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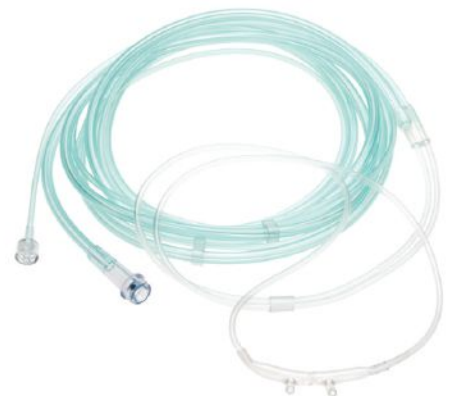

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Ventilating the Pediatric Patient

by Dana Evans, MHA, RRT-NPS

Perhaps one of the scariest scenarios an adult therapist or new graduate can face is the moment a child in respiratory failure enters their emergency department. You may be thinking: "What am I supposed to do? Can I treat them like an adult patient?"

Unlike adults, the most common reason for admission to the pediatric ICU (PICU) is respiratory failure and the need for mechanical ventilation.[1] For this reason, the importance of strong, knowledgeable respiratory therapists cannot be overemphasized.

Children are not "little adults"

This is a familiar mantra for those who work with pediatric patients on a routine basis. Children should not be treated the same as their adult counterparts. Unfortunately, most of the best research in the area of ventilation has been completed on adult subjects only. There are several reasons for this, most significantly that there are fewer patients admitted to the PICU. The smaller numbers make data gathering and study recruitment more difficult, creating a quandary… *How do we treat children differently when the research we use is primarily adult based?*

Presently, there is no consensus or widely accepted standard for mechanical ventilation in children. Pediatric care providers have selectively adopted practices from adult research, seeming to pick and choose what they employ. There often appears to be little reason why one practice is adopted and another is not, leading to variation between providers. Additionally, some regional differences regarding what is considered "standard" care or practice have been observed.

Is it acceptable to apply adult data to pediatric patients? The answer is likely yes, with some limitation. While it is true that children are not "just small adults," it is also true that infants are not merely small children. One can assume that the data regarding adult mechanical ventilation is more easily translated for adolescent patients than it is for small children or infants. The reason for this is partially due to the process of lung development.

Lung and alveolar growth begins *in utero* and continues well into childhood. At birth, a term neonate has approximately 50 million alveoli. The remaining alveoli (nearly 300 million more) continue to develop postnatally. While the exact timeline remains controversial, it is estimated that alveolar development continues until 8–11 years of age.[2]

about the author…

Dana Evans, MHA, RRT-NPS, is the respiratory care manager at Mercy Children's Hospital–St. Louis in St. Louis, MO.

Mode selection

Current mechanical ventilators have brought forth an explosion of new modes for all patient populations, many of which have been implemented with little or no data supporting their superiority over other modes. There is very little outcome data on modes of ventilation in general and even less so regarding pediatric patients. As a result, physicians and respiratory therapists are left to make decisions based upon small studies. Currently, the data appears to favor volume-targeted modes of ventilation.

Tidal volume selection and measurement

It is standard practice to calculate adult tidal volume based upon ideal/predicted body weight. Conversely, for pediatric patients it remains common in many areas of the country to calculate tidal volume based upon actual weight. While there are programs and calculations available to determine predicted body weight in children, this can become complicated in some patient populations, particularly in scoliosis or other spinal deformities that can make measuring height difficult if not impossible.

There are issues associated with using actual body weight when determining a child's tidal volume. Childhood

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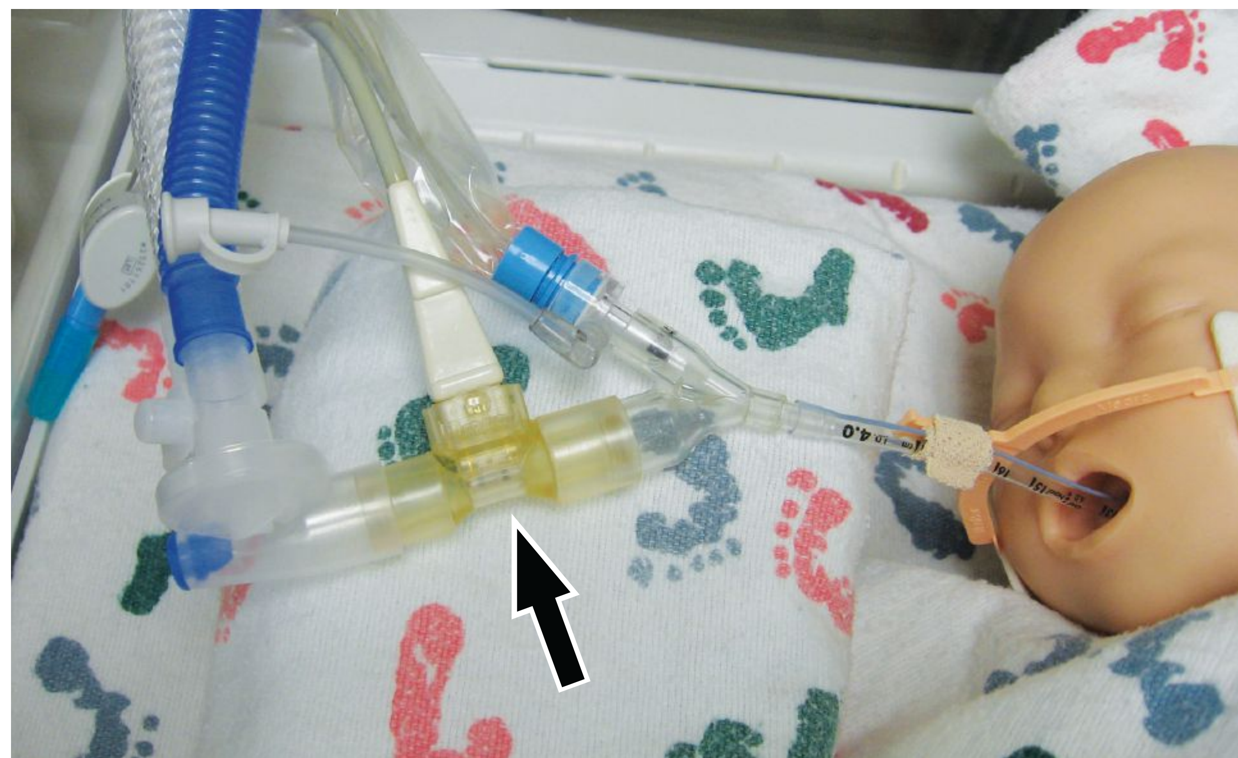

Flow sensor at the patient wye for tidal volume measurement

obesity, which is on the rise, is an example in which this method could pose a significant problem. An obese child is unlikely to have "larger" lungs.[3] For this reason, it is ideal to select tidal volume based upon predicted body weight (PBW) rather than actual weight. This can most easily be done by using sex and age growth charts, choosing the weight based upon the 50th percentile.

While likely, research is lacking to determine if tidal volume selection has an impact on the rate of acute lung injury (ALI) in pediatric patients and what range is most suitable for children. Without strong evidence to guide practice, this is an area of inconsistency among providers. Recently, the Pediatric Acute Lung Injury Consensus Conference Group published recommendations for the care of ALI. Even amongst this group there was controversy regarding tidal volume selection. Ultimately, they came to a "weak agreement" to recommend 3–6 mL/kg PBW for those with poor compliance and 5–8 mL/kg PBW for those with compliance "closer to physiologic range." Additionally, the group agreed that the plateau pressure should not exceed 28 cm H_2O (lower than the commonly accepted adult limit of 30 cm H_2O).[4]

The location for measuring tidal volume remains an important consideration for pediatric patients. Ventilator manufacturers have added software that determines and accounts for circuit compliance and compressible volume lost. Despite these additions, variation can be seen in tidal volume measurement at the machine versus those measured by a proximal airway sensor/pneumotachograph (see photo). This discrepancy can be caused by a number of things, including the ventilator's potential inability to compensate for secretions, changes in humidification, changes in temperature, condensation, and devices in the ventilator circuit (in-line suction catheters or $EtCO_2$ monitors).[5] The percentage of variance in measured tidal volume can be more

Table 1. Respriatory Rate Ranges for Children

	Initial RR Setting (breaths/minute)
Infant	25–40
Toddler	20–35
Small Child (Pre-School Age)	20–30
Child (School Age)	18–25

pronounced in small children/infants (when compared to adult patients) due to their smaller tidal volume.[1,5,6] While the difference is likely to be clinically insignificant in large children or adults, it can be very significant in small children and infants. Respiratory therapists must evaluate their equipment to make the most appropriate decision for their patient.

Respiratory rate and PEEP

Not unlike adults, initial respiratory rate (RR) selection for pediatric patients is based upon the average RR range for that child. For example, initial RR for an adult is typically 10–20 breaths/minute. See Table 1 for RR ranges for children.[7]

Positive end-expiratory pressure (PEEP) selection in children is not different from PEEP selection in adults; an initial setting of 5 cm H_2O is acceptable.

Clinical decision making

Adjustment of ventilator settings should be made based upon information gathered from blood gas analysis, noninvasive monitors, chest radiograph, ventilator graphics, and patient assessment (as is the case with adult patients).

While it is true that "children are not little adults," much of what we know regarding adult ventilation can be adapted to safely care for a pediatric patient. Additional research on pediatric mechanical ventilation is much needed, particularly as it relates to appropriate tidal volume ranges. We may soon have the answers we need thanks to the efforts of many multi-center research groups, including the PALISI (Pediatric Acute Lung Injury and Sepsis Investigators) network, the Australian and New Zealand Intensive Care Society Clinical Trials Group, and the Collaborative Pediatric Care Research Network. ■

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Understanding the Science and Management of the BPD Patient

by Jonathan M. Fanaroff, MD, JD

The field of neonatology has made tremendous progress over the past several decades with markedly improved survival. Bronchopulmonary dysplasia (BPD), the most common cause of pulmonary disease diagnosed in the first year of life, continues to be a challenging long-term morbidity facing neonatal ICU (NICU) graduates.

Definition and prevalence

Historically, neonates who were ventilated for months with high airway pressures and oxygen developed severe chronic lung disease. William Northway, Jr., introduced the term bronchopulmonary dysplasia in 1967 and described the classic x-ray findings.[1] Many of these infants died from heart failure and severe pulmonary hypertension. This was known as the "old" BPD. With changes in practice including antenatal steroids, surfactant replacement, and improved ventilation strategies, we now see more of the "new" BPD, which is found in smaller premature infants who require prolonged respiratory support but do not necessarily require ventilation with high airway pressure or oxygen.

Bronchopulmonary dysplasia has had a number of different definitions over time. Initially it was defined as requiring oxygen at 28 days of life. This definition became less relevant as survival improved. Almost all 23-week infants, for example, are on oxygen at 28 days of life. Consequently, the definition was modified at a 2001 National Institutes of Health workshop. An infant on oxygen at 28 days of life but on room air by 36 weeks post-conceptual age (PCA) has mild BPD. Infants requiring less than 30% oxygen by 36 weeks PCA are classified as moderate BPD, while an infant on more than 30% oxygen or requiring any positive pressure (ventilator, CPAP, high-flow nasal cannula) is considered severe BPD. A "physiologic" definition of BPD involving an oxygen challenge test has been developed by Michele Walsh to help standardize the classification of BPD.[2]

Regardless of the definition used, there is a clear inverse relationship between gestational age and the incidence of BPD, which affects the majority of infants 22–25 weeks gestation. Even larger infants born at 27 weeks gestation are vulnerable as approximately one-third of babies are diagnosed with BPD.[3] In order to understand proven therapies and strategies available today as well as some proposed therapies for the future, we must first consider the underlying pathophysiology of this complex disease.

about the author…

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

Pathogenesis

Bronchopulmonary dysplasia is a multifactorial disease that is incompletely understood. However, clinically it is found almost exclusively in preterm infants who receive mechanical ventilation. A combination of prematurity and mechanical lung over-distention have been considered key factors contributing to the pathogenesis of BPD. Other factors that can contribute to the pathogenesis of BPD are listed in Table 1.

Treatment strategies

As expected in a multifactorial disease, a multidimensional interdisciplinary approach is needed to minimize the risk of BPD. Indeed, critical interventions may occur before the premature infant even reaches the NICU and, in fact, before he or she is born.

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Steroids — Antenatal and Postnatal: First described by Howie and Liggins as far back as 1972, antenatal steroids appear to enhance fetal lung maturity and have major benefits for the fetus.[4] The risk of death, intraventricular hemorrhage, and respiratory distress syndrome (RDS) are reduced by 50%. While there are some women who present to the hospital and deliver rapidly before steroids can be given, it can be useful for an institution to track administration rates as a quality measure.

Postnatal steroids are controversial because of their link to negative long-term neurologic outcomes. It is unclear at this point which steroids to use, when to use them, how long to use them, and at what dose they are needed. Current studies may help answer these questions.

Surfactant: Surfactant deficiency is a primary cause of RDS and for select infants with meconium aspiration syndrome is effective in preventing and treating RDS. This leads to decreased need for mechanical ventilation and oxygen supplementation, both major risk factors for BPD. Surfactant replacement has been shown to help reduce the risk factors of BPD.

Lung Protective Ventilation: Lung protective ventilation strategies are important to minimize the risk of BPD. With respect to minimizing volutrauma and barotrauma, every breath counts. Evidence shows that even a few overdistending breaths in the delivery room can damage the lung. At the same time, insufficient ventilator support can lead to collapsed alveoli and atelectotrauma.

Of course, the best ventilation strategy may be to avoid the ventilator completely. A meta-analysis of several randomized controlled trials including the United States SUPPORT trial have shown that CPAP is a reasonable alternative to intubation and has actually been shown to decrease the rate of BPD and death.[5]

Oxygen: Oxygen was the first respiratory therapy used in premature infants. Despite decades of use, however, it is still unclear and controversial exactly which saturation levels are best to target. Too much oxygen can lead to oxidative stress and increase the risk of lung damage as well as retinopathy of prematurity. Too little oxygen has been associated with an increase in mortality. Keeping abreast of the evolving literature and developing unit protocols may be helpful for guiding caregivers on appropriate saturation targets.

Caffeine: Americans drink more than 400 million cups of coffee per day. For premature infants, caffeine has a number of benefits, including reducing the frequency of apnea and the need for mechanical ventilation. In the placebo-controlled randomized Caffeine Therapy for Apnea of Prematurity (CAP) trial, a 40% reduction in bronchopulmonary dysplasia was found.[6] This is likely related to more successful use of noninvasive ventilation, such as CPAP. Some studies suggest that giving caffeine early (within the first two days) is more beneficial compared to starting it later.[7]

Vitamin A: Vitamin A is one of the more interesting treatments in the history of bronchopulmonary dysplasia. It is a fat-soluble vitamin that promotes cell growth, including in the lung. A randomized controlled trial conducted by the National Institutes of Health Neonatal Research Network found that Vitamin A decreased BPD.[8] The number needed to treat was 13 — meaning that for every 13 babies who received Vitamin A, one less would get BPD. Unfortunately, it has to be given intramuscularly for multiple doses, which can be painful for a baby with no body fat. For this reason, many units have chosen not to give this therapy.

Inhaled Nitric Oxide: While this therapy has dramatically decreased the need for extracorporeal membrane oxygenation in term babies, outcomes from studies in preterm babies have been mixed. While certain critically ill premature infants seem to respond to nitric oxide, current evidence does not support its routine use to prevent BPD in preterm babies. Ongoing studies will provide additional information when their results become available.

Bronchodilators: Infants with BPD have airway smooth muscle hypertrophy and airway hyperreactivity. While bronchodilators successfully reduce airway resistance in infants with BPD, the benefits are short lived and the side effects are significant. For most infants, they are best used for acute exacerbations of airway obstruction.

Fluid Restriction/Diuretics: Infants with BPD require pristine fluid management. Calories and salt are needed to

• Gestational age
• Oxygen support
• Barotrauma
• Patent ductus arteriosis
• Infection/chorioamnionitis
• Surfactant abnormalities
• Family history/genetics

Table 1. Factors That Contribute to the Pathogenesis of BPD

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support growth. While diuretics may be helpful in the acute setting and help decrease resistance and improve lung compliance, the benefits of chronic diuretics is often outweighed by the significant side effects such as hearing loss from ototoxicity, electrolyte abnormalities, and kidney stones.

Nutrition: Providing proper nutrition for infants with BPD is difficult because of the need for relative fluid restriction as well as the increased energy and protein demands of the disease itself. Yet nutrition is essential for growth, including new alveoli. Consequently, aggressive nutrition strategies are needed, mainly with high-calorie formulas and supplements.

