARC president for 2010–2012, I realize it's important to receive vital assistance from my colleagues — AARC members — in order to bring to fruition everything the AARC, its membership, and the patients we care for need to accomplish during my presidency. I am now asking *you* to volunteer your expertise to your professional organization. Having RT volunteers not only facilitates our profession and Association's growth, it also presents all volunteers with the opportunity to develop and advance their leadership skills, increase their professional contacts, and give back to the profession, as well as the patients we serve.

Volunteers have always been the heart and soul of the AARC and its leadership. Our strength and advancement comes from the countless hours of support volunteers provide through their time and knowledge toward the betterment of their colleagues, patients, and our profession. This year, the AARC reached a milestone of 50,000 members. That's great, and it shows that there are many people like you who need and use the professional tools the AARC provides for career advancement. Why not get in on the ground floor and collaborate with your fellow RTs to develop new tools to help RTs continually improve and grow?

We need *you* to volunteer your expertise and skills to work on various committees so that the necessary, important work of the Association is accomplished. AARC Executive Office staff members perform an incredible amount of work to support the respiratory care profession each year. However, members who volunteer to serve on committees, accept appointments, or offer their time and assistance in a variety of ways are truly the backbone of this profession.

There is enormous momentum and potential for the profession as we head toward 2011. While no one individual can accomplish all the challenging goals ahead, I know that dedicated respiratory therapists supporting the AARC's efforts can make vast strides toward assuring quality patient care across the continuum and securing our profession's place in our ever-changing health care system.

Many exciting projects are planned for the next few years, but more ideas from AARC members are always welcome to keep a constant flow of creativity and to keep us all energized for what we can do as a collective. We need everyone's energy and input. Will you take action now and volunteer your talents? We are always looking for specific projects and activities our Association should invest in so we can promote the healthy future of our profession. In light of the ever-increasing duties and responsibilities respiratory therapists have, what types of educational and informational needs do you have, and how could the AARC best address your needs? Your ideas are important.

This is *your* Association, and now is the time to step forward. A balance of experienced and new members is needed on all our committees; it is this special mixture that not only makes it possible for the AARC to continue being the vital professional organization it always has been by mentoring in new talent, but also ensures the future of the respiratory therapist in the health care environment as it goes through some of the most sweeping changes in history.

Consider this a friendly challenge to each of you in the respiratory care community to consider how *you* can help your Association, the profession, and the patients we serve. Network with your fellow AARC members — perhaps someone active in your state society — whom you believe could contribute a special talent or service to the AARC. Encourage them to contact me so that we can capitalize on the vast amount of expertise available in our Association membership.

Please take time now to consider volunteering to serve your Association and your profession. Write to me, in care of the AARC, 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063; demayo@aarc.org. Tell me how you would like to serve and provide a copy of your resumé or CV so I can consider how to best use your special talents and expertise.

We can continue to make milestones in the respiratory care profession if we all work together to make it happen. Thank you for supporting your professional organization, and I look forward to hearing from you soon. ■

State Societies Watch for Lingering Health Effects from Gulf Oil Spill

AARC state societies in Louisiana, Mississippi, Alabama, and Florida are keeping watch on possible health effects from the oil leak in the Gulf of Mexico. At press time, it had been capped.

The Louisiana Society for Respiratory Care (LSRC) board of directors recently had a meeting where directors discussed the oil spill and its potential impact on health facilities in the state. "We are not hearing much about any respiratory problems," said LSRC President Raymond Pisani, BS, RRT-NPS. "I had contact with one New Orleans area hospital manning a first-aid station in Grand Isle with an RN and EMS. So far, the only issues reported are heat related and abrasions."

The LSRC was working closely with the American Lung Association to keep everyone informed, and Pisani and his colleagues were also benefiting from information being fed to the state society directly from AARC member Kenneth E. Alexander, MS, RRT, vice president of quality and regulatory activities at the Louisiana Hospital Association.

Mississippi Society President Kevin Dees, RRT, said his members were not reporting an uptick in patients due to the health effects of the spill either, but they were becoming increasingly concerned about how the oil and dispersant being used to clean it up might come into play should the state be hit with another hurricane on the scale of Katrina. "This hurricane season is projected to be pretty tough," noted Dees. "After Katrina, we are pretty prepared for a large hurricane, but what type of extra preparation will we need to do to account for this spill?" He was planning to keep his members up to date by placing pertinent information on the MSRC website.

Kevin Taylor, RRT, president of the Alabama Society for Respiratory Care, said he and his board members discussed the effects of the spill during a conference call. He asked representatives from the southern part of the state about it early on and they were seeing a lot of flu-like symptoms or cold-like symptoms in that area, something they were not seeing in the central and northern part of the state. The southern reps also noted that the smell of gasoline was in the air and wondered if there could be a link between the odor and the unusual summer spike in cold and flu symptoms. "Is this potentially due to the oil?" asked Taylor. "There is no way to really prove that, but they are getting a major foul smell, which can be very irritating to people with lung conditions."

Florida Society President John Wilgis, MBA, RRT, said the spill had yet to cause many health issues in his state, but the FSRC was fielding a few queries related to responder safety and health, and the use of personal protection equipment and respirators. "The state and Florida Hospital Association have been doing a good job of sending out relative health information for patients, caregivers, and responders," he said. The FSRC had posted an "Oil Spill Fact Sheet" provided by the Centers for Disease Control and Prevention (CDC) and Agency for Toxic Substances and Disease Registry on the state society website and was working to ensure only accurate information is conveyed.

The AARC will continue to monitor any respiratory effects of the spill and clean up and will keep the membership informed. In the meantime, here are two additional CDC guidance documents that offer direction:

- **"Light Crude Oil Information for Health Professionals"** particularly emphasizes the care that must be taken when providing oxygen to anyone who has been contaminated with the oil because oil in oxygen-rich atmospheres is potentially explosive. The CDC also warns that swallowing crude oil can result in pneumonitis if the oil is vomited and then subsequently aspirated into the lungs, and notes that inhalation of fresh crude oil is more concerning than inhalation of weathered crude oil, because fresh oil contains more volatile hydrocarbons. Symptoms include headache, dizziness, confusion, and nausea or vomiting, and supplemental oxygen may be required.

- **"Oil Spill Dispersant Information for Health Professionals"** notes most exposures will occur to workers responsible for handling and transporting the material. Adverse effects can include chemical pneumonitis if aspirated into the lungs and respiratory irritation as a result of repeated and prolonged inhalation exposure, among others. Oxygen support may be required.

To keep up with oil spill/clean up guidance for health professionals and to access the above documents, visit the Information for Health Professionals page on the CDC website at www.cdc.gov/nceh/oil_spill/information_professionals.htm. ■

H1N1 Update

- A new study out of Singapore suggests **a tropical climate may lessen the impact of H1N1**. Researchers reviewed seasonal and H1N1 cases from May to July 2009, finding early pandemic influenza cases appeared slightly milder than seasonal flu and had a different symptom pattern. The most common symptoms among individuals with pandemic influenza were cough (88.1%), fever (79.3%), sore throat (53.7%), and runny nose (49.9%). Individuals with the predominant strain of seasonal influenza most commonly had fever (88%), cough (81.4%), runny nose (55.7%), and sore throat (38.3%). Seasonal influenza affected individuals of all ages, with a higher proportion of those five years and younger, while the pandemic virus was more likely to affect children and young adults and had very few elderly cases. (Source: *Archives of Internal Medicine*)

- Investigators from Hong Kong who followed 284 household members of 99 people with confirmed H1N1 conclude **the pandemic virus is similar to its seasonal cousin**. Eight percent of the contacts contracted H1N1, which is about the same as the 9% transmission rate seen for the seasonal flu. One interesting finding: People in the study who received oseltamivir seemed to have reduced antibody levels to H1N1. The authors believe the drug may result is a less vigorous immune response to H1N1 and note this runs counter to that seen for seasonal flu. (Source: *New England Journal of Medicine*)

- Mount Sinai School of Medicine researchers find **the H1N1 vaccine is capable of protecting against the 1918 Spanish flu that killed millions of people worldwide**. The discovery came when the investigators reconstructed the earlier virus from samples taken from bodies that were frozen in Alaska. They then gave mice either the 2009 H1N1 vaccine, the seasonal H3N2 vaccine, or no vaccine. Twenty-one days later they exposed the mice to the 1918 virus. Mice vaccinated against 2009 H1N1 lived. Those who received the H3N2 vaccine died, as did those who received no vaccine. (Source: Reuters)

- New York researchers who **analyzed data from 18 pregnant women** admitted to two urban academic medical centers with a diagnosis of H1N1 from May 18 to June 24, 2009, found three were admitted to the ICU and seven delivered during their hospital stay, six prematurely. Of these six premature births, five involved fetal distress and four were delivered via emergency C-section. No congenital birth defects were noted, but two fetal deaths were recorded. No maternal deaths were reported. (Source: *Archives of Internal Medicine*) ■

AARC Leaders Attend Meetings

Throughout the year, AARC leaders and members of the Executive Office staff attend meetings of the Association's state societies as well as other special meetings. In addition to making AARC representatives available for speaking engagements at meetings, the Association funds a special program to help some state societies partially pay for the travel costs of the speakers. Below are some activities AARC representatives are involved in:

Timothy R. Myers, AARC President
- Representing the AARC at the European Respiratory Society Meeting in Barcelona, Spain

Karen Stewart, AARC President-elect
- Representing the AARC at the European Respiratory Society Meeting in Barcelona, Spain

John Hiser, AARC International Committee Chair
- Representing the AARC at the European Respiratory Society Meeting in Barcelona, Spain

Sam Giordano, AARC Executive Director
- Representing the AARC at the European Respiratory Society Meeting in Barcelona, Spain

Thomas J. Kallstrom, AARC COO and Associate Executive Director
- Speaking at the SDSRC's annual conference in Rapid City, South Dakota
- Participating in a meeting of the NAEPP Coordinating Committee in Washington, DC
- Participating in the VAP workshop in Ocean City, MD

Steven B. Nelson, AARC Associate Executive Director
- Representing the AARC at the European Respiratory Society Meeting in Barcelona, Spain

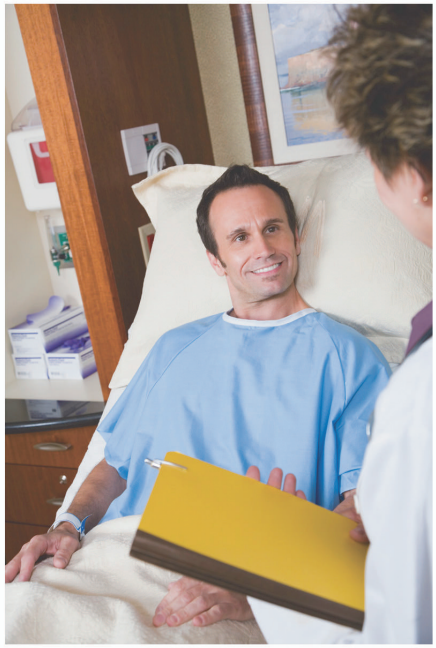
Cheryl West, AARC Director of Government Affairs
- Speaking at the meeting of the Massachusetts Society for Respiratory Care on federal and state government affairs issues.

A Whole-room Approach to Patient Safety

Many initiatives are underway to improve patient safety in hospitals. At the University Medical Center at Princeton in Princeton, NJ, however, safety is moving beyond the typical hand washing and other tactics and into the entire patient room.

Researchers there are planning to study patient outcomes between patients staying in a specially designed room and those in typical hospital rooms. Designed with funding from the Robert Wood Johnson Foundation, the specially designed room includes features like a bed that can be lowered to the ground and a bathroom near the head of the bed to reduce the chance of falls; a separate sink near the doorway to prompt workers to wash their hands; two-way cabinets to allow access to linens from both the room and hallway, thus reducing the number of people who come into the patient's room; a fold-out couch to make it easier for family members to stay over; and a design that hides tubes and wires while maximizing soothing outdoor views.

A report on the newly styled hospital room was featured in a recent issue of the *Wall Street Journal*. ■



Nominate an AARC Member for "Success Stories" or "Interesting People"

Do you know an AARC member who would be a good choice for one of our "people" features in "RC Currents"? If so, provide this information to the editor at the address below: the member's name, job title, place of work, city, and state; why you think they should be featured; and their contact information. Send to: Editor Marsha Cathcart, cathcart@aarc.org with "Success Stories" in the subject line. ■

Contribute to Writer's Corner

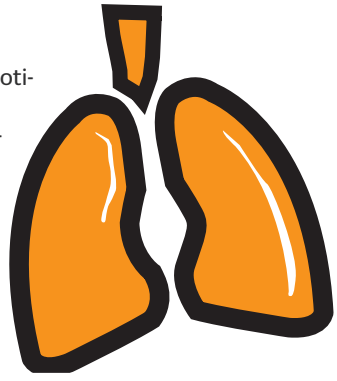
AARC Times is currently considering poems, essays, and short stories for publication in the Writer's Corner section of "RC Currents." AARC members' submissions should be under 500 words and contain a cover letter with contact information such as phone and fax numbers and e-mail address. Send submissions to cathcart@aarc.org with "Writer's Corner" in the subject line. ■

Join the Celebration for Respiratory Care Week, Oct. 24–30

Be a part of Respiratory Care Week this fall. It's that special time of year when the contributions of respiratory care professionals everywhere are honored. Enter the dates on your calendar and start planning with your team soon.

- Participate in events for fun and recognition with your peers.
- Encourage your patients and their families with special activities.
- Educate your community about lung health issues at local fairs.
- Visit a neighborhood school to motivate students.
- Demonstrate the value of RC professionals in your facility.

Check out the website at www.AARC.org/rcweek for lots of specific ideas for events in 2010. It's your online location for sharing ideas, photos, and more. ■



Industry Profile: B&B Medical

David Thompson, RRT, president and Beth Keifer, RRT, vice president, sales and marketing.

In the following interview, B&B Medical Technologies executives David Thompson, RRT, president, and Beth Keifer, RRT, vice president, sales and marketing, share some information about their company.

AARC Times: How long has your company been in business, and what kinds of devices do you manufacture?

B&B Medical: B&B Medical Technologies was founded by respiratory therapists in 1985 and has become one of the leading providers of clinically proven airway management products, tube securing devices, and specialty nebulizers for adult, pediatric, and infant patients. We assumed ownership and management of the company four years ago, but our team of respiratory therapists has worked together for more than two decades. We have more than 60 years combined experience as hospital clinical specialists and in developing products for the medical device industry. Together with our global partners, the team is directing B&B Medical Technologies toward even stronger priorities of patient safety, practitioner ease-of-use, and economic efficiency. B&B products are used worldwide and offer versatile applications for critical care, anesthesia, emergency, transport, home care, and alternate site care.

AARC Times: What projects or new features are you working on for the future?

B&B Medical: We're continually working to develop and bring new products to the field that support the patient's and clinician's needs. One of our newest products is the Babi.Plus™ Bubble PAP Valve 0–10 cm H_2O, which gives clinicians a safe, accurate, and professional method to deliver bubble CPAP therapy to neonates and premature infants. This FDA-cleared device allows clinicians to focus on patient care and eliminates the hospital risk from building and maintaining "homemade" medical devices.

The Sil.Flex™ Stoma Pad is a patent-pending product that enhances comfort and care for patients with tracheostomies. Available in multiple shapes and sizes for the smallest infant to largest adult, Sil.Flex Stoma Pad is made of flexible, pliable medical grade silicone. The contoured pad forms an interface between the rigid flange structure of the tracheostomy tube and the patient's skin. The Sil.Flex Stoma Pad stabilizes the tube, reduces undesirable movement, and may assist in reducing and reversing irritation at the stoma site.