Role of the respiratory therapist

Respiratory therapists play a significant role in the prevention and treatment of BPD. Promoting strategies and therapies that minimize volutrauma, barotrauma, and atelectotrauma — beginning in the delivery room — is crucial. Advocating for therapies shown to minimize the risk of BPD is essential. RTs must remain involved and current with the literature as their contributions may benefit infants and prevent them from developing BPD. For those who do develop BPD, a focused plan of care is critical to the infants' outcome. ■

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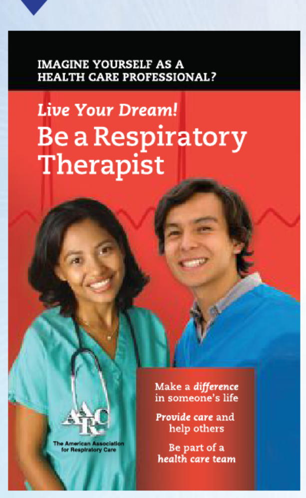

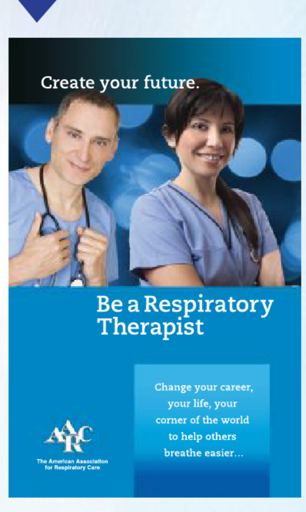

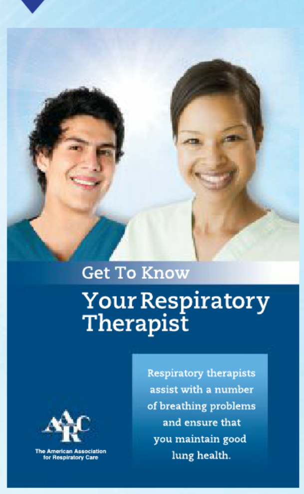

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E-cigarettes: A Viable Option for Smoking Cessation?

by Georgianna Sergakis, PhD, RRT, CTTS

When we talk to our patients about quitting tobacco, most of us have heard a story or two about that "certain friend." In the past, this friend was most often the one who successfully quit "cold turkey." We know now from the research evidence that the cold-turkey method of quitting has only about a 5% success rate.[1] We heard about this "friend" almost as often as we hear about the friend who lived to be 100 years old and, incidentally, smoked three packs a day for 95 years without getting COPD, right? Yes, I might have exaggerated a little (in most stories, the person lives to be 120 years old).

A new "friend" has now joined the tobacco-cessation lore — this one just quit smoking by using e-cigarettes. As always, we have to carefully approach the anecdotal stories our patients share with us armed with the latest evidence-based findings to debunk myths and to appropriately inform. The purpose of this article is to provide a review of the role e-cigarettes play in cessation, share related research evidence, and summarize the important role of the respiratory therapist in the discussion of this topic.

about the author...

Georgianna Sergakis, PhD, RRT, CTTS, is an assistant professor of respiratory care at The Ohio State University in Columbus, OH.

E-cigarettes: friend or foe?

About 70% of smokers admit they want to quit.[1] We know that quitting is difficult, expensive in many ways, and involves frequent relapses. Some patients may perceive e-cigarettes as the answer to this complicated predicament. Are they the answer? To put it simply, we don't know enough about use of e-cigarettes as a cessation method. Don't stop reading — there is more to understand. Here is a summary of what we *do* and *do not know* about e-cigarettes and cessation (for more detail, I recommend the *AARC Times* articles by Sarah M. Varekojis, PhD, RRT, in the November 2014 issue and Jay Taylor, AS, RRT, TTS, in the May 2015 issue).

We know: E-cigarettes, in U.S. markets since 2006, are electronic nicotine delivery systems that create a vapor for inhalation. They contain nicotine, which is propelled by glycerol or propylene glycol and often contains a flavored mixture. The products are often marketed as "water vapor" and as safer alternatives to cigarettes.[2]

We don't know: The safety of the e-cigarette is not clear. While studies have confirmed lower toxicity levels than traditional combustible cigarettes, the relative harm reduction remains unknown.[2] The devices are not regulated by the U.S. Food and Drug Administration (FDA) unless marketed for therapeutic use, and no entity to date has approved e-cigarettes for cessation. Furthermore, the nicotine and chemical content are variable; vapor aerosols have been found to contain carcinogens and toxins; and health consequences like reduced lung function, immunocompromise, and increased risk of pulmonary infection have been reported.[2,3] Nicotine poisoning is also an emerging health concern related to the safety of e-cigarettes. The second generation e-cigarettes, or tank systems, allow the user to refill a reservoir with nicotine liquid, which can present dangerous situations if not stored out of reach of vulnerable populations. Calls to the poison control centers about e-cigarette exposures accounted for 41.7% (in 2014, increased from 0.3% in 2010) of combined monthly e-cigarette and

cigarette exposure. Perhaps most disturbing is that the calls are most frequently related to children younger than five years of age.[4]

The newest e-cigarettes allow modifications to the battery and other components that may change the composition of the original solution. Another disconcerting trend associated with safety is self-created nicotine solutions in the e-cigarette. Some poison control reports have shown the presence of date-rape drugs, heroin, or other toxic chemicals that have been inserted into these devices — affecting teens unknowingly.

We know: E-cigarettes have gained popularity with smokers because they look and feel like smoking a traditional cigarette. The appeal for the product is further amplified by the ability to use the products in environmental areas where smoking is prohibited.[5] Some proponents of the e-cigarette argue that this substitution or dual use results in the reduction of consumption of traditional cigarettes (harm reduction).

We don't know: It is unclear how many individuals are current dual users or the percentage of smokers who are using e-cigarettes as a cessation strategy. One study investigating this issue reported smokers' prevalence of established use at 4%.[6] The 2014 Surgeon General's report states the greater importance of duration of smoking (years) over intensity (number of cigarettes smoked per day) in the generation of negative health consequences.[3] Dual use of traditional cigarettes and e-cigarettes will have a much smaller benefit on survival compared to complete abstinence.

We know: Users identify themselves as "vapers" with a unique culture complete with designated marketing and an industry estimated to generate over $2 billion sales in the United States.[7] Many former "Big Tobacco" agencies are stakeholders in the e-cigarette industry. Targeted marketing to adolescents raises concerns of e-cigarette use as a gateway to traditional tobacco use, whereby adolescent e-cigarette users will switch to traditional cigarettes once addicted to nicotine. The increased use of e-cigarettes as the "renormalization" of smoking is also a major concern.[2]

We don't know: Long-term effects of e-cigarette use are unknown.[2] Longitudinal evidence about e-cigarette uptake by adolescents leading to traditional cigarette use is also not yet available. Furthermore, the complex interplay of marketing and public behavior to renormalize smoking in American society has yet to be elucidated.

In summary, what we do know about e-cigarettes is that there is much more to learn and study about e-cigarettes.

Research on e-cigarettes as a cessation aid

There is growing investigation on the use of e-cigarettes as a cessation method, but the evidence is not conclusive. A recent systematic review and meta-analysis on e-cigarettes and smoking cessation resulted in a review of only six studies that met criteria.[8] These six articles included two randomized controlled trials (RCTs), two cross-sectional studies, and two prospective cohort studies. One of the RCT studies by Bullen et al (2013) described abstinence rates in the nicotine e-cigarette (7.3%) group as greater than that of placebo e-cigarettes (4.1%) and nicotine patches (5.8%).[9] The other RCT, conducted by Caponnetto et al (2013), also found higher abstinence rates in the nicotine e-cigarette groups (11%) than placebo e-cigarette groups (4%).[10] Futhermore, the researchers found that dual users of tobacco and e-cigarettes who quit were more likely to relapse than those using e-cigarettes exclusively. According to the systematic review, initial research findings regarding nicotine e-cigarettes as a cessation aid are positive. However, the heterogeneity of studies, the lack of large-scale, randomized controlled trials, and an investigation of the safety of e-cigarette use are recommended to validate the findings.[8]

Evidence-based cessation methods

We do have research evidence to support the use of other cessation strategies. There is a growing body of research evidence regarding the use of FDA-approved pharmacotherapies for smoking cessation.[1] The pharmacotherapies combined with behavioral interventions like counseling have been demonstrated as most effective. More specifically, there are now more studies available that demonstrate the effectiveness of maintenance medications (patch, bupropion, varenicline), combined with quick-relief pharmacotherapy for cravings (gum, lozenge, inhaler, spray). Evidence also suggests that pharmacotherapy combined with behavioral interventions further increases cessation rates.[1,11,12] Tobacco users with chronic lung disease, like COPD, also benefit from pharmacologic aids and counseling interventions. Because of the increased severity of tobacco dependence in this population, more aggressive and intensive interventions are often necessary. The use of pharmacotherapy in COPD smokers is recommended to include nicotine replacement therapy, bupropion or varenicline, single or in combination, at standard doses or at high doses, and for a prolonged period of up to 12 months.[13]

Role of respiratory therapy

The role of the RT in these discussions is similar to the discussions we have about any other treatment. We should tell our patients that there is currently a lack of conclusive research evidence to recommend e-cigarettes for cessation and that we do not have evidence to support the safety of e-cigarette use. Moreover, our trusted professional agencies do not support e-cigarettes for smoking cessation at this time (e.g., AARC, American Lung Association, The American Thoracic Society). Tobacco dependence is a chronic disease; and just like other diseases, we need to have the breadth and rigor of research evidence to appropriately support any treatment strategy.

Discussions with patients who have "quit" by switching entirely from traditional tobacco products to e-cigarettes should focus on the plethora of safety issues and unknown consequences of long-term use. Abstinence from all forms of nicotine should be the goal. In addition, the e-cigarette user should understand that they are still addicted to nicotine and there are several associated health consequences (most notable, the numerous cardiovascular effects). As RTs, we should stress that nothing foreign should ever be inhaled into the lungs, especially for individuals impacted by lung disease. In the interest of lung health, we have a duty to inform the individual of the current scientific evidence and advise accordingly.

Discuss, instead, what we do know: that there are evidence-based strategies that work for assisting in cessation (counseling, pharmacotherapy). The safety of these evidence-based strategies has also been demonstrated. The nicotine inhaler, a recommended nicotine replacement product, also looks and acts much like a cigarette. Remind your patients that there is always more to the story. There are so many complicated factors that influence an individual's decision to quit smoking. Ask them next time you hear the story about the "friend" who quit by using the e-cigarette: "Was it the e-cigarette or was your friend just ready to quit and had the medications and social support to be successful this time?" Offer your support for their intended quit attempt, offer assistance, and refer them to a tobacco dependence treatment program and/or the national quit line. What else can you do? Get involved in other conversations about e-cigarettes with the providers and policymakers where you live. Want to know more? Read more about tobacco dependence treatment in the AARC's "Clinican's Guide to Treating Tobacco Dependence" that is available at www.aarc.org/education/online-courses/clinicians-guide-treating-tobacco-dependence/. ■

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Sleep in the ICU

by Karsten Roberts, MS, RCP, RRT-ACCS

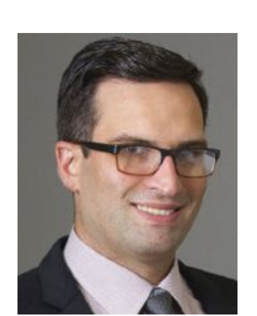
When respiratory therapists step into the ICU, the primary issues on their minds have to do with airway stabilization, secretion clearance, and management of mechanical ventilation. They bounce between intubations, extubations, and requests for PRN nebulizers. But how often do they consider the patients' need for sleep? RTs must be able to recognize the importance of quality sleep, how sleep affects weaning from ventilator dependence, optimal patient-ventilator interaction, decreased incidence of delirium, and overall health. Current literature states that poor sleep and delirium are common problems in the ICU.[1–4] Respiratory therapists must give thoughtful consideration to the difference between merely sedating patients versus allowing for quality sleep and what role RTs perform in advocating for our patients.

How sleep affects overall health

Quality of sleep, starting with the natural instinct to fall asleep, affects every organ system. Sleep is important in regulation of circadian rhythm, thermoregulation, and cardiopulmonary, gastrointestinal, and endocrine system health. Circadian rhythm is the body's natural sleep-wake cycle.[1] Once asleep, modulation of sleep cycles is driven by sleep homeostasis. Sleepiness leads to sleep onset in the evening, and eventually the sleep homeostasis drives the promotion of sleep.

In regards to thermoregulation, core temperature peaks late in the day.[1] Temperature decreases to the lowest points during the rapid-eye movement (REM) sleep cycle. Core temperatures then gradually increase to normal by morning. The cardiopulmonary effects of quality sleep include respirations changing through each cycle of sleep. Muscle relaxation leads to partial pressure of carbon dioxide (PCO_2) increases between 3–7 mmHg above baseline. Additionally, blood flow changes as cardiac output increases and blood pressure changes through non rapid-eye movement (NREM) and REM cycles.[1,5] Even gastric acid follows a circadian rhythm; as we sleep, esophageal tone decreases as rectal tone stays intact since over-all gastric motility also stays intact. Hormone levels play an important role in sleep/wake cycles as well.[1] Cortisol levels fluctuate throughout the day, decreasing in the evening and increasing in the early morning. Sleep is not only for wellbeing; it is essential to basic biologic function.[5]

about the author...



Karsten Roberts, MS, RCP, RRT-ACCS, is the clinical education coordinator for respiratory care services at Stanford Health Care in Stanford, CA.

Events in the ICU preventing quality sleep

Sleep in the ICU — especially for critically ill, mechanically ventilated patients — is irregular at best.[2,5] It is common for patients to report sleep disturbances long after discharge from the hospital. Sleep difficulties have been reported by patients in post-ICU stay interviews.[6] Patients report unpleasant memories associated with sleep disturbances during hospital stays and noise. In one study, an interviewee noted that, "[The ICU] was noisy, you're woken up all the time; and when you try to sleep or rest, there are all these alarms going off. And you're woken up regularly for care."[6] Noise, from ventilator alarms to staff conversations, is pervasive in ICUs.

Light can also be intrusive and interrupt sleep. To facilitate sleep in the ICU, it is important to keep day/night patterns consistent, allowing light in during daytime hours and blocking out light as much as possible at night. Procedures such as chest x-rays and physical examinations also interrupt sleep. For example, neurologic examinations often require lightened sedation and painful stimuli.

Current literature

It is important for clinicians to remember that similarities and differences exist between natural sleep and sedation. Sedation does not have the same function as natural sleep.[5] Instead of being cyclical, as in sleep, sedation is static and depends heavily on the type of medication being delivered and at what dose. Similarly, some medications may be helpful to overall sleep, whereas there are still questions as to what adverse outcomes may exist when sleep is not of good quality. When comparing electroencephalograms (EEGs) of natural sleep to sedation, there are marked differences. EEGs in the critically ill patient will follow the same pattern as the medication being delivered, as opposed to the cyclical nature of sleep. Additionally, polysomnographic tracings from a critically ill patient are likely to show fragmented sleep patterns as compared to healthy individuals.[5]

The differences between sleep and sedation are highlighted in current literature. Weinhouse and Watson, for example, focus on comparing commonly used sedatives. Examples of medications that interfere with gamma-aminobutyric acid (GABA) receptors include first-line sedation, often benzodiazepines and propofol. These drugs work to enhance central nervous system depression. They are both hypnotic and sedative. Some research shows that propofol, in particular, does not interfere with natural sleep patterns.[5] Other medications, such as dexmedetomidine hydrochloride, which binds to alpha-2 receptors, are also commonly used in the United States. This is likely due to the fact that it more closely resembles natural sleep.[5] Since conventional medications such as propofol and dexmedetomidine hydrochloride are often associated with delirium and respiratory depression, antipsychotics can be used for their sedative effects. Commonly used medications include haloperidol.[2,5]

Opioids may also be used in combination with sedatives. This is an especially important consideration for patients experiencing post-traumatic or post-operative pain, which often leads to sleep disturbances in the ICU.[5] Patients randomized to fentanyl versus bupivacaine delivered via epidural drip reported no statistically significant differences in sleep quality.[7] Melatonin has also been researched as an alternative to "traditional" ICU sedatives.[3]

Psychological risk factors common to ICU stays and critical illness include post-traumatic stress, anxiety, depression, and delirium — all of which could be attributed to the lack of quality sleep and the overuse of sedative medications.[6] The onset of delirium can lead to increased mortality, longer hospital stays, higher cost of care, and greater risk of subsequent cognitive impairment and institutionalization.[2] A common thread, found by Chahraoui et al, is that many patients (after leaving the ICU) reported a lack of memory or "lack of factual memories" in interviews done after leaving the hospital.[6] This, the authors posit, could "be ascribed to the various medications used in the ICU, particularly sedatives and/or pain killers used to keep patients as calm and comfortable as possible when receiving mechanical ventilation."[6]

The role of respiratory therapists

Perhaps the most important intervention respiratory therapists can provide is proactive weaning from mechanical ventilation. Delirium is listed among other ventilator-associated complications, and spontaneous awake trials paired with spontaneous breathing trials decrease such complications.[8] Along with weaning from mechanical ventilation, RTs can advocate for the use of "sleep-friendly sedation protocols." The benefit of such protocols is that they are patient focused and based on individual needs like anxiety, depression, and pain.[8]

When it comes to providing good, quality sleep for patients, clinicians are encouraged to first focus on the environment. Unit-based practice may help drive improvement in the quality of sleep patients achieve. Practices such as quiet time protocols utilize Circadian rhythms to determine the best time of day to schedule diagnostic procedures such as chest x-rays and CT scans.[9] Such protocols could help avoid unnecessary interruptions in sleep. RTs must work together with other health care professionals to help provide a quiet environment free from disruptive conversations and nuisance alarms for patients to sleep. This can easily be accomplished by limiting the number of patient-care interventions during hours when natural sleep occurs.[9] Finally, RTs can collaborate with other health care professionals to provide the right medication, for the right patient, delivered at the right time. ■

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It's How You Say It

by Anthony L. DeWitt, JD, RRT, FAARC

When I was a recruit in the Army, we had a drill sergeant whom we all believed was meaner than a sack of rattlesnakes. He was known for dispensing justice without mercy. There was a story that the drill sergeant was called upon to break the news of a mother's death to one of his recruits. The captain told the sergeant to "do it gently." So the drill sergeant called his men together and said "OK, all you men who have a living mother, take one step forward.... Not so fast Jones!"