B&B's new Babi.Plus™ Pacifier Adaptor delivers aerosolized medication therapy to babies and children who present with breathing difficulties and are reluctant to relinquish their familiar pacifiers or to wear an aerosol mask. The Pacifier Adaptor attaches directly onto the child's own pacifier and efficiently delivers aerosol medication via a small port directed at the nose while minimizing discomfort and wasting of the aerosol.

Other products currently in development address needs for highly specialized medication delivery, airway management, and ventilator-associated pneumonia prevention.

AARC Times: How do your products improve patient care, and how does this impact the respiratory therapist?

B&B Medical: We maintain daily contact with clinicians, and it is this interaction that provides the most valuable insight into changing clinical needs and effective product development. Our new products and in fact, all our company's products, are designed to improve patient care, comfort, and

outcomes easily and efficiently for the clinician and economically for the institution. These qualities are the hallmark of B&B Medical Technologies' products and company charter.

***AARC Times*:** You are both registered respiratory therapists, and you have RTs on staff. How has this impacted your product line?

B&B Medical: As registered respiratory therapists, we are closely involved in day-to-day operations of our company. Not only do we have many years of direct clinical experience, we have a proven track record of introducing successful new treatment modalities and developing products. A respiratory therapist designed our company's very first product, and RTs have been directly involved in the development of every product since.

***AARC Times*:** How do you expect the economy and health care reform to affect how you develop new respiratory care technology over the next two years?

B&B Medical: We believe our products are a model of how to do health care reform right, and that is by being safe, effective, and efficient in use and cost. Our entire product line is designed to be effective for patients and clinicians; to offer versatile applications for critical care, home care, and alternate care environments; to be conveniently packaged so that everything is at your fingertips; and to be a cost-effective solution for airway management, medication delivery, and more. We'll keep doing this. We've always understood the importance of safety, quality, efficiency, convenience, and cost effectiveness. Now, more than ever, our industry and profession needs clinician-focused companies like B&B Medical Technologies and the products we provide.

***AARC Times*:** Where do you see the respiratory device industry heading?

B&B Medical: Our industry must change as the entire health care delivery system changes. Clinicians need smarter and more economical tools to deliver effective care while reducing adverse events and facilitating the patient's discharge from the high-cost acute care environment. Equally important is to raise the level of care that can safely be provided in less expensive subacute and home care environments. The caregiver skill sets and infrastructure of these alternative care environments require an entirely new level of sophisticated human engineering and operational simplicity for all levels of medical devices. With costs escalating and reimbursements being reduced, we must deliver the training and tools for all levels of caregivers to provide the most efficient patient care possible. ■

▶Strange But True…

$40 Million Cell: Scientists from the J. Craig Venter Institute have done what most thought impossible: created the world's first synthetic cell. The $40 million one-cell organism, which is capable of reproducing, is expected to usher in a new industry being dubbed "synthetic biology." Companies are already considering how the technology could be used to produce fuel.

Natural Pollutant: Ozone pollution isn't just created by man-made sources. Stony Brook University researchers find kudzu — known as the "vine that ate the South" — is having a big effect, as well. Their study suggests it's doubling the emission of nitric oxide from soils. Along with volatile organic compounds, nitric oxide is the key precursor to ozone pollution in the lower atmosphere.

Strong Stuff: People in China are ending up with a lot of cigarette butts for disposal these days, but researchers from Xi'an Jiaotong University believe they have an eco-friendly solution. Their studies show a water-based extract of cigarette butts is effective in limiting corrosion on steel.

Speedy Match-up: A Texas hospital is helping connect patients with physicians through a new "Doc Shop" where the two can pair off for five-minute conversations at a time to see if they would be a good match — health-wise, that is.

Clean That Glass: British researchers who studied the transmission of Legionnaires' disease believe failing to add windshield wash to a vehicle's windshield wiper water could be causing about 20% of Legionnaires' disease cases. The study published in the *European Journal of Epidemiology* was spurred by reports that the waterborne disease is five times more common among professional drivers than would be expected. ■

National Health Observances

- **World Spirometry Day**; Oct. 14; AARC, European Respiratory Society, European Lung Foundation; www.2010yearofthelung.org; materials available
- **Respiratory Care Week**; Oct. 24–30; AARC, (972) 243-2272; www.AARC.org/rcweek; materials available
- **Lung Health Day**; Oct. 27; AARC, (972) 243-2272; www.AARC.org/rcweek; materials available

Ready, Set, Build a Vent!

Sasha Weatherspoon (left) and Michael Hickman demonstrate their ventilator to college president Dr. Vivian Presley.

Teaching students how to operate a mechanical ventilator is one thing. Making sure they fully understand the concepts behind the machine is something else entirely. For the past three years, students in the RC program at Coahoma Community College in Clarksdale, MS, have been getting an inside-out education on the profession's most life-saving device by building their own ventilators from scratch.

"The students learn critical-thinking skills about how to look at a problem, develop a plan, and pursue that plan to completion," says AARC member Bob Swatzell, RRT, who just retired as clinical director of the program. "They also learn the basic tenets of how a ventilator works by essentially devising ways and means of interrupting flow over time."

This year's competition involved 17 students. "The rules are simple," says the educator. "The design must be original, it must be a team effort, and it may be either a negative- or positive-pressure ventilator." Students scour auto supply stores, auto salvage yards, and discount retailers like Walmart to find the parts, and they can't spend more than a total of $10. "In the past there have been entries made from electric car seat motors, roadside hazard flashers, breast pumps, and air pumps," says Swatzell.

Judges are brought in from local RC departments and other sites, and each team makes a presentation on its device. "The team must be able to describe the mechanism of action of their particular device, what physical laws are applicable, and where they found their parts," says Swatzell. The program has been fortunate to have Maquet Inc as a sponsor for the event as well. This year the company donated $400 toward the competition.

Swatzell says the students really get into the event, and the competition can get fierce. "The student feedback is one of high stress leading up to the event, great fun during the event, and profound relief after the event is over. The teams really guard their invention closely and will not share with another student not on their team." ■

Judge Michael Cooper (left) listens while Lakendrea Benton, Michael Morris, and Arlicia Jurnett explain how their ventilator works.

▶ Transitions

Douglas R. Gracey, MD, passed away on June 21 at age 73. A long-time supporter of the respiratory care profession, he served as chair of AARC Board of Medical Advisors and was also president of the National Association of Medical Directors of Respiratory Care. An Air Force veteran, Dr. Gracey received his medical degree from Northwestern University Medical School and completed fellowships at the Mayo Graduate School of Medicine. He joined the Northwestern Medical School faculty in 1969 but returned to Mayo in 1975, where he served in numerous capacities until his retirement in 2005. Dr. Gracey authored more than 100 scientific papers and three books, and received numerous honors and awards.


1

Julie McDougal, MAE, RRT, co-authored a paper in a special online issue of *Pediatric Allergy, Immunology and Pulmonology* last May on a collaborative effort to develop a family education program for children with interstitial lung disease. "Get Up and Go with chILD!" provides families with accurate and understandable information about the condition. MacDougal is on the respiratory care faculty at the University of Alabama at Birmingham. (Photo 1)


2

Natalie Napolitano, MPH, RRT-NPS, AE-C, has joined the COPD Foundation as associate director of research. Napolitano earned her BS degree in respiratory therapy from Gannon University in Pennsylvania and her master's degree from George Washington University in Washington, DC. (Photo 2)


3

Marty Jones, MBA, RRT, has been promoted from respiratory services manager to executive director of home care services at Drugco Pharmacy in Roanoke Rapids, NC. Jones earned the promotion after graduating with an MBA from Wake Forest University in May. (Photo 3)


4

Steve Mosakowski, MBA, RRT, CPFT, has been promoted to director of respiratory care services and business analytics at the Chester County Hospital and Health System in West Chester, PA. In his new position he will be responsible for respiratory care, pulmonary function and the stress lab, and examining reimbursement for inpatient non-surgical patients. He recently graduated from Eastern University with an MBA focusing on health administration. (Photo 4)


5

Clatie Campbell, BS, RRT, AE-C, was recognized for a decade of service to the Pediatric/Adult Asthma Coalition of New Jersey at the organization's recent 10-year anniversary celebration. Campbell is an RT at Deborah Heart and Lung Center in Pemberton Township, NJ. (Photo 5)


6

Brian Walsh, MBA, RRT-NPS, RPFT, FAARC, is the new director of respiratory care at Children's Medical Center in Dallas, TX. Walsh comes to the position from Children's Hospital Boston, where he was a manager in respiratory care. (Photo 6)


7

Claudia Scoccola, BS, CRT, has been named director of respiratory services at Reliable Medical Inc. in Hackensack, NJ. (Photo 7)


8

Ed Coombs, MA, RRT-NPS, CPFT, has been promoted to director of marketing, respiratory care for North America at Draeger Medical in Telford, PA. (Photo 8)

James Hightower, RRT, has received the Leo Soorus Leadership Award from the Lakeland Health Foundation for his many leadership activities both inside and outside of his hospital. Hightower is manager of respiratory therapy and the Sleep Disorder and Treatment Centers at Lakeland Healthcare in St. Joseph, MI.