Unfortunately, clinicians (most often physicians, but nurses and therapists too) wind up delivering much the same message to their patients when they field questions from worried patients and loved ones.

Everyone has heard the aphorism that "it's not what you said, it's how you said it." Our voices and our inflections put meaning into words that would not be there otherwise. When the wise-cracking street criminal on television tells the police officer to "be careful going home, it's dangerous out there," it isn't the text of the message that gives us concern for the officer's safety, it's the way the character says the line.

As clinicians, we develop our own language. We talk in terms of centimeters of PEEP, ABGs, and a dozen other acronyms. We talk about the patient in Room 319, bed B, as a single identifier: 319B. As in "319B needs a treatment." All of this is routine shorthand to us, but it comes across as something different to patients. It comes across as callous. No one wants to be a number. When patients feel that way, they often go see a lawyer if anything goes wrong.

about the author...

Anthony L. DeWitt, JD, RRT, FAARC, is an attorney and a partner in the firm Bartimus, Frickleton, Robertson & Goza, 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.

Choose your words

Several weeks ago, I was chatting with a pediatrician who was discussing a patient with me in the context of legal advice:

Doc: "...and so she said that she was worried about meningitis."
Me: "...and what did you say?"
Doc: "I told her I wasn't worried about that."

This is a communication that illustrates how our beliefs about medicine and patient care sometimes crowd out our better judgment in terms of how we talk to patients.

When you tell a patient "I'm not worried about that," you probably believe you're being compassionate and helpful. You probably believe you're telling them the problem is not important, but the choice of words is all wrong. Instead of "I'm not worried about that," the physician should have said "Let me explain to you why you shouldn't worry about that." This is because what the patient thinks when she hears "I'm not worried about that" is "this doctor doesn't care about me." When something later goes wrong, that patient's grief and guilt will recall that conversation and conclude that the doctor was asleep at the switch. Instead of repeating what the doctor said, the statement will come out like, "That doctor said she didn't care about my baby!"

Sometimes in health care our processes make us look as though we put profit over patients. No patient gets admitted that someone doesn't do the admission paperwork and ask the questions about how the hospital will be paid. Depending on how that interaction goes, the patient can leave with the understanding that they amount to no more than a piece of the hospital's giant revenue stream.

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What you say matters. How you say it matters more. There should never be an interaction with the patient that leaves that patient feeling like you don't care about their best interests. This is what prevents lawsuits.

patient you work on. Greeting the patient by the name they prefer ("Do you want to be called Jake or Mr. Jones?") is a good first step. Asking how the patient has been feeling is a second. Touching the patient on the arm or shoulder, making good eye contact, being more concerned with listening than performing the tasks ordered, and offering words of encouragement to the patient round out an approach to patient care that lets the patient know you have compassion, they are important to you, and you are interested in their care.

Sometimes our work puts us in conflict with other clinicians, particularly physicians. We may know better than the doctor who ordered the test what the flow-volume loop means, and we might have a better handle on the blood gas results than the resident physician. However, hospital policies usually forbid sharing that knowledge.

What do we do when the patient says, "tell me what the test results are." We routinely tell the patient that we cannot provide that information and that it needs to come through the doctor. How we do it, however, is important. The explanation is sometimes a terse "you'll have to ask your doctor about that." Worse still, I've heard nurses ask "why do you need to know that?" or "you let the doctor worry about that." While these statements have the benefit of being succinct, they also sound like you don't care a bit about the patient, who is there, in the hospital, alone and feeling vulnerable. A better answer is "Madam, your doctor knows your complete health history and has done an examination on you. He is the one who can interpret these results and put them in context. I wish I could help you with this, but we want you to get the right information the first time."

What you say matters. How you say it matters more. There should never be an interaction with the patient that leaves that patient feeling like you don't care about their best interests. This is what prevents lawsuits.

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Time and time again I counsel doctors, nurses, and therapists that the best insurance you cannot buy comes from forming a strong bond with your patient. People do not sue people they like. Forming that bond starts with good communication and using the right words to provide information. ■

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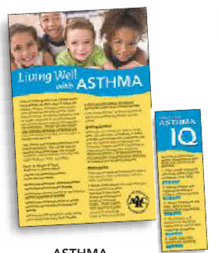
ALLERGIES
Tip sheet: BR0007N



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Bookmark IQ Card: PE0007

SMOKING AVOIDANCE
Tip sheet: BR0014N

SMOKING CESSATION
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SECONDHAND SMOKE
Tip sheet: BR0008N
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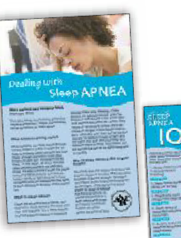

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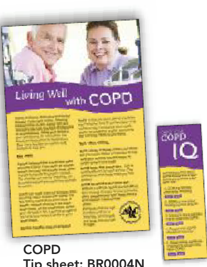

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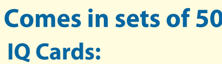
Bookmark IQ Card: PE0006

PEDIATRIC LUNG HEALTH
Tip sheet: BR0006N



Comes in sets of 50

IQ Cards:
MEMBER PRICE: $7.50
Nonmember Price: $11.50

Tip Sheets:
MEMBER PRICE: $8.50
Nonmember Price: $12.00

Visit c.aarc.org/go/healthtips

AARC Election 2016

All Active and Life members of the American Association for Respiratory Care will soon vote for the candidates running for 2016 officer and director positions in the AARC leadership on an online secure website.

As an AARC member, you 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*. A biographical sketch about each candidate and their answers to questions posed by the AARC Elections Committee will be available for your review beginning Aug. 12, 2015. The actual voting site will not be activated until Sept. 1, 2015, and voting will continue through Sept. 30, 2015. Be looking for an AARC email with the link and instructions; you can vote only upon receipt of the email. Only Active and Life members of each specialty section may vote for the chair of their respective sections.

Members of record as of Aug. 24, 2015, will be eligible to vote. An email will be generated with your unique link to your ballot, and you will vote directly from that link.

Your thoughtful consideration of this information before voting will help ensure the most qualified people are chosen to lead your professional association. ■

President-Elect

Sheri Tooley, BSRT, RRT-NPS, CPFT, AE-C, FAARC
Supervisor, Respiratory Care Education
Rochester General Hospital
Adams Center, NY

Brian Walsh, MBA, RRT-NPS, RRT-ACCS, AE-C, RPFT, FAARC
Clinical Research Coordinator
Boston Children's Hospital
Boston, MA

Information on all AARC election candidates will be available for your review beginning Aug. 12. Voting will run Sept.1-30, 2015.

Home Care Section Chair-Elect

Zachary Gantt, RRT
CEO, President
AireMed Travelox
Livingston, TN

Debra Schuessler, CRT
Director of Respiratory Care
Via Christi Home Medical
Wichita, KS

Sleep Section Chair-Elect

Marilyn Barclay, BS, RRT, CPFT
Manager of Cardiopulmonary and Neurodiagnostic Services
Samaritan Albany General Hospital
Albany, OR

Jessica Schweller, MS, RRT, RN, CNP
Sleep Nurse Practitioner
The Ohio State University Lung and Sleep Center
Columbus, OH

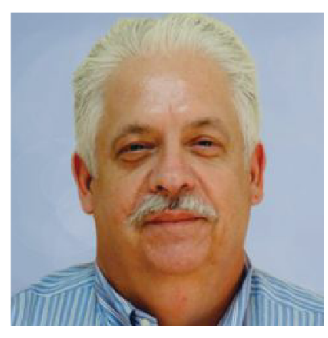
Neonatal/Pediatrics Section Chair-Elect

Bradley Kuch, RRT-NPS, FAARC
Director, Respiratory Care Services and Transport
Children's Hospital of Pittsburgh of UPMC
Lawrenceville, PA

Steve Sittig, RRT-NPS, C-NPT, FAARC
Neonatal/Pediatric Transport Clinical Specialist
Sanford Health
Sioux Falls, SD

Director-at-Large

Carl Hinkson, MS, RRT-ACCS, NPS, FAARC
Assistant Manager
Harborview Medical Center
Seattle, WA



John Lindsey, MEd, RRT-NPS, FAARC
Director, Respiratory Care Services/
NeuroDiagnostics/Sleep Lab
CHI St. Vincent-Hot Springs
Hot Springs, AR

Thomas Malinowski, MSc, RRT, FAARC
Director, Pulmonary Diagnostics and
Respiratory Therapy Services
University of Virginia Health System
Charlottesville, VA

Doug McIntyre, MS, RRT, FAARC
President
Durable Medical Supply
Destrehan, LA

Raymond Pisani, BS, RRT-NPS
Director, Cardiopulmonary Services
Teche Regional Medical Center
Morgan City, LA

Debra Skees, MBA, RRT, CPFT
Manager
Mercy Hospital–Allina Hospitals and Clinics
Coon Rapids, MN

Pattie Stefans, BS, RRT
Director of Cardiopulmonary Services
Community Hospital of Anaconda
Anaconda, MT

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

Cast Your Vote Online for the

27th Annual AARC Zenith Awards

The AARC awarded the 2014 Zenith Award to: ResMed, Covidien, Masimo Corporation, Teleflex Medical, CareFusion, and Draeger Medical Inc.

Each year the AARC presents the Zenith award to the top corporations in the respiratory care industry during our annual International Respiratory Convention & Exhibition. Considered the "people's choice" award of the respiratory care profession, they are highly prized by the recipients, who proudly display them on their websites, in their Exhibit Hall booths, and in the lobbies of their corporate headquarters.

Now it is up to *you* to choose the recipients for 2015. This is your opportunity to say "thank you" to your favorite industry team members… the companies that research and develop new products and enhancements to make life better for patients, whose representatives are just a phone call or email away when you need help, who stand behind their products — and their promises.

The AARC will present the 2015 Zenith Awards to executives representing the winning companies when the Association convenes AARC Congress 2015 in Tampa, FL, on Saturday, Nov. 7. Your vote could place your favorite company in the spotlight during this year's Awards Ceremony. Now, that's a great way to show them your appreciation for making your job easier.

Consider these voting criteria

When making your choice, evaluate the manufacturers, service organizations, and supply companies that have done the most outstanding job for you over the past year according to these criteria:

- Quality of equipment and/or supplies
- Accessibility and helpfulness of sales personnel
- Responsiveness
- Service record
- Truth in advertising
- Support of the respiratory care profession.

The Zenith Award voting will be online where you will see the list of companies serving the respiratory care markets. You may vote for up to 10 companies by filling out the online ballot. Online voting will end on August 30. ■

Watch for an announcement on www.AARC.org on July 31 regarding how members can vote online for the 2015 Zenith Award.

These Top Companies Received the 26th Annual Zenith Award

In last year's Zenith Award competition, we honored the following companies for reaching the pinnacle of excellence in service and support for the respiratory care profession: ResMed, Covidien, Masimo Corporation, Teleflex Medical, CareFusion, and Draeger Medical Inc.

Get involved in choosing the recipients of this year's award by voting online. ■

RESPIRATORY CARE
CHANGING THE
WORLD
ONE **BREATH** AT A TIME

RC Week is Oct 25-31

2015 RC WEEK PRODUCTS NOW AVAILABLE

Plan ahead to celebrate, educate and promote respiratory health.

Visit AARC's RC Week
Online store for all your
RC Week themed gifts,
kits and promotional items.

Order Products Online:
c.aarc.org/go/rcstore

TAMPA BAY INSIDER

From top: Tonia Knight and her husband Merle Donaldson (in the foreground) enjoy a day at the beach with friends from Germany, Renate and Reini Hoffman. Below is Winter, the star of "Dolphin Tale," at home at the Clearwater Marine Aquarium.

Photo Credit: Photos for this article were graciously provided by AARC member Tonia Knight, BSRT, RRT, respiratory care manager at ALMA Medical Services in Saint Petersburg, FL.

About the Author
AARC member Carol Proctor, RRT, RPFT, is a pulmonary rehabilitation respiratory therapist for Baycare Healthcare at their Morton Plant campus in Clearwater, FL.

The AARC is excited to bring Congress 2015 — the Association's 61st International Respiratory Convention & Exhibition — to beautiful Tampa, FL, Nov. 7–10 (Saturday–Tuesday). Plan to come early or stay late to enjoy all the great things the city and surrounding areas have to offer during the AARC's annual meeting this year. In addition to all the great places to go that are close to the Tampa Convention Center, where you can easily walk to a wonderful chef-inspired bistro on the waterfront, you may want to explore further. In this issue, AARC member Carol Proctor, RRT, RPFT, and colleagues highlight their favorite places in the Tampa Bay area.

Across the Bay: Clearwater to Tarpon Springs

by Carol Proctor, RRT, RPFT

As you come across Tampa Bay into Pinellas County, you will discover another world. With beaches named the best in the country, as well as state and local parks from Sand Key to the Indian Mounds in Philippe Park in Safety Harbor, you'll find a wealth of places around Tampa to enjoy the great outdoors — and some really great food, too.

Fun things to do in nearby Clearwater

Take some time to go to Clearwater Beach, and you can catch a luncheon cruise or a pirate ship and enjoy free events at Pier 60 (www.sunsetsatpier60.com/). You can also rent gear and fish off the pier. Across the street from the pier is the harbor. StarLite Cruises (www.StarLiteCruises.com) has sightseeing-only or trips offering full dinner service, as well as dolphin cruises. Want to play a pirate game? Contact Captain Memo at www.captainmemo.com.

If you would like to visit a real rescue, recovery, and release aquarium, head over to the Clearwater Marine Aquarium on Island Estates, directly east of the beach. This is where they filmed the "Dolphin Tale" and "Dolphin Tale 2" movies featuring Winter — the dolphin rescued, rehabilitated, and fitted with a prosthetic tail. Winter still resides at the aquarium, and they conduct public educational sessions about her prosthetic tail. You can also take the trolley or the boat over to their second facility in downtown Clearwater, where you'll find movie props and information. This is not a fancy aquarium where you watch fish in tanks; rather, you get to see how wildlife is treated and rehabilitated. I like the fact that proceeds from ticket and souvenir sales support the good work of this rescue organization. 249 Windward Passage, Clearwater, FL (727) 441-1790 (www.seewinter.com/visit-us).

While in Clearwater, you can also fly a jet or helicopter without leaving the ground. SimCenter has flight simulators that are used by professional pilots to refine their skills, but you don't need to be a pilot to enjoy this attraction. (727) 643-1781 (www.simcentertampabay.com)

Carol Proctor's advice to Congress attendees: cross the bridge into Pinellas County for a look into another world.