9

Nancy Weissman, PhD, RRT, recently received the 2010 Outstanding Community Partner Award from the American Lung Association of Florida. Weissman is department chair/program director of the respiratory care program at Palm Beach State College in Palm Beach Gardens, FL. (Photo 9)

Don Muse, PhD, of Don Muse & Associates, passed away on June 25. For more than a decade, Muse and his firm were under contract with the AARC to assist the Association in Medicare regulatory issues and research analysis. His expert advice helped the AARC successfully navigate many issues with the potential to impact the profession.


10

James E. "Jed" Dozier, BBA, from Willis, TX, passed away in June. He worked in medical supplies sales for many years and was honored by Salter Labs in 2009 as Salesperson of the Year. (Photo 10)

We welcome news about AARC members. Submit job changes, awards, and death notices online at www.AARC.org/transitions. ■

It's Never Too Late for an Education

Dr. Hatem Saqr is the oldest student to earn a PhD from the University of Texas School of Public Health in Houston.

Lots of people go back to college when they're well past college age, stepping back into classrooms with students five, 10, or even 20 years their junior. But Hatem Saqr, PhD, RRT, is a record-holder. When he marched across the stage to receive his doctorate last May, he was the oldest person — at age 70 — to ever graduate with that degree from the University of Texas School of Public Health in Houston.

The goal was a long time coming. A Palestinian refugee, Dr. Saqr first came to Texas in 1961 with plans to attend medical school or earn an advanced degree in the health sciences. But with family members to help out back home, he needed an immediate source of income, and respiratory therapy looked like the perfect fit. "In 1963, I became interested in RC because it was a promising student job and a particularly good introduction for a young student pursuing an education in health care or medicine," he recalls now. "I remained in the profession of respiratory therapy because it offered me great professional growth as well as leadership positions in management and education."

After working in numerous capacities throughout Houston, Dr. Saqr founded his own respiratory management company in 1971. Today ITA Resources provides professional RC services to hospitals and other facilities across Texas. Ensuring quality respiratory care in the long-term acute care (LTAC) hospital has become a special mission for the therapist and was the topic of his PhD dissertation.

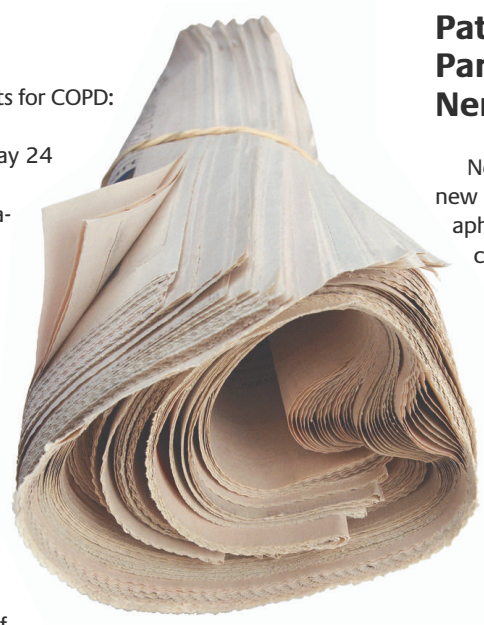
"I believe the increase in the Medicare population in the United States and the increase in the complexities of medical conditions will increase the importance of LTACs in the scheme of the continuum of care in this country," he says. "Respiratory care services will be one of the main services provided in the LTACs. Therefore, understanding the operation of LTACs and the needs of their respiratory patients is paramount for a respiratory therapist or any entity that specializes in providing quality respiratory therapy."

As for going back to school at the age when most people are thinking about retirement, the AARC member says it was a challenge, but one that was well worth the effort. "Initially I was more conscious about my age and concerned regarding my ability to keep up with the fast pace of learning with the younger students," he says, noting new educational technologies that have emerged since he earned his bachelor's and master's degrees — such as Blackboard and Microsoft Excel — were particularly difficult for him to grasp. "I thought I would never make it through the first year."

But with the help of his younger classmates and his co-workers, he learned to navigate the new educational terrain and gained confidence in his ability to complete the program. His experiences in a Palestinian refugee camp provided the resolve to push through, and his older age gave him the perseverance often lacking in the young. "The resiliency and endurance I developed during initial adversity and hardships proved vital to the advancement of my professional career, ultimately spawning the success I am so thankful for today," says Dr. Saqr. "The advantages of being an older student are a unique sense of motivation, the focus of purpose, and the increased sense of commitment toward the educational goals." ■

COPD in the News

Two new studies shed light on treatments for COPD:



- Dutch researchers publishing in the May 24 issue of *Archives of Internal Medicine* looked at beta-blocker use in 2,230 patients, 560 of whom had COPD at the start of the study and 1,670 of whom developed it during the study period. Among the group, 665 used beta-blockers and 1,565 did not. During an average of 7.2 years of follow-up, 686 patients (30.8%) died, including 27.2% in the beta-blocker group and 32.3% in the non-beta-blocker group. Among the 1,055 patients who had at least one exacerbation of COPD, 42.7% were in the beta-blocker group compared to 49.3% in the non-beta-blocker group. Among the subgroup of 1,229 patients without overt cardiovascular disease, 520 experienced at least one exacerbation of COPD and 241 died. Both outcomes were less likely among the 239 patients who used beta-blockers.

- Investigators from Baystate Medical Center in Springfield, MA, studied the association between use of antibiotics and outcomes among 84,621 patients hospitalized for acute exacerbations of COPD at 413 acute care facilities throughout the United States. Among the group, 79% received at least two consecutive days of antibiotic treatment. Compared to patients not receiving antibiotics in the first two days, antibiotic-treated patients were less likely to receive mechanical ventilation after the second hospital day (1.07% vs. 1.80%) and had lower inpatient mortality (1.04% vs. 1.59%), a lower incidence of treatment failure (9.77% vs. 11.75%), and lower rates of readmission for acute exacerbations of COPD (7.91% vs. 8.79%). Patients treated with and without antibiotics had similar lengths of stay, but patients treated with antibiotics had lower costs. Patients treated with antibiotics, however, did have a higher rate of readmissions for Clostridium difficile than those who were not treated. (May 26 issue of JAMA) ■

Patient with Diaphragm Paralysis Saved by Phrenic Nerve Decompression

New Jersey plastic surgeons recently gave a new lease on life to a patient suffering from diaphragm paralysis. Due to chronic pneumonia caused by the condition, Julia Cooke had been told she had just six months to live when the team decided to perform a phrenic nerve decompression.

The procedure reversed the paralysis, allowing the 57-year-old woman to breathe normally. "We are extremely excited about Julia's successful results, as the procedure has proven to be life-changing for people with diaphragm paralysis who were previously told nothing can be done," Dr. Matthew Kaufman was quoted as saying. "Additionally, this represents a significant opportunity for patients with breathing difficulty caused by surgery complications, spinal cord injury, lung-related illnesses, and other medical tragedies." ■

A Tragic End to a Lung Transplant in England

A double-lung transplant ended tragically for British cystic fibrosis patient Lyndsey Scott. According to a report in the *Daily Mail*, the 28-year-old unknowingly received the lungs of a 30-year smoker. Scott died of pneumonia five months later.