Getting around in the area is easy, with or without a car. Grab the Jolley Trolley along Clearwater Beach to Dunedin, Palm Harbor, and Tarpon Springs, or transfer at Dunedin to Safety Harbor or Countryside Mall. The beach route runs from 10 a.m. to 10 p.m. Sunday–Thursday and from 10 a.m. to midnight Friday–Saturday. www.clearwaterjolleytrolley.com

Grab a bite

Hungry? Frenchy's has several locations, from the small original site next to its gift shop on North Clearwater Beach to three restaurants located further south. They all have a casual, old-time beach feel with outdoor seating. I like the original at 41 Baymont St., Clearwater Beach, (727) 446-3607, or Frenchy's Salt Water Café, 419 Poinsettia Ave, Clearwater Beach, (727) 461-6295. www.Frenchysonline.com

Clear Sky Café is on the gulf side, and no one I know has ever been disappointed in any of the selections. 490 Mandalay Ave., Clearwater Beach, (727) 442-3684. www.clearskycafe.com

Bob Heilman's Beachcomber has been a local favorite since 1948 and is perfect for celebrations. More upscale, it features classic American cuisine. 447 Mandalay Ave., North Clearwater Beach, (727) 442-4144, www.heilmansbeachcomber.com/

For Spanish food, I would suggest the Columbia on the bayside of Sand Key. The 1905 salad with a bowl of Spanish bean soup makes for a substantial lunch. In fact, Columbia was listed in *USA Today* as "One of 10 Great Places to Make a Meal Out of a Salad." Want more? The beef Boliche "Criollo" stuffed with chorizo, served with plantains, accompanied by sangria and finished with flan, is my favorite. I start by splitting a salad with my dining companion. I know others have also enjoyed the fish and chicken dishes. 1241 Gulf Blvd., Clearwater, (727) 596-8400, www.columbiarestaurant.com/

Another old-time beach restaurant favorite is Keegan's on Indian Rocks Beach. Everyone seems to love the seafood bisque. 1519 Gulf Blvd., Indian Rocks Beach, (727) 596-2477, www.keegansseafood.com/

My absolute favorite restaurant is Café de Paris, also on Indian Rocks Beach. Xavier De Marchi is from France; and the quiches, pastries, and crepes are all recommended. Favorites include the spinach or mushroom quiche, savory crepes stuffed with pate or cheese, the almond croissant (not too sweet), and the tart citroen. The Sicilian loaf or a baguette is a great start for a picnic basket. 2300 Gulf Blvd., Indian Rocks Beach, (727) 593-0277, www.cafedeparisbakery.com/

In Dunedin or Palm Harbor, stop for homemade ice cream at Strachan's Homemade Ice Cream — on Alternate 19 and Main St. in Dunedin and Alternate 19 in Palm Harbor (look for the wooden cows in front of the store). www.strachansdesserts.com

The Dunedin store begins a street full of blocks and blocks of lovely shops and small restaurants. If you like microbreweries, Dunedin has several that are considered excellent. The Chamber of Commerce is across the street from Strachan's and has a lot more information on local establishments.

Also in Dunedin, approximately one block north on the west side of Alternate 19 is a very simple seafood restaurant called Sam's Fresh Seafood. The po boys with cole slaw are very good. They are closed on Sundays and Mondays. 900 Broadway, Dunedin, (727) 736-1179, www.samsfreshseafood.com/

If you are traveling by car, another traditional stop is J.J. Gandy's Pies. This is still on Alternate 19. Gandy's is famous for its pies, especially its key lime pie. They also carry cookies, brownies, breads, cheese balls, and pot pies. They've been around for over 30 years, and they have at least that many types of pies. 3725 Palm Harbor Blvd., Palm Harbor, (727) 938-7437.

Tarpon Springs is a Greek village noted for hosting a huge Epiphany celebration every Jan. 6. It has many authentic Greek restaurants and wonderful bakeries. Dodecanese Blvd., home of the world-famous sponge docks, is the center of many shops and restaurants. Mamma's, Costa's, and Hellas are just a few I'd recommend. The horiatiki or village salad, gyro, and souvlaki are all good menu choices. Do note, however, that service can range from excellent to virtually non-existent, even at the same restaurant, depending on the crowds and the server's mood. Menus are posted outside the restaurants.

No matter where you have lunch, head to Hellas Bakery for dessert. Baklava is probably the most popular choice, but the cream-filled galaktoboureko is a special treat. You can visit the sponge exchange, the Train Depot Museum, and historic St. Nicholas Cathedral while you're there. Boat rides are also available. www.visitgreeceinflorida.com

Getting back

From Tarpon, you can take the trolley back into town — or perhaps you would like to exercise off some of that food instead. The Pinellas Trail runs from Tarpon Springs to St. Petersburg, and there is also an east/west oriented trail, as well as a trail from downtown Clearwater to the beaches.

Three bridges form a triangle from Clearwater to Clearwater Beach, Clearwater Beach to Sand Key, and Belleair Beach to Belleair Bluffs. The triangle is approximately a half marathon and includes designated bike lanes as well as lanes for pedestrians. The bridges are a welcome relief from the flatness of the surrounding area. This corridor is ideal for walking, jogging, skating, or biking. www.pinellascounty.org/trailgd/

- For additional information on the Clearwater area visit: www.clearwaterflorida.org
- For Dunedin: www.dunedin-fl.com
- For Tarpon Springs: www.tarponspringschamber.com

More To Come Soon! This edition of "Tampa Insider" is just the first of three articles.

Next month we'll take a closer look at wildlife venues in and around the city; and then in the October issue, we're planning a grand finale detailing some of the wonderful things to see and do in Tampa itself. It's all being brought to you by people who know the area from the inside out — members of the Florida Society for Respiratory Care. ■

Tonia Knight and husband Merle Donaldson give Pier 60 a big "thumbs up."

Take Your Pick: It All Waits for You in Tampa

Tampa Improv

Hyde Park Village

Legoland

Busch Gardens and Zoo

Florida Aquarium

Lowry Park Zoo

Datz Dough

Wrights Gourmet Café

Ulele on the Riverwalk

Roux

AARC Congress 2015

The 61st International Respiratory Convention & Exhibition

Advance Program

Tampa Convention Center • Tampa, Florida USA
November 7 – 10, 2015 • AARC.org

Welcome To

AARC Congress 2015…

"Everyone here has the sense that right now is one of those moments when we are influencing the future." — Steve Jobs

In 1955 the first ever annual meeting of the American Association for Inhalation Therapy was held in Chicago, IL. Attendance for this historic event numbered fewer than 30 oxygen orderlies who descended upon Hotel St. Clair with a vision of a bright future.

Sixty one years later, our profession has evolved from one of oxygen tanks and medical gases to one of scientific inquiry, research and technological advancements. Just as in 1955, so too do we have an opportunity to influence the future of our profession at AARC Congress 2015.

The world of healthcare delivery is changing all around us. While the roots of our profession will forever be emblazoned into our DNA, we too must look to for new ways to add meaningful benefit to our patients, from disease educators and case managers to clinical consultants and physician extenders.

Your attendance could not be more important to the future of our profession. It starts right here – right now…at AARC Congress 2015.

Unless specified differently, all Congress events will be held at the Tampa Bay Resort and Convention Center.

The 61st International Respiratory Convention & Exhibition

AARC Congress 2015

On behalf of AARC President Frank Salvatore and the Board of Directors, we invite you to attend the largest respiratory care meeting in the world. At AARC Congress 2015 in Tampa, the AARC Specialty Sections and the Program Committee have developed a curriculum that will offer more of everything that matters to you and your patients. You may attend other educational meetings, but none of them offer you all of the following…

- The latest information on the Readmission Reduction Program, Value Based Purchasing and its impact on hospitals, patients and the respiratory therapist.

- The AARC Exhibit Hall where you can learn, see and touch the latest advancements in technology showcasing all manufacturers in the industry…more than 200 exhibitors in total and 8 hours of unopposed exhibit time.

- The result of original research presented by your peers in 12 OPEN FORUMS over the 3 1/2 days.

- All the continuing education credit (CRCE) you need to maintain your state license.

- Programs in all areas of respiratory care: adult critical care, neonatal and pediatric care, home care, continuing care, rehabilitation, diagnostics, transport, management, education, sleep, and long-term care, all presenting the most current and cutting-edge information.

Read through this program and very rapidly you will realize why you must come to Tampa and be part of the largest and most comprehensive respiratory care meeting anywhere in the world…AARC Congress 2015.

See you there!

300+ original research projects

140+ speakers

238+ sessions on current respiratory care topics

3½ days of networking and education

3 days of exhibits with all companies in the industry

21+ CRCE credits

So register now and connect to the professional event where everything is about quality respiratory care.

PROGRAM COMMITTEE

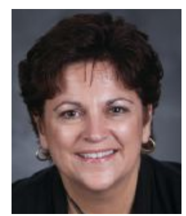
Ira M Cheifetz MD FAARC - *Chair*
Bill Galvin MSEd RRT CPFT AE-C FAARC
Garry Kauffman MPA FACHE RRT FAARC
Keith Lamb RRT-ACCS
Thomas Lamphere RRT FAARC
Karen Schell DHSc RRT-NPS RRT-SDS RPFT AE-C CTTS
Kent Christopher MD RRT FAARC
Dean R Hess PhD RRT FAARC – *Consultant*
Douglas Laher MBA RRT – *Staff Liaison*

Pre Course:
Management of Chronic Hypoxemia Across the Continuum of Care

Friday, November 6, 2015 • Tampa, FL

Thomas J Kallstrom MBA RRT FAARC

Patrick J Dunne MEd RRT FAARC


Kimberly S Wiles RRT CPFT

Approved for 5.64 hours of continuing education credits (CRCE). You must attend the entire course to receive CRCE credit; no partial credit will be awarded.

OBJECTIVES: Acute care hospitals can no longer work in a vacuum. Health care reform, including the Affordable Care Act, now requires hospitals, post-acute care providers and outpatient facilities (home care, pulmonary rehabilitation, medical offices, durable medical equipment providers and home health agencies) to work together for the betterment of patient care. This course will address the scientific foundation and management of chronic hypoxemia and will allow RTs to:

1. Describe the different categories, strengths and limitations of oxygen delivery systems
2. Implement a patient-centric, collaborative care model to enhance RT management and monitoring of chronic hypoxemia
3. Demonstrate ability to collaborate, communicate and coordinate with RTs in these different care settings to maximize clinical and financial outcomes in the management of chronic hypoxemia.

Attend this course to gain a better understanding of the challenges in managing the chronically hypoxic pulmonary patient and in managing that patient across the continuum with other care providers.

Kent Christopher MD RRT/*Co-Presiding*
Patrick J Dunne MEd RRT FAARC/*Co-Presiding*

8:00 am – 8:10 am

Respiratory Care from Hospital to Home: The AARC Comprehensive Post-Acute Care Education Program

Thomas J Kallstrom MBA RRT FAARC, Irving TX
Welcoming remarks.

8:15 am – 8:50 am

Changing U.S. Health Care Delivery: Teamwork by Different RTs in Different Care Settings

Patrick J Dunne MEd RRT FAARC
The U.S. health care delivery system is changing rapidly, and the RT profession needs to advance its approach to patients presenting with chronic respiratory conditions. Integrated patient-centric respiratory disease management should span all health settings from hospital to home. This presentation will outline opportunities for RTs to collectively and collaboratively improve care of chronic hypoxemia in concert with the newly evolving U.S. health care environment.

8:55 am – 9:30 am

Core Competencies Required To Position Home Oxygen Therapy for Success

Kimberly S Wiles RRT CPFT, Ford City PA

The AARC has been evaluating core competencies required for RTs to evaluate the post-acute care respiratory needs of patients as well as those requirements for oversight of self-care in the home. This presentation will address core competencies identified to position home oxygen therapy for success.

9:35 am – 10:10 am

Scientific Foundation for Treating Chronic Hypoxemia: Milestones, Marginal Data and Missing Pieces

Brian W Carlin MD FAARC, Pittsburgh PA

RTs caring for patients with chronic hypoxemia in any care setting must have current understanding of the scientific foundations for that management. Scientific fact must be distinguished from fiction, and what is completely unknown should be recognized as such.

10:15 am – 10:50 am

Understanding Oxygen Delivery Systems for the Home

Robert McCoy RRT, Apple Valley MN

There are a variety of delivery systems intended for home oxygen therapy. There are also numerous commercially available models within each equipment category. Performance characteristics vary among devices. In fact, if delivery is by intermittent flow, one oxygen system may perform differently on two individual patients. An approach for selecting the clinically appropriate delivery system to meet specific patient needs will be discussed.

Brian W Carlin MD FAARC

Robert McCoy RRT

10:50 am – 11:05 am
Break

11:05 am – 11:40 am
Collaborative Care in Disease Management: Engaging Patients with Chronic Hypoxemia and Meeting Patient Needs

Kent Christopher MD RRT, Denver CO
Jon Tiger, Wichita, KS

Optimization of management of chronic hypoxemia can be achieved through a patient collaborative care model. RTs across the continuum must be empowered to engage, assess, educate, instruct, and monitor patient self-management. Effective team communication is essential. The "art" of engaging patients throughout evolving emotional, psychological and physical needs will be presented. First-hand experience of a patient requiring continuous home oxygen for over 20 years should offer insight. An RT-monitored patient self-management model for hypoxemia similar to the diabetes model will be presented.

11:45 am – 12:20 pm
The Transition Home: Pensive Planning, Communication and Follow-through

Brian W Carlin MD FAARC
Kimberly S Wiles RRT CPFT

This presentation will discuss transition to the home for patients requiring supplemental oxygen as an integrated, well-planned process with communication between inpatient RTs and RTs involved in the post-discharge care.

12:20 pm – 1:45 pm
Lunch (on your own)

1:45 pm – 3:00 pm
Two Rotating Groups

The audience will be broken up into two groups. The two rotating sessions offer individual attendees a blend of a balanced perspective through hands-on use of devices in different categories and presentation of cases to enhance clinical assessment and decision-making skills.

1:45 pm – 2:20 pm
Group 1 – Hands-on Practical Session: Home Oxygen Devices

Kimberly S Wiles RRT CPFT

Robert McCoy RRT, Apple Valley MN

2:25 pm – 3:00 pm
Group 2 – Case Presentations: What Would You Do?

Brian W Carlin MD FAARC

Kent Christopher MD RRT

Patrick J Dunne MEd RRT FAARC

Kent Christopher MD RRT

Brian W Carlin MD FAARC

Kimberly S Wiles RRT CPFT

3:05 pm – 3:40 pm

Panel Discussion: Overcoming Obstacles to a "Continuum" Team Approach

Moderator: Patrick J Dunne MEd RRT FAARC

Panel:

Brian W Carlin MD FAARC

Kimberly S Wiles RRT CPFT

Robert McCoy RRT

Jon Tiger

The panel will address questions and offer suggestions for RTs in different care areas to facilitate a collaborative team approach. Medicare regulations and reimbursement issues will also be addressed.

3:45 pm – 4:00 pm

Closing Comments and Future Directions

Kent Christopher MD RRT

Patrick J Dunne MEd RRT FAARC

Patrick J Dunne MEd RRT FAARC

Robert McCoy RRT

Pre Course:
Adult and Pediatric Mechanical Ventilation

Friday, November 6, 2015 • Tampa, FL

Approved for 6.75 hours of continuing education credits (CRCE). You must attend the entire course to receive CRCE credit; no partial credit will be awarded.

OBJECTIVES: Although adult and pediatric mechanical ventilation are often discussed in separate arenas, there is much knowledge and experience to be shared between these populations. This course will provide an opportunity for adult and pediatric practitioners to learn from each other in the morning session, while focusing on more refined aspects during separate tracks in the afternoon. Experts in the field of mechanical ventilation will address the following objectives:

1. Review various strategies to optimize lung protective ventilation.
2. Discuss approaches to optimize lung recruitment.
3. Explore the concept of patient-ventilator synchrony and strategies to reduce dyssynchrony.

Ira M Cheifetz MD FCCM FAARC/*Presiding*

Neil R MacIntyre MD FAARC

Richard H Kallet MS RRT FAARC

Dean R Hess PhD RRT FAARC

8:00 am – 8:45 am
Lung Protective Ventilation

Neil R MacIntyre MD FAARC, Durham NC
What is lung protective ventilation? What is the experimental and clinical evidence supporting this approach? This presentation will review the available data and propose strategies to optimize lung protective ventilation.

8:50 am – 9:35 am
Is 6 mL/kg Tidal Volume Appropriate for All Patients?

Richard H Kallet MS RRT FAARC, San Francisco CA
It is widely accepted that a tidal volume of 6 mL/kg should be used for all ARDS patients. What about patients who do not have acute lung injury? Can higher tidal volumes be used if the plateau pressure is maintained less than 30 cm H_2O? Does the mode of ventilation matter? What about the pediatric patient? These questions and more will be addressed.

9:40 am – 10:25 am
PEEP/Recruitment Maneuvers

Dean R Hess PhD RRT FAARC, Boston MA
There should be no argument that PEEP is an important part of lung protective ventilation. But how does one select an appropriate level of PEEP? What is the evidence? When and how should recruitment maneuvers be used? Are strategies for adult and pediatric patients similar? This presentation will address these questions and more based on the medical literature.

10:25 am – 10:40 am
Break

10:40 am – 11:25 am
Adjunct Approaches to ARDS

Keith D Lamb RRT-ACCS, Des Moines IA
Various ventilator and non-ventilator strategies are used by some clinicians for ARDS — particularly in the setting of refractory hypoxemia. What are the roles, if any, for APRV, HFOV, prone position, and inhaled vasodilators? This presentation will attempt to address the question of whether adjunct therapies improve outcome for ARDS.

11:30 am – 12:00 noon
Panel Discussion

Moderator: Ira M Cheifetz MD FCCM FAARC, Durham NC

Dean R Hess PhD RRT FAARC, Boston MA

Keith D Lamb RRT-ACCS, Des Moines IA

Neil R MacIntyre MD FAARC, Durham NC

Richard H Kallet MS RRT FAARC, San Francisco CA

12:00 noon – 1:15 pm
Lunch (on your own)

Adult Track

1:15 pm – 2:00 pm
Noninvasive Ventilation

Dean R Hess PhD RRT FAARC
Noninvasive ventilation has become a standard approach when attempting to avoid intubation and escalation of care in acute respiratory failure. It has also proven successful in the support of chronic respiratory insufficiency, such as obstructive apnea and nocturnal hypoventilation. This presentation will cover the latest evidence pertaining to noninvasive ventilation as well as circumstances where it may be efficacious in other patient populations.

2:05 pm – 2:50 pm
Patient-ventilator Synchrony

Keith D Lamb RRT-ACCS
Patient-ventilator asynchrony can cause increase in anxiety, sedation, wasted energy, and ventilator time. This presentation will describe the different causes of asynchrony and how the bedside clinician can identify them and address the patients' needs and correct them.

2:50 pm – 3:05 pm
Break

3:05 pm – 3:50 pm
Cardiorespiratory Interactions

Dean R Hess PhD RRT FAARC
The heart and lungs work in tandem. When one element isn't functioning properly, the other one is negatively affected. At times, this is subtle and others times it manifests as severe failure. This presentation will examine the relationship between the cardiac and respiratory systems and how one can manage the patient in order to minimize these negative influences.

3:55 pm – 4:40 pm
Liberation from Mechanical Ventilation

Neil R MacIntyre MD FAARC
Liberation from the ventilator starts as soon as the patient is intubated and is inarguably the most important element of routine ventilator management. This presentation will discuss what we already know about liberation from mechanical ventilation and explore what the future may hold.

Keith D Lamb RRT-ACCS

Ira M Cheifetz MD FCCM FAARC

Dean R Hess PhD RRT FAARC

Neil R MacIntyre MD FAARC

Pediatric Track

1:15 pm – 2:00 pm
Noninvasive Ventilation

Ira M Cheifetz MD FCCM FAARC, Durham NC
Use of noninvasive ventilation in the pediatric population continues to grow as technology and the availability of interfaces increase. However, definitive data are limited. This presentation will discuss the potential benefits and risks of NIV in pediatrics as well as review the pertinent medical literature. Thoughts for the future applications of NIV for infants and children will be offered.

2:05 pm – 2:50 pm
Patient-ventilator Synchrony

John S Emberger RRT FAARC, Newark DE
Patient-ventilator asynchrony can have deleterious effects on patients. This presentation will describe the various types of asynchrony as well as approaches to identify them, including a focus on airway graphic analysis. Approaches to eliminate patient-ventilator asynchrony will be offered.

2:50 pm – 3:05 pm
Break

3:05 pm – 3:50 pm
Cardiorespiratory Interactions

Ira M Cheifetz MD FCCM FAARC
The heart and lungs are obviously anatomically connected, but they are physiologically connected as well. This presentation will review the physiologic principles of cardiorespiratory interactions. Strategies to use mechanical ventilation to optimize the interactions between heart and lung will be discussed.

3:55 pm – 4:40 pm
Liberation from Mechanical Ventilation

Alex T Rotta MD FAACP FCCM, Cleveland OH
Although often viewed as more art than science, strategies to liberate a patient from mechanical ventilation are well described in the medical literature. The separation of a patient from mechanical respiratory support is inarguably the most important element of routine ventilator management. This presentation will discuss what we already know about liberation from mechanical ventilation and explore what the future may hold.

4:45 pm – 5:00 pm
Panel Discussion

Alex T Rotta MD FAACP FCCM, Cleveland OH

Ira M Cheifetz MD FCCM FAARC, Durham NC

John S Emberger RRT FAARC, Newark DE

Ira M Cheifetz MD FCCM FAARC

John S Emberger RRT FAARC

Alex T Rotta MD FAACP FCCM

Pre Course:

Vascular Access: Developing an Arterial Catheter Insertion Program

Friday, November 6, 2015 • Tampa, FL

12:30-12:45
Welcome and Introductory Comments

12:45-1:30
Healthcare Reform

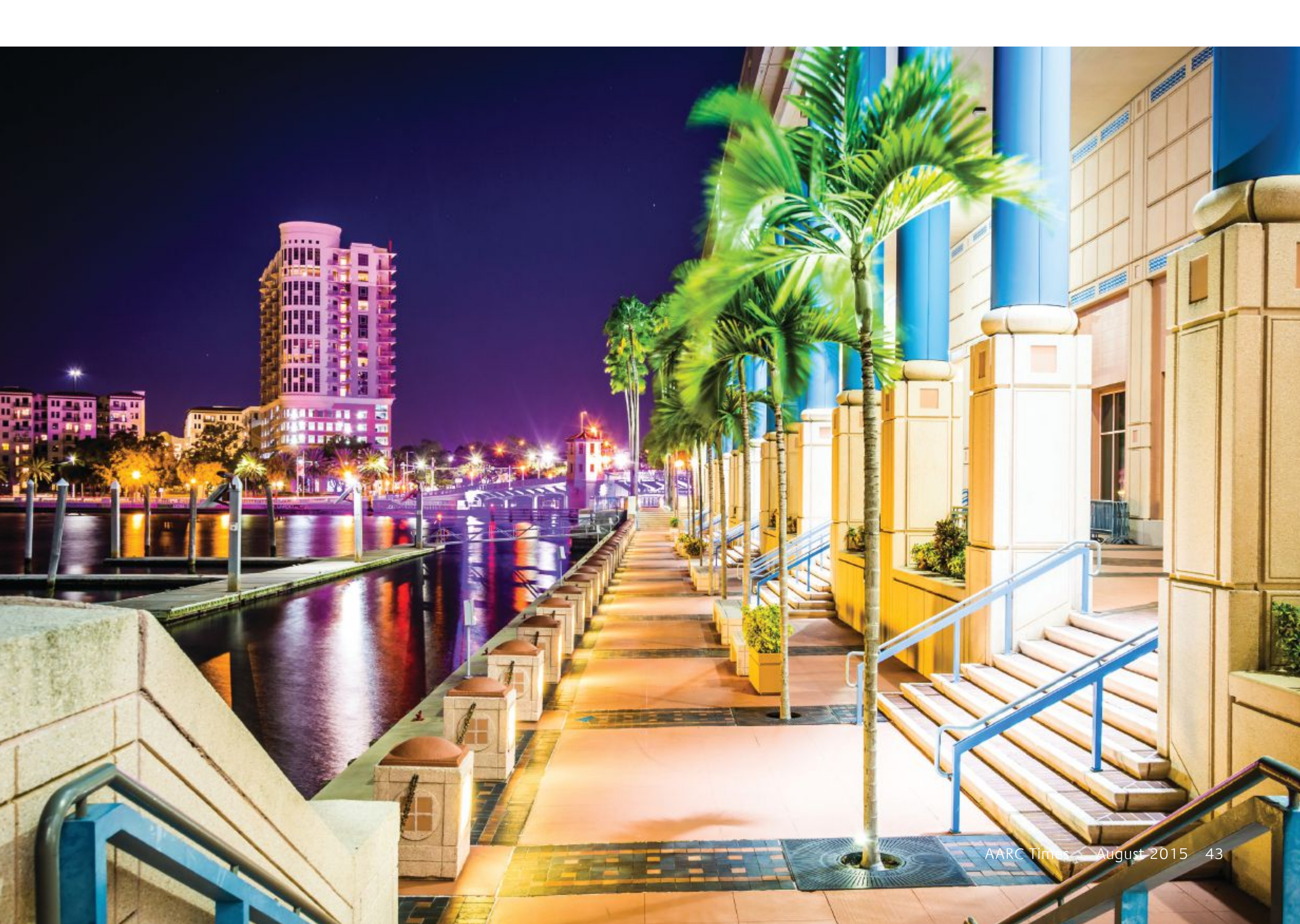
1:30-2:15
Developing a Vascular Access Program

2:45 – 3:30
Ultrasound Guided Arterial Catheter Insertion

3:30-4:15
Respiratory Therapists Should Be Placing More Vascular Access Devices

4:14-5:00
Essentials for a Successful Team, Tracking, CQI and Training

More information to come on aarc.org



AARC Congress 2015

Saturday, Nov. 7

Opening Session
8:30 am – 10:55 am

Thomas J Kallstrom MBA RRT FAARC
AARC Executive Director/CEO/*Presiding*

AARC Awards Ceremony
8:30 am – 10:00 am

The ceremony recognizes the "doers" in the profession, from students to long-established practitioners. Be there and applaud your peers. Today it's them; tomorrow it may be you!

Keynote Address

Tobacco Wars! The Battle for A Smoke-free Society
10:05 am – 10:55 am

Patrick Reynolds, Executive Director for The Foundation for A Smoke Free America

Patrick Reynolds is a grandson of the tobacco company founder, R.J. Reynolds. Mr. Reynolds spoke out publicly against the tobacco industry before Congress in 1986 after the family's brands killed his father and eldest brother. Since then, he has campaigned against smoking and tobacco use, FDA regulation of e-cigarettes, and for state tobacco prevention and cessation programs.

Mr. Reynolds keynoted the AARC's Congress in New Orleans in 1990. After 25 years, he is returning to celebrate our wins at reducing tobacco use. He'll outline the progress we've made, and discuss the vital work remaining to be done. He'll tell his very personal story of crossing over to the other side, and discuss what it was like growing up inside the RJ Reynolds tobacco family.

His impassioned keynote will also address tobacco-cessation therapies and will remind RTs of their power to make a difference when they intervene with patients who continue to smoke. He'll offer an overview of tobacco control in the U.S. today, and outline the policies which have been proven to significantly reduce smoking rates among youth and adults.

Mr. Reynolds will discuss the stunning rise of chewing tobacco and e-cigarette use among our youth and what can be done now. He'll close his keynote with a promise that, "A society free of tobacco is coming. It's coming because of you."

Sputum Bowl Preliminaries
8:00 am – 6:00 pm

Sherry Whiteman MS RRT/*Presiding*

Teams from the AARC State Societies compete in the preliminary competitions. The top four teams will advance to the Finals on Monday evening, Nov. 9, along with the Student Sputum Bowl finalists.

Supported by an unrestricted educational grant from

&

Patrick Reynolds

Opening of Exhibit Hall
11:00 am

Frank R Salvatore Jr MBA RRT FAARC/*Presiding*

The 2015/2016 AARC President opens the Exhibit Hall. As the "Gold Standard" of all respiratory care meetings, AARC Congress 2015 presents to you all the manufacturers and suppliers in the industry. The Exhibit Hall offers attendees an opportunity to see, touch, and manipulate the latest technology in the field and have clinical conversations with manufacturer representatives. Don't miss this great opportunity!

Orientation for First-time Attendees
11:30 am – 12:00 noon

Presented by the AARC Program Committee, Ira M Cheifetz MD FCCM FAARC

Are you a first-time attendee with unanswered questions about who to see, where to go, and what to expect from your first AARC Congress? If so, then attendance at this presentation is a MUST for you! This presentation provides first-time attendees with an overview of the entire AARC Congress and includes suggestions on how to maximize your time, not only at the educational session but also at the exhibits and peripheral activities as well.

Continuing Respiratory Care Education (CRCE)

AARC Congress 2015 is approved for all the credit hours you need to maintain your state license, more than 21 hours.

Saturday, Nov. 7

Presenting an Open Forum Abstract
12:05 pm – 12:35 pm

Teresa A Volsko MHHS RRT FAARC, Youngstown OH

This presentation will introduce the neophyte research presenter to the customs, roles and experience of presenting an Open Forum Session. The stages of an open forum presentation, including poster set-up, interacting with participants and moderators, presenting at the podium and participating in moderated audience discussions will be addressed.

Health Care Business Acumen: 101 for New Leaders and a Refresher for Seasoned Managers
1:00 pm – 1:35 pm

Health Care Business Acumen: 101 for New Leaders and a Refresher for Seasoned Managers

Garry W Kauffman MPA FACHE RRT FAARC, Winston-Salem NC

Content Category: Management

This presentation will review the concepts of revenue, expense, and assets with regard to the stakeholders in the delivery system and how the effective RT leader can demonstrate their value to their organization by understanding and applying this financial information critical to the success of a health care organization.

Exhibit Hours at The Buying Show:

Saturday, Nov. 7, 11:00 am - 4:00 pm

Sunday, Nov. 8, 9:30 am - 3:00 pm

Monday, Nov. 9, 9:30 am - 2:00 pm

Life-threatening Asthma
1:00 pm – 1:35 pm

Identifying and Minimizing the Risk

Bruce K Rubin MD MEngr MBA FAARC, Richmond VA

Content Category: Neonatal/Pediatric

Despite improvements in medical care, severe asthma continues to threaten the lives of our patients. This presentation will provide insight into strategies to identify those pediatric patients at greatest risk and offer thoughts on how best to minimize the risk. Consideration will be given to novel strategies that may be on the horizon.

Respiratory Therapists Leading an Alpha 1 Screening Program
1:00 pm – 1:35 pm

Respiratory Therapists Leading an Alpha 1 Screening Program

Ann M Wilson RRT RPFT, Etters PA

Content Category: Pulmonary Function

This presentation will share with participants the elements of developing an Alpha 1 screening program in a pulmonary lab.

Using the Evidence to Your and Your Patients' Advantage
1:00 pm – 1:35 pm

Using the Evidence to Your and Your Patients' Advantage

Sarah M Varekojis PhD RRT, Columbus OH

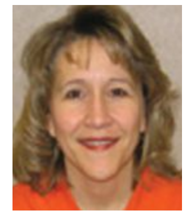
Content Category: Education

Using scientific evidence in your practice has benefits for both you and your patients. Becoming a good consumer of research will help the RT improve the care we give patients as well as help gain recognition and improve the impact of our profession. Getting started finding, reading, and understanding research can be challenging but is something that all RTs can incorporate into their practice.

Teresa A Volsko MHHS RRT FAARC

Garry W Kauffman MPA FACHE RRT

Bruce K Rubin MD MEngr MBA FAARC



Ann M Wilson RRT RPFT

Sarah M Varekojis PhD RRT

Professors' Rounds: Dueling Experts
1:00 pm – 2:15 pm

1:00 pm – 2:15 pm
Neuromuscular Blockade Should Be Used in Every Patient with Severe ARDS

Pro: Samir Jaber MD PhD, Montpellier Cedex France

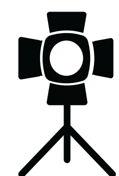
Con: Richard H Kallet MS RRT FAARC, San Francisco CA

Content Category: Adult Critical Care
Several European trials and one meta-analysis reported lower mortality if neuromuscular blocking agents were used to control tidal volume and airway pressure for the first several days at the onset of ARDS. This presenter will detail and evaluate the data supporting this approach and justify expansion of this approach.

Open Forum® Symposia
sponsored by

Clinicians present the results of their scientific studies. Abstracts with a similar focus are clustered into a symposium to encourage discussions and interactions among investigators and observers; posters expand the information presented. 12 Open Forum Symposia will be presented during the four days of AARC Congress 2015.

COPD Management: Taking Care of the Entire Patient
1:00 pm – 2:55 pm



1:00 pm – 1:35 pm
COPD Management: Where We Stand in 2015 (Diagnosis, Drugs, and Devices)

Brian W Carlin MD FAARC, Pittsburgh PA

Content Category: Clinical Practice
This session will focus on the recent updates in the diagnosis of COPD as well as the newer drugs and devices that are available for treatment.

1:40 pm – 2:15 pm
Collaboratory – What Is That, and Why Is the Patient So Important?

Deb McGowan RN BSN ACM CHCP, Washington DC

Content Category: Clinical Practice
Patients and health care leaders shoulder to shoulder? What happens? Readmission Collaboratory—what is that? PRAXIS of course.

2:20 pm – 2:55 pm
Emerging Roles of RCPs: Evolution or Revolution?

Claudia Vukovich RCP RRT AE-C TTS CCM, Sacramento CA

Content Category: Clinical Practice
Discussion of the emerging utilization of RCPs as educators, clinical coordinators, and case managers in chronic pulmonary disease management in both inpatient and outpatient settings.

Samir Jaber MD PhD

Richard H Kallet MS RRT FAARC

Brian W Carlin MD FAARC

Deb McGowan RN BSN ACM CHCP

Saturday, Nov. 7

Patient Safety
1:00 pm – 2:55 pm

1:00 pm – 1:35 pm
First Do No Harm…Effective Tools for Monitoring Patients That Are Receiving Opioid Pain Medications

Kevin McQueen MHA RRT CM,
Oceanside CA

Content Category: Patient Safety
As an active member of the San Diego Patient Safety Council this presenter will outline the journey his team went through as they created the latest evidence-based tool kit of best practices for monitoring respiratory status of patients receiving opioid pain medications outside of intensive care units.