Physicians involved in the case are defending the decision to give Scott the smoker's lungs, noting lungs are in such short supply that 30% of patients die before receiving a transplant. However, the patient's family says Scott ultimately wished that she had not had the transplant at all. ■

GINA Resources Available for Public and Professionals

The Genetics and Public Policy Center at Johns Hopkins University, the National Coalition for Health Professional Education in Genetics (NCHPEG), and Genetic Alliance have teamed up to help patients and professionals better understand provisions in the Genetic Information Nondiscrimination Act (GINA), a landmark U.S. law that protects individuals from the misuse of genetic information in health insurance and employment.

The public-oriented materials include a "GINA & You" information sheet and slide set for advocacy organizations. The resources are available at www.GINAHelp.org and on the Genetic Alliance website, www.geneticalliance.org.

The materials for health care providers include background documents, a discussion guide suggesting how and when to talk about GINA with patients, a teaching slide set, and case studies that describe how the law works in a variety of real-world, clinical settings. These materials are available on NCHPEG's website, www.nchpeg.org.■

Military Minute: Tony Garberg, RRT

***AARC Times*:** Which branch of the service were you in, and how long did you serve?
Tony Garberg: I was a U.S. Coast Guard PO3 from 1991–1996 and a U.S. Army Reserve Specialist from 1997–2001.

***AARC Times*:** Where did you serve?
Garberg: I served in the United States.

***AARC Times*:** What was your most interesting or heartwarming experience related to your military service?
Garberg: I was very fortunate in my services to get the opportunity to interact with the community that I served on multiple occasions. During my service time I worked with veterans during ceremonies, which was an incredible experience. But without comparison, working with children at air shows and community presentations was so rewarding. The wonder in their eyes, the honesty in their comments, and the excitement that they brought with them was so gratifying. I will never forget what it was like to be part of an experience like that.

Tony Garberg can't imagine what his life would have been like without his military service.

***AARC Times*:** How did your military service enhance your career as a respiratory therapist?
Garberg: The time I spent in the military has been unequaled in my life, both professionally and personally. The educational opportunities afforded me during my services were wonderful. I have served in the engine room on a ship, which was my formal introduction to gas laws, hydraulics, and aerodynamics, just to mention a few processes. I went to school and became an aviation structural mechanic, which gave me more knowledge in aerodynamics, hydraulics, metal fabrication, composite repair, and many other processes all related to respiratory therapy in one way or another. I have benefited so much from my military experience that at this point I can't imagine what my life would be without that experience. The most valuable asset that the military gave me was the mental toughness, and the cockpit resource management skills I learned there directly relate to critical thinking skills and the ability to manage stressful situations. I cannot say enough for my military service.

***AARC Times*:** Where do you work today?
Garberg: I am director of respiratory care at Good Shepherd Health Care Systems in Hermiston, OR. ■

Members, Send Us Your Human Interest Stories

Have you been active in a ventilator-dependent kids' summer camp? Have you helped an elderly patient in need? Have you saved a life outside of a health care facility? *AARC Times* is always searching for stories from AARC members that relate special experiences.

If you have a human interest story to share with our readers, please contact *AARC Times* Editor Marsha Cathcart at cathcart@aarc.org. ■

If you are an AARC member on active duty with the U.S. military, or a veteran of service, go online to www.AARC.org/go/mm/ to participate in our "Military Minute" Q&A.

Having Insurance Doesn't Mitigate Racial Disparities in Asthma Care

Even within a comprehensive health insurance system, black and Hispanic children with asthma have worse outcomes than their white counterparts, report Mathematica Policy Research investigators publishing in the August issue of the *Archives of Pediatrics & Adolescent Medicine*.

The finding is based on an analysis of data from 822,900 children age 2–17 who were continuously enrolled throughout 2007 in a Department of Defense health maintenance organization-type plan. Black and Hispanic children were more likely to be diagnosed with asthma at all ages, and black children of all ages and Hispanic children age 5–10 were more likely to have potentially avoidable hospitalizations or ED visits related to asthma. Interestingly, black children of all ages were also more likely to receive recommended asthma medications, particularly inhaled corticosteroids, although the researchers believe this could be related to their higher rate of ED visits and potentially avoidable hospitalizations, where these medications would be prescribed and filled.

The finding could also be explained by the fact that black children were less likely to receive care from a specialist, who may be more likely to treat asthma according to clinical guidelines. "Thus, even though black children filled more prescriptions for asthma medications, they may have been less likely than white children who visited specialists to control their asthma and use the medications appropriately," the authors write. "Our findings suggest that eliminating racial and ethnic disparities in health care likely requires a multifaceted approach beyond universal health insurance coverage." ■

Readmissions Point to the Need for Better Outpatient Care

According to a recent analysis from the federal Agency for Healthcare Research and Quality (AHRQ), about a quarter of all hospital patients in 12 states in 2006–2007 were readmitted for the same conditions prompting their initial hospitalization. Specific findings include:

- 21% of patients with asthma had multiple readmissions.
- Multiple readmissions were seen for 30% of patients with uncomplicated diabetes and 28% of those with high blood pressure.
- More than a third of patients with coronary atherosclerosis were readmitted at least once.
- Among Medicare patients, 42% experienced multiple hospital admissions and 38% made multiple emergency department visits; statistics for Medicaid patients were 23% and 50%, respectively.
- About 22% of uninsured patients had multiple hospital readmissions; 38% made multiple hospital emergency department visits but were not admitted.
- Privately insured patients were the least likely to require multiple hospital readmissions, at 19%. They also made the fewest multiple visits to the emergency department, at 29%.

The AHRQ notes that while some patients require readmission due to the severity of their underlying conditions, in many cases repeat admissions can be avoided with the provision of better outpatient care for a host of chronic diseases, including asthma and COPD.

Former AARC President Patrick J. Dunne MEd, RRT, FAARC, published an article on preventing readmissions with a COPD transition protocol in the June 2010 issue of *AARC Times*. He noted, "There is a clear imperative to help COPD patients make a successful transition to home once discharged… this represents a great opportunity to demonstrate the value RTs could bring to acute care hospitals at a time when the innovative use of existing resources could not be valued more." ■

Routine Oxygen for Heart Attack Patients Called into Question

People suspected of suffering a heart attack are routinely given oxygen. But could it be doing more harm than good? European researchers who reviewed the data from three clinical trials suggest it might. Patients in the studies were given either pure oxygen or room air to inhale during the 24 hours after the onset of heart attack symptoms. While only 14 deaths were recorded among the 387 patients, nearly three times as many patients on oxygen died as patients on room air.

The investigators stop short of linking oxygen to the deaths but believe the findings do warrant further study on the value of routine administration of oxygen to heart attack patients. The report appeared in a recent issue of the *Cochrane Database of Systematic Reviews*. ■

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Your Membership Makes A Difference

ACTIVE MEMBER

An individual is eligible if he/she lives in the U.S. or its territories or was an Active Member prior to moving outside its borders or territories, and meets ONE of the following criteria: (1) is legally credentialed as a respiratory care professional if employed in a state that mandates such, OR (2) is a graduate of an accredited educational program in respiratory care, OR (3) holds a credential issued by the NBRC.

ASSOCIATE OR SPECIAL MEMBER

Individuals who hold a position related to respiratory care but do not meet the requirements of Active Member shall be Associate Members. They have all the rights and benefits of the Association except to hold office, vote, or serve as chair of a standing committee. The following subclasses of Associate Membership are available: Foreign, Physician, and Industrial (individuals whose primary occupation is directly or indirectly devoted to the manufacture, sale, or distribution of respiratory care equipment or supplies). Special Members are those not working in a respiratory care-related field.

STUDENT MEMBER

Individuals will be classified as Student Members if they meet all the requirements for Associate Membership and are enrolled in an educational program in respiratory care accredited by, or in the process of seeking accreditation from, an AARC-recognized agency.