1:40 pm – 2:15 pm
Patient Hand-off: Do You Hear What I Am Saying?

Steven E Sittig RRT-NPS FAARC,
Hartford SD

Content Category: Patient Safety
Lack of adequate communication between medical caregivers has been recognized as a serious risk to patient safety. This lecture will cover aspects of patient hand-off process as well as how to improve communication between caregivers and thus improve patient safety.

2:20 pm – 2:55 pm
Improving Teamwork and Patient Safety Through Simulation

Charles R Bishop BSRC RRT-NPS AE-C C-NPT, Wilmington NC

Content Category: Patient Safety
This presentation will take a look at how simulation can be used to improve teamwork, build unit cohesiveness, improve patient safety, and implement new team strategies.

Sleep and Your Heart
1:00 pm – 2:55 pm

1:00 pm – 1:35 pm
Cardiovascular Patients, Sleep Diagnostics and Treatment

Peter Allen BSRC RRT-NPS-SDS RST RPSGT,
Radnor PA

Content Category: Sleep Medicine
A focused review for sleep lab managers and technicians regarding the care and handling of the cardiovascular patient. Many have additional underlying or associated conditions that make them high risk in the sleep lab. Situations with irregular EKG, medications, oxygen, 911, or the ER are all reviewed within this lecture via case histories.

1:40 pm – 2:15 pm
How to Sleep with a Broken Heart: Impact of Sleep-disordered Breathing on Cardiac Conditions

Jessica Schweller RRT RN MS CNP,
Columbus OH

Content Category: Sleep Medicine
Sleep-disordered breathing can lead to many health complications, especially cardiac arrhythmias and potentially congestive heart failure. Attendees will learn when to refer for a sleep evaluation as well as the complexity of sleep-disordered breathing that comes along with cardiac disease.

Kevin McQueen
MHA RRT CM

Steven E Sittig
RRT-NPS FAARC

Charles R Bishop
BSRC RRT-NPS
AE-C C-NPT

Peter Allen BSRC
RRT-NPS- SDS RST
RPGST

Jessica Schweller
RRT RN MS CNP

Brian W Carlin
MD FAARC

2:20 pm – 2:55 pm

Be Still My Beating Heart: How ECG Changes During Sleep Can Be Fatal

Brian W Carlin MD FAARC, Pittsburgh PA

Content Category: Sleep Medicine
Presenter will discuss the ECG changes during sleep. Discussion will be held regarding what types of arrhythmias can be fatal and how to observe ECG changes to avoid negative outcomes during a sleep study.

Year in Review

1:00 pm – 4:55 pm

1:00 pm – 1:35 pm

Pediatric ARDS

Ira M Cheifetz MD FCCM FAARC, Durham NC

Content Category: Neonatal/Pediatric
This lecture is an overview of recently published guidelines on the management of pediatric ARDS.

1:40 pm – 2:15 pm

ECMO

Heidi J Dalton MD, Phoenix AZ

Content Category: Neonatal/Pediatric
This lecture is an overview of important papers published in 2015 related to ECMO.

2:20 pm – 2:55 pm

Adult Mechanical Ventilation

Richard D Branson MSc RRT FAARC, Cincinnati OH

Content Category: Adult Critical Care
This lecture is an overview of important papers published in 2015 related to invasive mechanical ventilation.

3:00 pm – 3:35 pm

Noninvasive Ventilation

Samir Jaber MD PhD, Montpellier Cedex France

Content Category: Adult Critical Care
This lecture is an overview of important papers published in 2015 related to noninvasive ventilation.

3:40 pm – 4:15 pm

Asthma

Bruce K Rubin MD MEngr MBA FAARC, Richmond VA

Content Category: Clinical Practice
This lecture is an overview of important papers published in 2015 related to asthma.

4:20 pm – 4:55 pm

Neonatal Respiratory Care

Sherry E Courtney MD MS, Little Rock AR

Content Category: Neonatal/Pediatric
This lecture is an overview of important papers published in 2015 related to neonatal respiratory care.

Be All You Can Be! A Professional Development Model

1:40 pm – 2:15 pm

Be All You Can Be! A Professional Development Model

Peggy Watts MS RRT, St Louis MO

Content Category: Management
Professional development is an ongoing necessity in medical fields. Do you know what motivates therapists to continually grow as professionals? The speaker will present an innovative development model for RRTs to pursue growth and recognition. Successes, challenges, and improvement approaches will be shared.

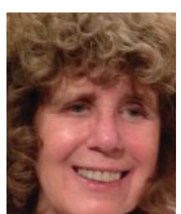
Ira Cheifetz MD FCCM FAARC

Heidi J Dalton MD

Richard D Branson MSc RRT FAARC

Samir Jaber MD PhD

Bruce K Rubin MD MEngr MBA FAARC



Sherry E Courtney MD MS

Peggy Watts MS RRT

Saturday, Nov. 7

Pediatric HFOV in the Era of Protective Ventilation

1:40 pm – 2:15 pm

Pediatric HFOV in the Era of Protective Ventilation

Alex T Rotta MD FAACP FCCM, Cleveland OH

Content Category: Neonatal/Pediatric
High-frequency oscillatory ventilation has been used for decades in children and neonates, but recent trials in adults with ARDS cast a doubt over its efficacy. This presentation discusses the applicability of the adult HFOV trials to children and the role of HFOV in the current era.

Spirometry

1:40 pm – 2:15 pm

Spirometry

Curt Merriman BA RRT CPFT, Burnsville MN

Content Category: Pulmonary Function
This lecture will discuss basic measurements, reference values, repeatability and acceptability, and how to perform a quality procedure as well as calibration of the spirometer and patterns of abnormal results.

RESPIRATORY CARE
The peer-reviewed science journal of the American Association for Respiratory Care

COPD360 Social and Other Social Media Platforms

1:40 pm – 2:15 pm

COPD360 Social and Other Social Media Platforms

Jason Moury MPH RRT, Miami FL

Content Category: Education
In 2013 the COPD Foundation launched a social media platform to help close the gap in COPD patient communications. COPD360 Social is a Web-based social media platform that helps increase communications with patient and caregivers. This session will explore how a respiratory therapist can interact with patients in a new way through social media platforms.

Lung Volume

2:20 pm – 2:55 pm

Lung Volume

Curt Merriman BA RRT CPFT, Burnsville MN

Content Category: Pulmonary Function
This lecture will discuss the measurement of lung volumes, repeatability, and acceptability and tips for maintaining good quality control.

Growing Our Young: Developing the Newly Hired Critical Care Therapist

2:20 pm – 3:35 pm

2:20 pm – 2:55 pm

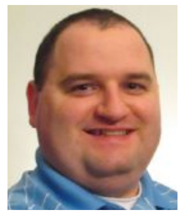
Designing the Optimal and Standardized Critical Care Orientation Model

Tony H Ruppert MS RRT-ACCS, York PA

Content Category: Education
This presentation will provide a comprehensive, optimal, and standardized model for orientation of new employees to the ICU and other critical care units. In addition, the economical, professional, and corporate benefits of effective training/ orientation will be explained.

Alex T Rotta MD FAACP FCCM

Curt Merriman BA RRT CPFT


Jason Moury MPH RRT

Tony H Ruppert MS RRT-ACCS

David L Vines MHS RRT FAARC

3:00 pm – 3:35 pm

Cultivating Confidence and Competence in the Newly Hired Critical Care Therapist

David L Vines MHS RRT FAARC, Glen Ellyn IL

Content Category: Education

RC programs provide extensive clinical education in the hectic and harried world of critical care. Despite these efforts, disparities remain in the educational acuity and abilities of recent graduates to function in such a fast-paced and demanding environment. This presentation will address methodologies and educational techniques to cultivate confidence and competence in the new graduate or newly hired novice critical care therapist.

To Breathe or Not To Breathe? Spontaneous Breathing in the Critically Ill Patient
2:20 pm – 4:15 pm

2:20 pm – 2:55 pm

Spontaneous Breathing in the Patient with Acute Lung Injury

Eddy Fan MD, Toronto Canada

Content Category: Adult Critical Care

This lecture will discuss the physiological considerations regarding mechanically ventilated patients breathing spontaneously.

3:00 pm – 3:35 pm

Pressure Support, Atrophy, and Asynchrony: What Every RT Should Know!

Thomas Piraino RRT, Hamilton Canada

Content Category: Adult Critical Care

This lecture will discuss the potential risk of delivering high levels of pressure support including atrophy and asynchrony. There will be clinical case examples and tips for minimizing the risk.

3:40 pm – 4:15 pm

Volumetric Capnography: The Multi-use Bedside Measurement

Michael Gentile RRT FAARC, Durham NC

Content Category: Adult Critical Care

This lecture will discuss the many uses of volumetric capnography in the intensive care unit. It will focus on the calculation of dead-space fraction, optimizing PEEP, and using volumetric capnography during the weaning phase of mechanical ventilation.

Eddy Fan MD

Thomas Piraino RRT

Michael Gentile RRT FAARC

Special Events

AARC Awards Ceremony

Saturday, November 7, 8:30 am - 10 am

Keynote Address

Saturday, November 7, 10:05 am - 10:55 am

AARC Opening Reception

Saturday, November 7 at 8 pm
sponsored by

38th Sputum Bowl Finals

Monday, November 9, at 5 pm
sponsored by

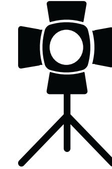
&

Closing Ceremony

Tuesday, November 10, 12:45 pm - 2:15 pm

Saturday, Nov. 7

Employee Engagement- The Key to Your Success as a Leader 2:20 pm – 4:55 pm



2:20 pm – 2:55 pm

Planting the Seed: Education Strategies To Cultivate Engaged Students

Diane Oldfather MHEd RRT, Rolla MO

Content Category: Management
Before becoming practicing therapists, RT students are exposed to the health care field through their classroom and clinical experiences. Savvy educators must use these experiences to develop the traits of student engagement that will transfer into the workplace and ensure that these new therapists are assets to their organization.

3:00 pm – 3:35 pm

Shaking the Engagement Tree – Hiring Engaged Therapists

Garry W Kauffman MPA FACHE RRT FAARC, Winston-Salem NC

Content Category: Management
One of the keys to ensuring an engaged RT staff is to hire engaged applicants. But how can a hiring manager ensure that engaged candidates rise to the top of the list? This lecture will share tips, tricks, and techniques for enhancing employee engagement during the hiring and onboarding process.

3:40 pm – 4:15 pm

No Low-hanging Fruit Allowed – Creating an Engaged Staff

Cheryl A Hoerr MBA RRT CPFT FAARC, Rolla MO

Content Category: Management
Disengagement in the workplace is a costly and frustrating problem facing RT managers. Patient satisfaction, quality care, staff retention, and productivity have all been shown to be better in organizations with a higher percentage of engaged employees. This presentation will share some of the management actions that have been proven to promote and sustain therapist engagement.

4:20 pm – 4:55 pm

Cultivation and Sustainable Growth – Manager Engagement

Karen S Schell DHSc RRT-NPS RRT-SDS RPFT AE-C CTTS, Emporia KS

Content Category: Management
Before department managers can engage their staff, the managers themselves must be engaged with their organization and their own work. This presentation will share techniques for managers to increase their own engagement and, in doing so, provide a role model for success to their staff.

How Do I? – Evidence-based Practice 2:20 pm – 4:55 pm

2:20 pm – 2:55 pm

How Do I Choose NIV vs. Intubation?

Brian K Walsh MBA RRT-NPS FAARC, Boston MA

Content Category: Neonatal/Pediatric
The use of noninvasive ventilation is increasing at a rapid rate in pediatrics. However, there are not generally accepted criteria to initiate NIV or to identify failure requiring intubation. This presentation will review the available literature and offer thoughts from an expert in the field.

Diane Oldfather MHEd RRT

Garry W Kauffman MPA FACHE RRT FAARC

Cheryl A Hoerr MBA RRT CPFT FAARC

Karen A Schell RPFT AE-C CTTS

Brian K Walsh MBA RRT-NPS FAARC

Ira Cheifetz MD FCCM FAARC

3:00 pm – 3:35 pm

How Do I Set the Ventilator?

Ira M Cheifetz MD FCCM FAARC, Durham NC

Content Category: Neonatal/Pediatric

Despite the growing literature in the adult population regarding an optimal approach to mechanical ventilation, there remains a shortage of data in pediatrics. This presentation will review the recommendations from the Pediatric Acute Lung Injury Consensus Conference and offer thoughts from an expert in the field.

3:40 pm – 4:15 pm

How Do I Decide When To Move Beyond Conventional Ventilation?

Heidi J Dalton MD, Phoenix AZ

Content Category: Neonatal/Pediatric

What do you do when a patient fails conventional ventilation? What adjuncts are supported by the literature? What is the optimal timing for transition from conventional ventilation to alternate approaches, including extracorporeal life support (such as ECMO)? This presentation will review the available literature and offer thoughts from an expert in the field.

4:20 pm – 4:55 pm

How Do I Sedate My Ventilated Patient?

Alex T Rotta MD FAACP FCCM, Cleveland OH

Content Category: Neonatal/Pediatric

Despite advances in mechanical ventilation, the optimal approach to sedation management remains uncertain. However, it is well known that excessive sedation translates to a prolonged course of mechanical ventilation. An expert in the field will review the available literature and provide a rational approach to the optimal sedation management of infants and children with the goal of minimizing ventilation.

Understanding End-of-Life Issues in the Chronic Respiratory Patient 3:00 pm – 3:35 pm

Understanding End-of-Life Issues in the Chronic Respiratory Patient

Paul Selecky MD FAARC FCCP, Newport Beach CA

Content Category: Ethics and Law

Palliative care seeks to improve the quality of life for patients suffering from life-limiting illnesses. It is vital that the respiratory therapist understand a broader range of implications on quality of life than just physiologic issues. This presentation will define palliative care and discuss the emotional, spiritual, psychological, and social impact of chronic respiratory diseases.

Empowering the Respiratory Care Practitioner To be Physician Extenders in Sleep Medicine – Who Benefits? 3:00 pm – 3:35 pm

Empowering the Respiratory Care Practitioner To be Physician Extenders in Sleep Medicine – Who Benefits?

Ernestine Wigler RRT RC, Fontana CA

Content Category: Sleep Medicine

What is the smartest, most efficient way to survive and thrive in today's health care system? Invest in the performance, development, and engagement of your existing employees, especially the respiratory care cractitioner. Quality patient care requires skilled practitioners committed to ongoing education and development.

Heidi J Dalton MD

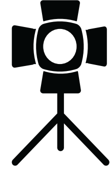
Alex T Rotta MD FAACP FCCM

Paul Selecky MD FAARC FCCP

Ernestine Wigler RRT RC

Saturday, Nov. 7

Dyspnea and the Evaluation for Upper Airway Disorders 3:00 pm – 4:55 pm



3:00 pm – 3:35 pm

Dyspnea and Upper Airway Disorders in Adults

Michael J Morris MD MACP FCCP, Fort Sam Houston, TX

Content Category: Pulmonary Function

This presentation will discuss the role of the respiratory therapist and pulmonary function technician in evaluating dyspnea in the adult patient with a specific focus on identifying upper airway abnormalities in this population.

3:40 pm – 4:15 pm

Dyspnea and Upper Airway Disorders in the Pediatric Population

Steven Boas MD, Glenview IL

Content Category: Pulmonary Function

This presentation will further discuss the role of the respiratory therapist and pulmonary function technician in evaluating pediatric patients during both acute and chronic presentations of dyspnea with a specific focus on the role of the upper airway.

4:20 pm – 4:55 pm

Vocal Cord Dysfunction and Inducible Laryngeal Obstruction

Kent L Christopher MD RRT FAARC, Aurora CO

Content Category: Pulmonary Function

This presentation will specifically focus on inducible laryngeal obstruction (ILO), more commonly known as VCD or PVFM, and how the respiratory therapist and pulmonary function technician play an integral role in identifying and documenting these disorders.

Reducing Risk & Improving Patient Safety During Transport 3:00 pm – 4:55 pm

3:00 pm – 3:35 pm

Medical-Legal Pitfalls of Interhospital Transports

Robert Aranson MD FCCP, Tucson AZ

Content Category: Patient Safety

Interhospital transports are one of the greatest medical-legal risks to clinicians. This expert in the field will review the current state, discuss the highest risk aspects of interhospital transports, and explore approaches to minimize risk.

3:40 pm – 4:15 pm

Patient Safety on Transport — On Your Mark, Get Set... Stop?

Jennifer L Watts RRT-NPS C-NPT, Oak Lawn IL

Content Category: Patient Safety

The safety of our patients should always be the highest priority of the health care professional, but this priority is not limited to the hospital setting alone. Patient safety begins the moment we assume care from a referring hospital prior to physically moving the patient. Be it from the back of an ambulance or up in the clouds, we must always adhere to the highest standard of patient safety.