SPECIAL NOTICE — Student Members do not receive Continuing Respiratory Care Education (CRCE) transcripts. Upon completion of your respiratory care education, continuing education credits may be pursued upon your reclassification to Active or Associate Member.

Membership Application

Please read the eligibility requirements for each of the classifications to the left, then complete the form. All information requested must be provided, except where indicated as optional. See **side 2** for more information and fee schedule. Please sign and date application on **side 2** and type or print clearly. Processing of application takes approximately 15 days.

You may apply or renew instantly on-line by going to https://secure.aarc.org/membership/

☐ Active ☐ Associate (Foreign) ☐ Associate (Physician) ☐ Associate (Industrial) ☐ Special ☐ Student

Last Name _____ First Name _____

Social Security No. (last four digits only) _____ Home Address _____

City _____ State _____ Zip _____

Phone No. (_____) _____ Email Address _____

You are automatically assigned to a state society based on your **home address**. If you wish to be assigned to a different state society, please indicate which state that is here: _____

Work Information: Place of Employment _____

Address _____ City _____

State _____ Zip _____ Phone No. (_____) _____

Preferred Fax No.(_____) _____ Preferred Email Address _____

Preferred Mailing Address: ☐ Home ☐ Business

Have you ever been or are you currently in the military? ☐ Yes ☐ No

For Student Member (Required)

School/RC Program _____ Address _____

City _____ State _____ Zip _____

Phone No. (_____) _____ Program Director _____

Expected Date of Graduation Month _____ Year _____

Please answer these questions to help us design services and programs that meet your needs.

Primary Job Responsibility (check one only)

☐ Clinical Specialist ☐ Director of Clinical Education ☐ Director ☐ Disease Manager
☐ Diagnostic Technologist ☐ Instructor/Faculty/Professor ☐ Medical Director ☐ Manager
☐ Marketing ☐ Nurse ☐ Owner ☐ Other
☐ Program Director ☐ Patient Educator ☐ Pulmonary Function Technologist ☐ Product Management
☐ Sales ☐ Supervisor/Coordinator ☐ Sleep Technologist/Polysomnographer ☐ Sleep Technologist/Specialist
☐ Staff Therapist ☐ Student

Type of Business

☐ DME/HME ☐ Educational Institution ☐ Home Health Agency ☐ Long Term Acute Care/Rehab
☐ Manufacturer/Distributor/Pharma ☐ Military ☐ Hospital ☐ Other
☐ Physician's Office ☐ Skilled Nursing Facility ☐ Sleep Lab Free Standing ☐ Sleep Lab Hospital Based
☐ Student ☐ Temp ☐ Outpatient Facility

Check the Highest Degree Earned

☐ PhD ☐ EdD ☐ MEd ☐ MBA ☐ MS ☐ MHA ☐ MHS ☐ MPA ☐ MPH ☐ MSEd ☐ MSN
☐ MA ☐ BSRT ☐ BSRC ☐ BS ☐ BHS ☐ BSEd ☐ BSN ☐ BA ☐ AAS ☐ AS ☐ AA

Job Status ☐ Full Time ☐ Part Time ☐ Years in Respiratory Care _____

Credentials ☐ MD ☐ DO ☐ RRT-NPS ☐ RRT-SDS ☐ RRT ☐ RPFT ☐ CRT-NPS ☐ CRT-SDS ☐ CRT
☐ CPFT ☐ RN ☐ RPSGT ☐ AE-C ☐ CTTS ☐ EMT-P ☐ LPN ☐ LVN

Honorary Credentials ☐ FAARC ☐ FACHE ☐ FAACVPR ☐ FCCM ☐ FCCP

Date of Birth _____ **Sex** _____

AMERICAN ASSOCIATION FOR RESPIRATORY CARE

AARC An Excellent Investment

Membership has many personal and professional benefits. The potential savings from these benefits go well beyond the cost of AARC membership, only a quarter a day!

PLEASE SIGN

I hereby apply for membership in the American Association for Respiratory Care. If approved for membership in the AARC, I will abide by its bylaws and professional code of ethics. I authorize investigation of all statements contained herein and understand that misrepresentations or omissions of facts called for is cause for rejection or expulsion.

A yearly subscription to Respiratory Care journal and *AARC Times* magazine includes an allocation of $11.50 from my dues for each of these publications, if applicable.

NOTE: Contributions or gifts to the AARC are not tax deductible as charitable contributions for income tax purposes. However, they may be tax deductible as ordinary and necessary business expenses subject to restrictions imposed as a result of Association lobbying activities. The AARC estimates that the nondeductible portion of your dues — the portion which is allocable to lobbying — is 19%.

Signature _____ **Date** _____

You may apply or renew instantly on-line by going to https://secure.aarc.org/membership/

Membership Fees (U.S. dollars only)

Payment must accompany your application to the AARC. Fees are for 12 months. These fees contain the $12.50 new members processing fee. **Renewing members (except students) can deduct $12.50.**

Choose One Level of Membership

AARC REGULAR MEMBERSHIP (Receive both *AARC Times* magazine and Respiratory Care journal)

☐ Active $102.50 ☐ Associate (Industrial or Physician) $102.50 ☐ Associate (Foreign) $117.50 ☐ Special $102.50 ☐ Student $50.00

→ **NEW! AARC REGULAR MULTI-YEAR MEMBERSHIP** ☐ Active **or** ☐ Associate (U.S. only) **or** ☐ Special **for:** ☐ 2 years $170 **or** ☐ 3 years $240

Or

AARC CHOICE MEMBERSHIP (Choose one publication) I want ☐ *AARC Times* magazine **or** ☐ Respiratory Care journal

☐ Active $91.00 ☐ Associate (Industrial or Physician) $91.00 ☐ Associate (Foreign) $106.00 ☐ Special $91.00

Or

AARC PLUS MEMBERSHIP (All publications and other special benefits)

☐ Active $137.50 ☐ Associate (Industrial or Physician) $137.50 ☐ Associate (Foreign) $177.50 ☐ Special $137.50

(Includes one **free** specialty section – please mark your choice below.)

Or

Web-only MEMBERSHIP (Open only to international members) ☐ Foreign $92.50

***Voluntary PAC Contribution** $_____ ****Voluntary ARCF Contribution** $_____

* AARCPAC is a separate aggregated fund. Voluntary political contributions by individuals should be written on personal checks. Contributions from corporations are illegal and cannot be accepted. The AARC will not favor or disadvantage anyone based upon the amounts of or refusal to make AARCPAC contributions. Contributions to a political action committee are not deductible for federal income tax purposes.
** American Respiratory Care Foundation (ARCF) is a not-for-profit organization formed for the purpose of supporting research, education, and charitable activities in respiratory care. Contributions to the ARCF are tax deductible.

Specialty Sections (Open to all members) E-mail address is required.

Membership in AARC Specialty Sections connects you to others who practice in your area of respiratory care through an electronic mailing list, monthly E-Newsletters, quarterly Section E-Bulletins, and an information-rich Specialty Section website. Programs created by specialty section members are integral to the AARC Summer Forum and AARC International Respiratory Congress.

☐ Adult Acute Care Section $15.00 ☐ Education Section $20.00 ☐ Neonatal-Pediatric Section $15.00 ☐ Diagnostics Section $15.00
☐ Management Section $20.00 ☐ Transport Section $15.00 ☐ Long-Term Care Section $15.00 ☐ Home Care Section $15.00
☐ Continuing Care Rehabilitation Section $15.00 ☐ Sleep Section $15.00

Payment Information

Enclosed is a check for the membership fee I selected ***plus*** any specialty section fees ***plus*** any contributions to AARCPAC or ARCF for the total amount of $_____. Please make checks payable to the AARC.

Please charge my dues to: ☐ MasterCard ☐ Visa ☐ American Express

Card Number _____ Card Expires _____ /_____ Signature _____

Send this application and fees to:
American Association for Respiratory Care
9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706 (if using a credit card)
or P.O. Box 650097, Dallas, TX 75265-0097 (if sending a check)
Fax: 972-484-2720 • Phone: 972-243-2272

Did you remember to give us your email address on page 1?