4:20 pm – 4:55 pm

Addressing Special Needs of Neonatal-Pediatric Intra-hospital Transfers

Alex J. Brendel RRT-NPS MBA

Content Category: Patient Safety

Neonatal and pediatric patients have special needs that must be addressed to reduce the risks involved with transports within a facility. This lecture will describe those specific needs as well as policies and procedures designed to address them.

Michael J Morris MD MACP FCCP

Kent L Christopher MD RRT FAARC

Robert Aranson MD FCCP

Jennifer L Watts RRT-NPS C-NPT

Alex J Brendel RRT-NPS MBA

Open Forum
Poster Discussions #1
3:15 pm – 5:10 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Open Forum
Poster Discussions #2
3:15 pm – 5:10 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Terminal Mechanical Ventilator Weaning and the RT
3:40 pm – 4:15 pm

Terminal Mechanical Ventilator Weaning and the RT

Lorraine Bertuola BA RRT, Townson MD

Content Category: Ethics and Law

The withdrawal of mechanical ventilation at the end of life is a difficult aspect of providing respiratory care. This presentation will define the concept of terminal weaning and discuss indications, ethical challenges, and patient/family support needed for terminal ventilator weaning in the long-term care environment.

Monitoring Patients in Their Home: Preventing Problems with Timely Intervention
3:40 pm – 4:15 pm)

Monitoring Patients in Their Home; Preventing Problems with Timely Intervention

Robert McCoy RRT, Apple Valley MN

Content Category: Clinical Practice

Many patients have symptoms suggestive of the onset of an exacerbation before the acute episode. Monitoring a patient for key indicators in their home may allow a clinician to intervene before respiratory failure manifests, requiring emergency intervention. This lecture will discuss methods and devices for home monitoring.

Automated Control of Ventilation
3:40 pm – 4:55 pm

3:40 pm – 4:15 pm

Automated Control of CPAP and NIV for Sleep-disordered Breathing

Brian W Carlin MD FAARC, Pittsburgh PA

Content Category: Sleep Medicine

This lecture will address the role of devices for automated control of CPAP and NIV for sleep-disordered breathing.

4:20 pm – 4:55 pm

Automated Control of Invasive Mechanical Ventilation

Richard D Branson MSc RRT FAARC, Cincinnati OH

Content Category: Sleep Medicine

This lecture will address aspects of automated control of invasive mechanical ventilation.

Lorraine Bertuola BA RRT

Robert McCoy RRT

Brian W Carlin MD FAARC

Richard D Branson MSc RRT FAARC

Saturday, Nov. 7

Step-wise Approach to Acid-base Determination
4:20 pm – 4:55 pm

Step-wise Approach to Acid-base Determination

Russell Acevedo MD FAARC, Syracuse NY

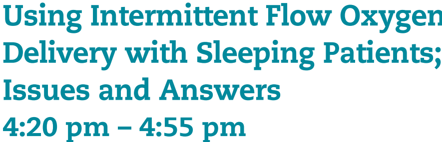
Content Category: Adult Critical Care
How to get the most “bang for your buck” from blood gases and electrolyte panels! In a step-wise fashion, how to extract as much information as possible from these tests will be reviewed and tips on finding all the acid-base disturbances will be presented. We explore the steps before looking up the causes.

Ebola — Preparing Your Department for the Unexpected
4:20 pm – 4:55 pm

Ebola — Preparing Your Department for the Unexpected

Cherise Wilson RRT, Gainesville VA

Content Category: Bioterrorism/Emergency Preparedness
Is your hospital prepared to care for a patient with Ebola? Have the respiratory therapists in your department received appropriate Ebola readiness training? This presentation will provide a review of this deadly disease, current best practices for preventing transmission, and suggestions for ensuring proper personal protective equipment training of staff.



Using Intermittent Flow Oxygen Delivery with Sleeping Patients; Issues and Answers
4:20 pm – 4:55 pm

Using Intermittent Flow Oxygen Delivery with Sleeping Patients; Issues and Answers

Robert McCoy RRT, Apple Valley MN

Content Category: Clinical Practice
The use of intermittent flow oxygen is controversial due to the lack of evidence regarding effectiveness. Portable oxygen concentrators have become a popular option for travel oxygen, which means a patient will need to sleep on the device if that is the only option while away from home. This lecture will discuss the research and options to use intermittent flow for patients during sleep.

Russell Acevedo MD FAARC

Cherise Wilson RRT

Robert McCoy RRT

Honor Our Troops

ATTEND THE AARC FLAG FOLDING CEREMONY

November 8
9:30 AM in front of
the Exhibit Hall Entrance

Student Seminar

11:40 am – 4:55 pm

This Symposium is not eligible for CRCE

11:40 am – 12:15 pm

OMG! He Wrote My Textbook! Analyzing Mechanical Ventilator Graphics

Dean R Hess PhD RRT FAARC, Boston MA

Analyzing mechanical ventilator graphics is dependent upon understanding the patient mode, breath type, and disease pathology, in addition to other factors. This presentation will discuss these factors as well as provide an interactive environment for students to practice analyzing mechanical ventilator graphics and understanding the patient condition.

12:20 pm – 12:55 pm

How Do I Read a Respiratory Care Article?

Richard D Branson MSc RRT FAARC, Cincinnati OH

P-values, t-tests, and means, OH MY! Understanding journal articles can be difficult but vital to ensuring respiratory therapists deliver evidence-based care. Mr. Branson, Respiratory Care deputy editor, will discuss a systematic method to understanding an article in the profession's scientific journal.

1:00 pm – 1:35 pm

What's the Fuss About CPGs?

Shawna L Strickland PhD RRT-NPS AE-C FAARC, Irving TX

Clinical practice guidelines (CPGs) are instrumental in directing patient care to achieve the best outcomes. Dr. Strickland will discuss how the CPG can guide the RT in clinical decision-making.

1:40 pm – 2:15 pm

What It Means To Be a Professional

Crystal L Dunlevy EdD RRT RCP, Columbus OH

This presentation will provide an overview of the profession of respiratory care to include its evolution, role and value. Emphasis will be placed on the characteristics and traits of a professional and the critical importance of being involved and maintaining professional membership.

2:20 pm – 2:55 pm

Securing Employment: Marketing and Networking Yourself to that Dream Job

Cheryl A Hoerr MBA RRT CPFT FAARC, Rolla MO

This presentation will provide an overview of the job search process to include developing the cover letter, resume, interview skills, and measures that will prepare one for meaningful and satisfying employment.

3:00 pm – 3:35 pm

How To Lose a Job Before You're Hired

Dana Evans MHA RRT-NPS, Chesterfield MO

You have just landed an interview for your dream job. You are nervous, excited, and really want to impress the hiring leader. Did you know you could lose the job before you even arrive at the interview? The presenter will discuss common mistakes and pitfalls of job seekers, including those that may cost you the position before you are hired.

3:40 pm – 4:15 pm

Acquiring Your Credential: Success on the Therapist Multiple-Choice Exam

Bill Galvin MSEd RRT CPFT AE-C FAARC, Gwynedd Valley PA

The presentation will address factors essential for success in the examination process. It will cover preparatory issues, what you will experience onsite, as well as test-taking strategies and techniques. Emphasis will be placed on the written component of the NBRC credentialing process.

4:20 pm – 4:55 pm

Acquiring Your Credential: Success on the Clinical Simulation Exam

Bill Galvin MSEd RRT CPFT AE-C FAARC Gwynedd Valley PA

The presentation will serve as a sequel to the previous presentation and will address the factors essential for success on the Clinical Simulation Examination. It will cover such issues as exam content, structure, and unique strategies for progressing through a branching logic type of examination.

Dean R Hess PhD RRT FAARC

Richard D Branson MSc RRT FAARC

Shawna L Strickland PhD RRT-NPS AE-C FAARC

Crystal L Dunlevy EdD RRT RCP

Cheryl A Hoerr MBA RRT CPFT FAARC

Dana Evans MHA RRT-NPS

Bill Galvin MSEd RRT CPFT AE-C FAARC

AARC Congress 2015

Sunday, Nov. 8

AARC Annual Business Meeting
7:30 am – 8:30 am

Frank R Salvatore Jr MBA RRT FAARC/*Presiding*

The official Annual Business Meeting of the AARC's 2016 AARC Officers, Board of Directors, and Officers from the House of Delegates are installed. Reports from AARC leadership are presented. The meeting concludes with an address from 2015/2016 AARC President, Frank Salvatore.

3rd Annual Thomas L Petty Memorial Lecture
8:40 am – 9:30 am

Surviving the ICU: Taking a Step Back into the Future

Dale Needham MD PhD, Baltimore MD

Content Category: Adult Acute Care
During World War II, ambulating hospitalized patients was the norm. Today? Not so much. While ambulating the ICU and mechanically ventilated patient has grown in popularity in recent years, far too often, hospitals still rely on deep sedation and extended bed rest for the critically ill patient. In this presentation, Dr. Needham will discuss the science behind why this approach may be detrimental to patient outcomes, including extended use of mechanical ventilation and longer ICU length of stay. Seventy-five years ago, it was an accepted premise that getting soldiers back on the battlefield started with early ambulation from their injuries. Attend this lecture and take a step back into the future as Dr. Needham discusses how this old approach can be applied to contemporary medicine – even with the mechanically ventilated patient.

Supported by an unrestricted educational grant from the Snowdrift Pulmonary Conference

Sputum Bowl Preliminaries
8:00 am – 6:00 pm

Sherry Whiteman MS RRT/*Presiding*

Teams from the AARC State Societies compete in the preliminary competitions. The top four teams will advance to the Finals on Monday evening, Nov. 9, along with the Student Sputum Bowl finalists.

Supported by an unrestricted educational grant from

&

Neonatal-Pediatrics Section Membership Meeting
9:35 am – 10:05 am

Natalie Napolitano MPH RRT-NPS FAARC/*Presiding*

Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section non-members, are invited to attend and participate.

Home Care Section Membership Meeting
10:00 am – 10:25 am

Kimberly S Wiles RRT CPFT/*Presiding*

Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section non-members, are invited to attend and to participate.

Frank R Salvatore Jr MBA RRT FAARC

Dale Needham MD PhD

Sunday, Nov. 8

Open Forum Poster Discusions #3
10:00 am – 11:55 am

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Open Forum Poster Discussion #4
10:00 am – 11:55 am

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Why Take the Stairs When You Can Take the Elevator? Succession Planning and Building Your Own Career Ladder
10:30 am – 11:05 am

Why Take the Stairs When You Can Take the Elevator? Succession Planning and Building Your Own Career Ladder

Laura Hartman RRT-NPS, St Petersburg FL

Garry W Kauffman MPA FACHE RRT FAARC, Winston-Salem NC

Content Category: Management
Increasingly, seasoned leaders are leaving management positions. A knowledge and experience gap will exist if current leaders do not intentionally plan for their successors. This lecture is for seasoned managers interested in creating opportunities for their staff and for younger leaders in positions where no succession plan exists.

Transitioning the RT: Home Care Competency and Education
10:30 am – 11:05 am

Transitioning the RT: Home Care Competency and Education

Kimberly S Wiles RRT CPFT, Ford City PA

Content Category: Clinical Practice
Respiratory therapists transitioning from acute care to the home care setting have limited experience in the home and typically do not have a significant orientation period. This session will discuss home care competencies for respiratory therapists, the development process, and how those competencies impact a proposed curriculum to transition acute care RTs to home care RTs.

Clinical Controversies in Neonatal Critical Care – Novel Modes of Conventional Ventilation Improve Outcomes
10:30 am – 11:45 am

Clinical Controversies in Neonatal Critical Care – Novel Modes of Conventional Ventilation Improve Outcomes

Pro: Howard Stein MD, Toledo OH

Con: Sherry E Courtney MD MS, Little Rock AR

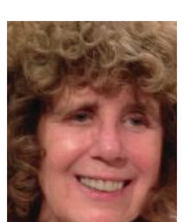
Content Category: Neonatal/Pediatric
Novel modes of conventional ventilation, such as NAVA, have been designed to promote patient-ventilator synchrony. Despite the use of these modes for some time and the increasing quantity of data, controversy regarding their applicability and effect on patient outcome continues. In this debate, two respected neonatologists will square off to highlight the pros and cons of novel modes of ventilation with a focus on patient outcomes.

Laura Hartman RRT-NPS

Garry W Kauffman MPA FACHE RRT FAARC

Kimberly S Wiles RRT CPFT

Howard Stein MD



Sherry E Courtney MD MS

Decision Making for Extracorporeal Life Support
10:30 am – 11:45 am

10:30 am – 11:05 am
Managing ARDS and When To Consider Extracorporeal Life Support (ECLS)

Thomas Piraino RRT, Hamilton Canada

Content Category: Adult Critical Care
This lecture will encourage critical thinking for managing ARDS patients by presenting various techniques and observations that can be done at the bedside to determine lung severity and help guide the decision whether to use ECLS.

11:10 am – 11:45 am
Extracorporeal Life Support to Facilitate Lung Protective Ventilation

Eddy Fan MD, Toronto Canada

Content Category: Adult Critical Care
The lecture will review the importance of lung protective ventilation and describe the role ECLS has in protecting the lung.

Interpretation of Ventilator Graphics: Do We Really Understand What We See?
10:30 am – 12:25 pm

10:30 am – 11:05 am
Ventilator Waveforms 101: An Interactive Session

Ruben D Restrepo MD RRT FAARC, San Antonio TX

Content Category: Adult Critical Care
Recognizing how ventilator waveforms are displayed is critical to understanding patient-ventilator interactions and to optimize the management of patients undergoing invasive mechanical ventilation. This interactive presentation will use audience response and is designed to explain the foundational concepts behind every graphic displayed on the ventilator screen.

11:10 am – 11:45 am
Understanding Patient-Ventilator Interaction: The Importance of Identifying Dyssychrony

Jonathan Waugh PhD RRT FAARC, Birmingham AL

Content Category: Adult Critical Care
Patient-ventilator dyssynchrony (PVD) is one of the most common unrecognized events in the ICU. Its recognition and management are important to make meaningful positive change in patient outcomes.

11:50 am – 12:25 pm
How Can I Use Waveforms To Optimize the Management of Patients with ARDS?

Neil R MacIntyre MD FAARC, Durham NC

Content Category: Adult Critical Care
Consistent vigilance of the patient-ventilator interaction plays an important role in the management of patients with ARDS. Ventilator waveforms often display response to ventilator changes and patient status beyond what clinicians suspect.

Exhibit Hours at The Buying Show:

Saturday, Nov. 7, 11:00 am - 4:00 pm

Sunday, Nov. 8, 9:30 am - 3:00 pm

Monday, Nov. 9, 9:30 am - 2:00 pm

Thomas Piraino RRT

Eddy Fan MD

Ruben D Restrepo MD RRT FAARC

Jonathan Waugh PhD RRT FAARC

Neil R MacIntyre MD FAARC

Sunday, Nov. 8

Symposium: Improving Quality in the Pulmonary Function Lab

10:30 am – 12:25 pm

10:30 am – 11:05 am

Eliminating Waste within a Preventative Maintenance and BioQC Program: A Lean Approach

Ann M Wilson RRT RPFT, Etters PA

Content Category: Pulmonary Function
This presentation will give an overview of how to use lean strategies to improve a BioQC and preventative maintenance program for a diagnostic pulmonary lab.

11:10 am – 11:45 am

The Strengths and Limitations of Computerized Grading of Spirometry Quality

Jeff Haynes RRT RPFT, Nashua NH

Content Category: Pulmonary Function
Modern spirometers are equipped with software that grade spirometry quality and provide feedback to clinicians. This lecture will review the strengths and limitations of computerized spirometry grading and examine its clinical impact on data collection and reporting.

11:50 am – 12:25 pm

Instrument Variability in the PF Laboratory: What Can Be Controlled?

Susan Blonshine RRT RPFT AE-C FAARC, Mason MI

Content Category: Pulmonary Function
Understanding, evaluating, and controlling instrument variability in the pulmonary function laboratory is an essential skill to improve the accuracy and precision of the measurements. The presentation will outline the steps to developing a robust quality assurance plan for the PF lab.

Pulmonary Rehab

10:30 am – 12:25 pm

10:30 am – 11:05 am

Pulmonary Rehab 101

Charley P Starnes RRT RCP, Charlotte NC

Content Category: Clinical Practice
Ever wondered what pulmonary rehab is all about? This presentation will touch on the basics of a pulmonary rehabilitation program and how it can improve your patients' quality of life.

11:10 am – 11:45 am

What Does It Take To Expand Services Beyond Pulmonary Rehabilitation?

Trina M Limberg RRT FAARC FAACVPR, San Diego CA

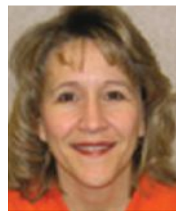
Content Category: Clinical Practice
Presenter will share valuable information on how to expand services utilizing skilled pulmonary rehabilitation clinicians in acute care areas and other outpatient specialties such as neuromuscular and COPD clinics for patient assessment, education and intervention.