Thanks for Being Part of the Team

Revised May 2010

Use Your Membership and Save

Use our savings calculator to find out how much you save with AARC membership. With the Member Savings Calculator it's easy to see how our membership pays for itself over the course of a year!

Try it at http://www.aarc.org/member_services/calculator/

AARC Member Benefit

Earn FREE CRCE Credits NOW with AARC Webcasts!

Easy – Convenient – and FREE for AARC Members

An AARC Webcast is a live online educational program that includes a test immediately afterward to earn CRCE® credit for licensure or NBRC requirements. Watch from your home, office or anywhere you have internet access.

Pre-registration is required, but webcasts are FREE to AARC Members.

September 1, 2010

Inpatient OSA Screening

Presented by Sheri Tooley Peters, RRT-NPS, CPFT, AE-C

CRCE Content Designation: NBRC-SDS

October 6, 2010

Unique Challenges of Pediatric Diagnostic Testing and Treatment

Presented by Kathy Deakins BS, RRT NPS

CRCE Content Designation: NBRC-NPS

Can't make it on these dates? No problem. All webcasts are archived and can be viewed at your convenience. *Nominal fee for the test for CRCE credit when viewed later.*

www.AARC.org/education/webcast_central/

Includes access to all archived webcasts and the new 2010 schedule

Classifieds

ADVERTISING SECTION

For Sale/For Rent

Oakes's Books

RC Week Special – Free shipping and volume discounts to hospitals and individuals. Limited time offer until Oct 23, 2010. Check out the details at www.RespiratoryBooks.com; (207) 262-0123.

Ventilators, Pulse Oximeters, and More

Respiratory care and cardiopulmonary equipment for sale. Featuring Puritan Bennett, Siemens, Bird, Bear, Lifecare, Sechrist, Infrasonics, Dräger, Newport, and other brand names. Adult, pediatric, infant/neonatal, transport, and home care ventilators. All equipment are fully remanufactured and warrantied. Lowest prices and best quality. Nationwide-worldwide shipping. We buy used equipment. Call for trade-in prices. General Biomedical Service, Inc., New Orleans, LA, (800) 558-9449.

AARC Times Classified Advertising Information & Requirements:

Classified Word Advertisements

AARC Members: $50 for 50 words or less; each additional word, $1. Free Internet placement. Nonmembers: $60 for 50 words or less; each additional word, $1.20. Listings are categorized by state. Following the state listings are United States/International, For Sale/For Rent, Miscellaneous, and Situations Wanted. All copy should be typed double-spaced. All ads will be set in 8-point type. To calculate the cost per advertisement, a "word" is considered to be one or more letters, numbers, or special characters with a space before and after.

Ads are featured on the AARC web site for one month after publication. Ad may only be placed on the web site with an insertion order for placement in an AARC publication. Ad is noncancelable after placement on the web site. NOTE: *AARC Times* reserves the right to refuse any advertisement not directly relevant to respiratory care. *AARC Times* does not endorse any advertiser, its positions, practices, services, or products.

We reserve the right to make editorial changes for reasons of clarity and consistency. Every effort is taken to avoid mistakes, but *AARC Times* cannot be responsible for clerical or printing errors. **Deadline for Ad Placement/Cancellation** Deadline for ad placement and written cancellations for the next available issue is September 24. Blind ads available. **For Recruitment Advertising Information, Contact Classified Advertisement** Anna Blydenstein • Alhambra Plaza • 725 N. Highway A1A, Suite C-106 • Jupiter, FL 33477 • (561) 745-6793 • Fax (561) 745-6795 • AARCAD@aol.com

Recruitment Display Advertisements

For Recruitment Display Ad Rates, go to http://www.aarc.org/marketplace/media_kit/2010_recruitment.pdf, or contact Goldsbury and Associates, Alhambra Plaza, 725 N. Highway A1A, Suite C-106, Jupiter, FL 33477, (561) 745-6793, Fax (561) 745-6795

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THERE IS OPPORTUNITY IN THE AIR.

A vital part of an active and vigorous life is healthy breathing. At Banner Health, we understand the vital role you play on our team and we are committed to your success. We provide an environment that is rich in opportunities, offers growth and development and is equipped with the latest in life-saving technology. Banner Health is dedicated to supporting successful and satisfying careers for our respiratory care professionals. We make a difference in our employees' lives so they can make a difference in the lives of others.

Breathe new life into your career. Call **1-866-377-5627** or visit:

www.BannerHealth.com

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NEBRASKA NEVADA WYOMING

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EOE/AA Banner Health supports a drug-free work environment.

Banner Health®

Circle 9 in Advertiser Index

CALL FOR ENTRIES

AARC Times

PHOTO CONTEST

IMPORTANT: PLEASE READ THE FOLLOWING PHOTO REQUIREMENTS

Adhering to these requirements will assure that your photograph will be acceptable for publication. A good photograph produced at the wrong resolution may render it unsuitable for reproduction.

➡ **Since the photo is for the cover,** we require a vertical format. Turn your camera sideways to take the photo.

NO	YES

➡ **If your photo is taken with a standard film camera,** we will need a color print and negative shipped to us at **PHOTO CONTEST,** AARC, 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706.

➡ **Most digital cameras give you a choice of settings for image resolution.** Photos taken at lower resolution settings take up less room on your memory card but may not be useable for print productions. Set your camera for the highest resolution photo and save it as JPEG or TIFF.

➡ **We prefer that you mail a CD of your photo since it will probably be too large to be e-mailed.** If you do try to e-mail, please send it directly to our production manager, Donna Knauf, at knauf@aarc.org and indicate clearly in your e-mail that the photo is for the Photo Contest.

HERE'S YOUR CHANCE TO HELP CHOOSE THE COVER OF *AARC TIMES* MAGAZINE

HERE'S HOW IT WORKS:

AARC Times will collect photo entries from the membership. Contest finalists will receive **FREE DUES** on renewal AND will automatically be entered into the publication's Photo-of-the-Year Contest, which will take place in the November 2010 issue.

The Photo-of-the-Year winner will see his or her photograph on the **COVER** of the January 2011 issue of *AARC Times*!

WHAT KINDS OF PHOTOS ARE WE LOOKING FOR?

Heartwarming photos of your adult patients who rely on your care and guidance and who inspire you.

JUST FOLLOW THESE SIMPLE RULES:

- Provide a signed release for any patients or co-workers pictured in your photos. The form is available online at **www.aarc.org/headlines/photo_contest/** or can be faxed to you by calling Karen at (972) 406-4661. Photos cannot be published without signed releases.
- Send a brief background story with the photo.
- Photos will not be returned and become the property of the AARC.
- Do not print photos from your home printer.
- Photographic prints of good quality are acceptable. Please **read the requirements we have provided at left** so that you send your photo in a format that can be used and reproduced in a magazine.

WWW.AARC.ORG

Calendar of Events

AARC & State Society Programs

September 21–24
Myrtle Beach, SC
South Carolina Society for Respiratory Care's 2010 Annual Conference
Contact www.scsrc.com or randylydick@yahoo.com

September 22–24
Hot Springs National Park, AR
39th Annual Arkansas Society for Respiratory Care State Meeting
Contact John.Lindsey@Mercy.Net

September 23–24
Cheyenne, WY
Wyoming Society for Respiratory Care State Conference
Contact Brad Zwiefelhofer, Brad.Zwiefelhofer@LPNT.net, (307) 857-3480

October 6
AARC Live Webcast
Unique Challenges of Pediatric Diagnostic Testing and Treatment
Contact AARC, (972) 243-2272, www.aarc.org/education/webcast_central

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October 6–8
Atlantic City, NJ
NJSRC Annual Shore Conference
Contact www.njsrc.org or Linda Birnbaum, (732) 713-6859, Lbirnbaum2@yahoo.com

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October 7–8
Verona, NY
NYSSRC's 30th Annual Symposium
Contact www.nyssrc.com

October 14–15
Blacksburg, VA
VSRC Fall Conference & Mountain Air Symposium
Contact www.vsrc.org or Judy at judmarmac@yahoo.com

October 14–15
Indianapolis, IN
Indiana Society for Respiratory Care's 36th Annual Conference
Contact www.in-isrc.org or Charity Bowling at cbowling17@ivytech.edu, (317) 921-4211

October 24–30
Respiratory Care Week
Contact AARC, (972) 243-2272, www.aarc.org

October 27
Lung Health Day
Contact AARC, (972) 243-2272, www.aarc.org

October 28
Newark, DE
17th Annual Trends in Respiratory Care Conference
Contact www.Delawarelung.org, Debbie Marckese, (302) 651-5117

December 6–9 (Monday–Thursday)
Las Vegas, NV
AARC International Respiratory Congress
Contact AARC, (972) 243-2272, www.aarc.org/education/meetings

Other Meetings

September 30 (11–12 EST)
TechEd Live Pulmonary Function Webcast Series
Bronchial Challenge Testing Part 1 — Methacholine Challenge
Contact Susan Blonshine, (517) 676-7018, sblonshine@techedconsultants.com

Submissions for the next available issue are due Sept. 24.

For information on submitting calendar events, contact: Beth Binkley, AARC Times 9425 N. MacArthur Blvd, Suite 100, Irving, TX 75063-4706 (972) 243-2272 Fax (972) 484-2720 E-mail binkley@aarc.org

Advertiser Index

To advertise, contact: Tim Goldsbury, Advertising Sales, Alhambra Plaza, 725 N. Highway A1A, Suite C -106, Jupiter, FL 33477, (561) 745-6793, Fax (561) 745-6795, goldsbury@aarc.org. Or contact Beth Binkley, Advertising Assistant, Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706, (972) 243-2272, Fax (972) 484-2720, binkley@aarc.org.

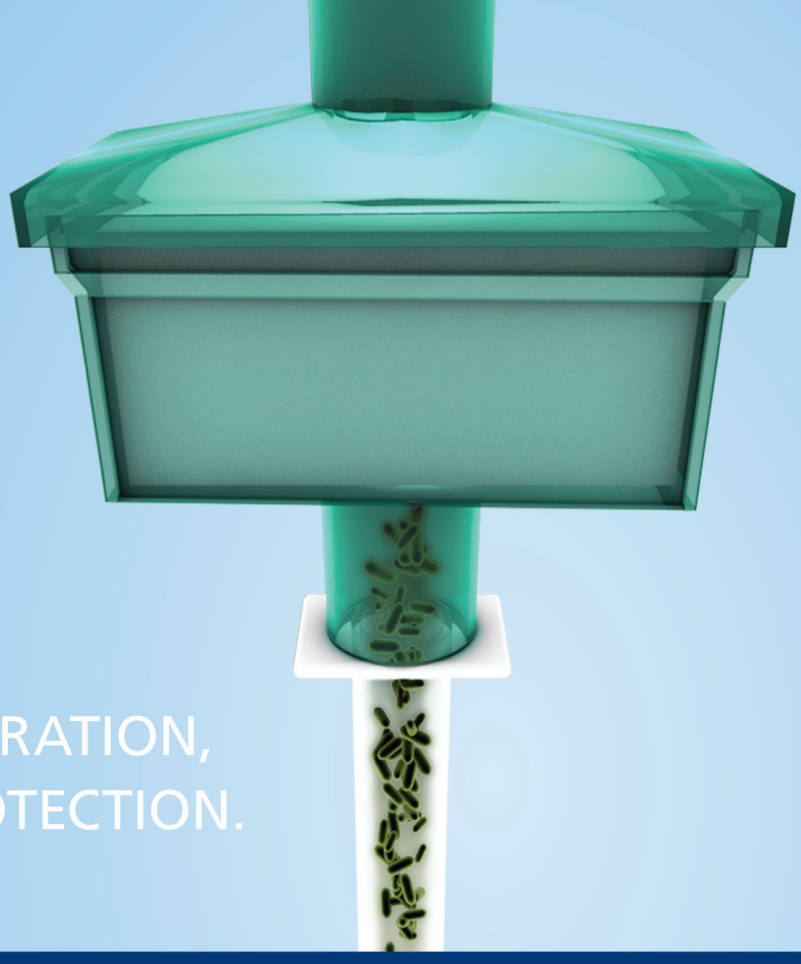
Company Name	Cir #	Pg #
Advanced Aeromedical (800) 346-3556 www.aeromedic.com	18	26
Airon (888) 448-1238 www.MACS-CPAP.com	21	56
B & B Medical Technologies, Inc. (800) 242-8778 (760) 929-9953 Fax www.bandb-medical.com	8	16
B & B Medical Technologies, Inc. (800) 242-8778 www.bandb-medical.com	75	76
Banner Health (866) 377-5627 www.BannerHealth.com	9	101
CareFusion carefusion.com	17	C2
CareFusion carefusion.com	86	77
Chad Therapeutics 7 (800) 423-8870 www.chadtherapeutics.com	25	
Covidien Respiratory and Monitoring Solutions (800) NELLCOR www.nellcor.com	16	13
Covidien Respiratory and Monitoring Solutions www.covidien.com/darfilters	3	C3
Covidien Respiratory and Monitoring Solutions (800) NELLCOR www.nellcor.com	79	76
Dräger Medical (800) 437-2437 www.draeger.com/respiratorycare	19	C4
Electromed, Inc. (800) 462-1045 www.SmartVest.com	78	76
Hans Rudolph, inc. www.rudolphkc.com	80	76
HCA West Florida www.MoreCareerChoices.com	12	100
IngMar Medical (800) 593-9910 www.ingmarmed.com	24	56
Instrumentation Industries, Inc. (800) 633-8577 www.iiimedical.com	11	35

Company Name	Cir #	Pg #
Instrumentation Industries, Inc. (800) 633-8577 www.iiimedical.com	76	76
Invacare (800) 333-6900 www.invacare.com	13	23
Invacare (800) 333-6900 www.invacare.com	82	77
Kimberly-Clark www.VAP.Kchealthcare.com/CSS	15	9
Maquet (888) 627-8383 www.maquetusa.com	77	76
Marsh Affinity Group (800) 503-9230 www.proliability.com/47501	4	31
Masimo (800) 257-3810 www.masimo.com	5	3
Masimo www.masimo.com	81	76
Medical Acoustics (716) 218-7355 www.lungflute.com	10	32
Monaghan Medical (800) 833-9653 www.monaghanmed.com	6	7
Monaghan Medical www.monaghanmed.com	83	77
Overton Enterprises www.spibelt.com	89	77
Philips Respironics www.respironics.com	87	77
Pulmodyne www.Pulmodyne.com	85	77
Smith Seminars (866) 857-2211 www.SmithSeminars.com	20	37
SureQuest Systems, Inc. www.surequest.com	88	77
Vapotherm (866) 827-6843 www.vtherm.com	14	17
Vortran (800) 434-4034 www.vortran.com	84	77

Name _____ **Title** _____ **Facility** _____

Address _____ **City** _____ **State** _____ **Zip** _____ **Phone #** _____

FOR FAST PRODUCT INFORMATION FROM THE MANUFACTURERS, circle the corresponding number on this page and fax this form to (888) 847-6035 or go online to www.aarc.org/resources/ and click on Reader Service Program



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To learn more about DAR™ Sterivent™ filters, visit: www.covidien.com/darfilters

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Circle 3 in Advertiser Index

1. Nelson Laboratories Inc. Bacterial filtration efficiency (BFE) test at an increased challenge level. Lab test 399950. January 2008.
2. Nelson Laboratories Inc. Virus filtration efficiency (VFE) test at an increased challenge level. Lab test 399952. January 2008.

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Today's intensive care environment is fast-pace and demanding. To care for the critically ill, clinicians demand high performance coupled with easy to use interfaces that are intuitive and provide instant access to the latest clinical information. The Evita Infinity V500 provides a full range of treatment options to meet the needs of adult, pediatric, and neonatal patients. With the V500, data management is streamlined and allows for efficient decision making at the bedside - where you're needed most.

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Circle 19 in Advertiser Index