11:50 am – 12:25 pm

Pulmonary Rehabilitation's Role in Confronting End of Life Issue

Deborah Bennett RRT, St Louis MO

Content Category: Clinical Practice
Chronic lung patients may have end of life concerns that go unaddressed. Pulmonary rehab is an ideal environment to explore this topic since family and friends often avoid discussing such issues. Therapists should be ready to provide end-of-life support and information for their patients. See how one program equipped its therapists to deliver an education around these sensitive subjects.



Ann M Wilson RRT RPFT

Jeff Haynes RRT RPFT

Susan Blonshine RRT RPFT AE-C FAARC

Charley P Starnes RRT RCP

Trins M Limberg RRT FAARC FAACVPR

Deborah Bennett RRT

Asthma Management
10:30 am – 12:25 pm

10:30 am – 11:05 am
Carrying the Weight on Your Lungs: The Effects of Obesity on Asthma

Kathleen O Ververeli MD, Allentown PA

Content Category: Clinical Practice
This lecture will focus on obesity and its association with the development, severity and treatment of asthma.

11:10 am – 11:45 am
Telemedicine for Improving Asthma Management

Dave Burnett PhD RRT AE-C, Kansas City KS

Content Category: Clinical Practice
Even with the current guidelines, management and control of asthma is unsatisfactory. Interventions to improve adherence to asthma guidelines must address improved changes at the clinician and patient levels in order to impact asthma control. This presentation will discuss how telemedicine can be used by clinicians and patients to improve asthma control.

11:50 am – 12:25 pm
Let the Sun Shine In: The Impact of Vitamin D on Asthma, Allergy, and the Immune System

Kathleen O Ververeli MD

Content Category: Clinical Practice
This lecture will discuss the role of Vitamin D in the development of the immune system through describing its functions on a molecular basis. In addition, the lecture will discuss the evidence supporting the association vitamin D deficiency with increased risk and severity of infections, asthma and allergies.

Pharmacology of Airway Management
10:30 am – 12:25 pm

10:30 am – 11:05 am
Sedatives and Analgesic Agents Commonly Used During Out of OR Intubations

Thomas M Fuhrman MD MMSC FCCP FCCM RRT, Miami FL

Content Category: Adult Critical Care
The discussion will highlight how sedatives and analgesics can be used to facilitate an intubation, to protect the patient from hemodynamic instability, and to minimize both physical and mental discomfort for the patient.

11:10 am – 11:45 am
The Use of Neuromuscular Blocking Agents in Airway Management

Dubravka Jovanovic MD, Bay Pines FL

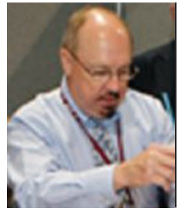
Content Category: Adult Critical Care
A discussion of the various neuromuscular blocking agents commonly used to facilitate intubations.

11:50 am – 12:25 pm
Case Presentations: Pharmacology of Airway Management

Arthur Tokarczyk MD FCCP, Winnetka IL

Content Category: Adult Critical Care
The discussion will include a number of case studies featuring aspects presented in the previous two airway management lectures.

Dave Burnett PhD RRT AE-C


Thomas M Fuhrman MD MMSC FCCP FCCM RRT

Arthur Tokarczyk MD FCCP

RESPIRATORY CARE

OPEN FORUM® Symposia sponsored by

Clinicians present the results of their scientific studies. Abstracts with a similar focus are clustered into a symposium to encourage discussions and interactions among investigators and observers; posters expand the information presented. 12 OPEN FORUM Symposia will be presented during the four days of AARC Congress 2015.

Sunday, Nov. 8

Is It Working? Does It Make a Difference? Is It Worth It? Measuring Outcomes
11:10 am – 11:45 am

Is It Working? Does It Make a Difference? Is It Worth It? Measuring Outcomes

Sarah M Varekojis PhD RRT, Columbus OH

Content Category: Management
With the implementation of health care reform initiatives, health care systems are being held accountable for their outcomes. RT roles are also evolving and expanding to include disease management and other areas of advanced practice. Measuring meaningful outcomes is one way to demonstrate benefit to the institution and to the patient and/or family, and to demonstrate the value of expanding RT roles.

Oxygen Therapy: A Quest To Understand Medicare's Home Oxygen Order, Testing, and Documentation Requirements
11:10 am – 11:45 am

Oxygen Therapy: A Quest To Understand Medicare's Home Oxygen Order, Testing, and Documentation Requirements

Jason Beasley RRT, Brentwood TN

Content Category: Clinical Practice
Prescribing or referring a Medicare patient for home oxygen has become an arduous task. This session will provide an overview of Medicare's required order, testing, and documentation requirements needed to set up a patient on home oxygen.

Open Forum Posters Only #1
11:30 am – 3:30 pm
Supported by an unrestricted educational grant from

Researchers and clinicians present the results of their work in this Posters Only session. Authors available from 12:00 pm – 1:30 pm for questions and interaction.

I Have Neckties Older Than My New Manager – Advice for Younger Managers
11:50 am – 12:25 pm

I Have Neckties Older Than My New Manager – Advice for Younger Managers

Laura Hartman RRT-NPS, St Petersburg FL

Garry W Kauffman MPA FACHE RRT FAARC, Winston-Salem NC

Content Category: Management
Over the past decade, a change in the workforce has created a new type of generation gap in which younger leaders are attaining leadership positions in higher numbers than have been witnessed previously. While there are a host of presentations advising seasoned leaders how to deal effectively with subordinates of the various generations, little has been communicated on the reverse scenario.

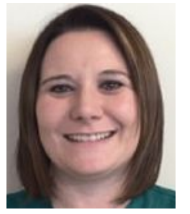
Legal and Ethical Implications at the Limit of Viability
11:50 am – 12:25 pm

Legal and Ethical Implications at the Limit of Viability

Jonathan Fanaroff MD, Cleveland OH

Content Category: Neonatal/Pediatric
What is the lower limit of viability? Who decides? How does one decide? Although the questions seem to outnumber the answers, this intriguing session will offer thoughts and perspective from one of the true experts in the field. Attend this session to better understand the legal and ethical implications at the limit of viability.

Sarah M Varekojis PhD RRT


Laura Hartman RRT-NPS

Garry W Kauffman MPA FACHE RRT FAARC

Jonathan Fanaroff MD

ECMO & Ethics
11:50 am – 12:25 pm

ECMO & Ethics

Shawna L Strickland PhD RRT-NPS AE-C FAARC, Irving TX

Content Category: Ethics and Law
The use of extracorporeal membrane oxygenation (ECMO) in the adult and pediatric population has been beneficial to bridge critically ill patients to recovery. However, there are many ethical issues encountered along the trajectory of care that must be considered. This presentation will discuss ethical issues at the time of ECMO initiation, perceptions of success, and transitioning the patient from ECMO when prognosis is nil.

What Goes Wrong in Home Care?
11:50 am – 12:25 pm

What Goes Wrong in Home Care?

Angela King RPFT RRT-NPS, Leo IN

Content Category: Clinical Practice
What goes wrong in home care? This presentation reviews data from the FDA and other sources to learn how and why patients unexpectedly die or are injured in home care. Ventilator malfunctions, setting errors, fires, oxygen mishaps - all can be causes of patient deaths. Learn things you can do to help ensure your patients' safety.

Diagnostic Section Membership Meeting

12:30 pm – 1:00 pm

Katrina Hynes RRT CPFT/*Presiding*
Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section non-members, are invited to attend and participate.

Open Forum Poster Discussions #5
12:30 pm – 2:25 pm
Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Open Forum Poster Discussions #6
12:30 pm – 2:25 pm
Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Long-Term Care Section Membership Meeting

1:00 pm – 1:30 pm

Lorraine Bertuola BA RRT/*Presiding*
Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section non-members, are invited to attend and participate.

Productivity Consultants - You're Thinking "Oh Shift"... Now Shift Your Thinking
1:45 pm – 2:20 pm

Productivity Consultants — You're Thinking "Oh Shift"...Now Shift Your Thinking

Darnetta Clinkscale MBA RRT, St Louis MO

Content Category: Management
Standing on a burning platform, hospitals are increasingly using consultants. Speaker will explain how to absorb this work, the need for it, and its proposals, advantages and limitations. You will learn the attitude, how to gauge your operation and how to bridge the gap –and go beyond- as you hold on to quality and safety.

Shawna L Strickland PhD RRT-NPS AE-C FAARC

Angela King RPFT RRT-NPS

Darnetta Clinkscale MBA RRT

Sunday, Nov. 8

Proper Billing Procedures in the Pulmonary Function Lab
1:45 pm – 2:20 pm

Proper Billing Procedures in the Pulmonary Function Lab

Jack Wanger MS RRT RPFT FAARC, Rochester MN

Content Category: Pulmonary Function
The codes utilized for billing pulmonary diagnostics procedures change nearly every year. These changes can include the deletion of existing codes or the creation of new codes. Other times, changes are made in what must be performed in order to use a specific code.

Step Up to the Plate: RTs on the ALS Multidisciplinary Team
1:45 pm – 2:20 pm

Step Up to the Plate: RTs on the ALS Multidisciplinary Team

Cynthia Knoche RRT BBA, Ponte Vedra Beach FL

Content Category: Clinical Practice
ALS (amyotrophic lateral sclerosis) patients rely on the expertise of both the clinic and home care therapist to evaluate, recommend, and manage their complex and ever-changing ventilation requirements. Collaboration with multidisciplinary team members and between clinic and home care therapists maximize patients' quality of life and ultimate ventilation goals.

Patient-Ventilator Interactions: Making the Ventilator "Cooperate" with the Patient
1:45 pm – 2:20 pm

Patient-Ventilator Interactions: Making the Ventilator "Cooperate" with the Patient

John D Davies RRT MA FAARC, Durham NC

Content Category: Adult Critical Care
Synchrony between the patient and ventilator should be of utmost importance. Graphical interfaces are much more advanced today and they give clinicians a valuable tool to guide breath delivery in an effective and comfortable manner.

Why Providing Sleep Services Has Turned into a Nightmare
1:45 pm – 2:20 pm

Why Providing Sleep Services Has Turned into a Nightmare

TBD

Content Category: Sleep Medicine
Presenter will discuss how sleep centers nationwide are dealing with the shift in staffing and reduction of reimbursement while still trying to provide sleep disorders testing to the increasing number of patients requiring polysomnography and sleep testing.

Pediatric Diagnostic Dilemmas
1:45 pm – 3:00 pm

Pediatric Diagnostic Dilemmas

Chani Traube MD, New York NY

Ira M Cheifetz MD FCCM FAARC, Durham NC

Content Category: Neonatal/Pediatric
Can you make the diagnosis? Two experts in the field will present a variety of common and uncommon pediatric respiratory disorders. Attend this interactive, educational, and fun session to test your diagnostic skills.

Jack Wanger MS RRT RPFT FAARC

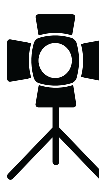
Cynthia Knoche RRT BBA

John D Davies RRT MA FAARC

Chani Traube MD

Ira M Cheifetz MD FCCM FAARC

The RT and Physician Partnership in Patient-centric Care Across the Continuum: Acute Care to Home
1:45 pm – 4:20 pm



1:45 pm – 2:20 pm
Coordinated Care and Maximizing Outcomes

Kent L Christopher MD RRT FAARC, Aurora CO

Content Category: Clinical Practice
This presentation will provide a foundation for the respiratory therapist's knowledge of patient-centric care implemented with a collaborative care model and how coordination and continuity of care impact patient outcomes and health care costs. The RT and physician partnership across the continuum should set an ultimate goal for patient empowerment for home self-care with RT and physician support.

2:25 pm – 3:00 pm
Coordinating Patient-centered Care in the Acute Care Setting

Russell Acevedo MD FAARC, Syracuse NY

Robert Pikarsky RRT, Syracuse NY

Content Category: Clinical Practice
This session will discuss continuity and coordination of care within the acute care setting. The presenters will identify situations that commonly cause disruption in patient-centric care in this environment as they navigate a patient toward assessment and preparation for appropriate discharge to downstream sites of care.

3:05 pm – 3:40 pm
Coordinating Patient-centric Care in the Long-term Acute Care and Post-acute Transitional Settings

Eric S Yaeger MD, Denver CO

Sam Collins CRT, Louisville KY

Content Category: Clinical Practice
This session will discuss continuity and coordination of care within the long-term acute care hospital and post-acute transitional settings. The presenters will identify situations that commonly cause disruption in patient-centric care in this environment as they navigate a patient toward assessment and preparation for discharge home.

3:45 pm – 4:20 pm
Coordinating Patient-centric Care in the Home

Kent L Christopher MD RRT FAARC, Aurora CO

Kimberly S Wiles RRT CPFT, Ford City PA

Content Category: Clinical Practice
This session discusses the importance of communication and collaboration with the physician and RT from the discharging institution, which helps position the patient and caregivers for favorable home outcomes. Continuity and coordination of care in the home care setting are stressed. The presenters will identify situations that commonly cause disruption in patient-centered care in this environment.

Continuing Respiratory Care Education (CRCE)

AARC Congress 2015 is approved for all the credit hours you need to maintain your state license, more than 21 hours.

Kent L Christopher MD RRT FAARC

Russell Acevedo MD FAARC

Robert Pikarsky RRT

Eric S Yaeger MD

Sam Collins CRT

Kimberly S Wiles RRT CPFT

Sunday, Nov. 8

AARC's 31st New Horizons in Respiratory Care Symposium

Monitoring

1:45 pm – 5:00 pm

AARC's 31st New Horizon in Respiratory Care Symposium – Monitoring

1:45 pm – 5:00 pm

1:45 pm – 2:20 pm

Pulse Oximetry — Beyond SpO2

Dean R Hess PhD RRT FAARC, Boston MA

Content Category: Clinical Practice
This lecture will cover recent embellishments in pulse oximetry such as measurements of carboxyhemoglobin, methemoglobin, hemoglobin, and perfusion.

2:25 pm – 3:00 pm

Volumetric Capnography and VD/VT

Richard H Kallet MS RRT FAARC, San Francisco CA

Content Category: Clinical Practice
This lecture will cover current aspects of volumetric capnography; it will contrast time-based and volume-based capnography. It will also include a discussion of the clinical use of dead space measurements.

3:05 pm – 3:40 pm

Ultrasound To Evaluate the Lungs and Diaphragm

Samir Jaber MD PhD, Montpellier Cedex France

Content Category: Clinical Practice
This lecture will describe the use of ultrasound to assess lung function and diaphragm function.

3:45 pm – 4:20 pm

Electrical Impedance Tomography

Brian K Walsh MBA RRT-NPS FAARC, Boston MA

Content Category: Clinical Practice
This lecture will describe the use of electrical impedance tomography as a lung imagining technique.

4:25 pm – 5:00 pm

Monitoring During Procedural Sedation

Lori Conklin MD, Charlottesville VA

Content Category: Clinical Practice
This lecture will address the appropriate role of monitoring during procedural sedation.

Dean R Hess PhD RRT FAARC

Richard H Kallet MS RRT FAARC

Samir Jaber MD PhD

Brian K Walsh MBA RRT-NPS FAARC

Lori Conklin MD

Non-Invasive Support for Acute Respiratory Failure

1:45 pm – 5:00 pm

1:45 pm – 2:20 pm

Humidified High-flow Nasal Cannula (HHFNC): Fad or Serious Management Strategy?

Julie Jackson BAS RRT-ACCS,
Des Moines, IA

Content Category: Adult Critical Care
HHFNC has become a popular tool in the support of acute respiratory failure. This lecture will discuss the current literature supporting its use and whether or not the strategy is here to stay.

2:25 pm – 3:00 pm

Humidified High-flow Nasal Cannula: A Case Report and One Large Tertiary Centers Experience

Julie Jackson BAS RRT-ACCS

Content Category: Adult Critical Care
This lecture will discuss a case report where HHFNC was successfully utilized in a patient with acute respiratory failure. We will also discuss other experiences within a large tertiary medical center and our own internal analysis of this therapy.

3:05 pm – 3:40 pm

Non invasive Positive Pressure Ventilation: Can and Should It Be Used Outside of the Critical Care Areas for COPD and CHF?

Carl R Hinkson MS RRT-ACCS NPS FAARC,
Seattle WA

Content Category: Adult Critical Care
This lecture will discuss the current literature regarding the use of NIPPV in acute respiratory failure with COPD and congestive health failure. We also will discuss the use of NIPPV with these patients in areas outside of the critical care unit.

3:45 pm – 4:20 pm

Non invasive Positive Pressure Ventilation (NIPPV) in Patients Other Than CHF and COPD

Brady Scott MS RRT-ACCS, Chicago IL

Content Category: Adult Critical Care
This lecture will discuss the use of NIPPV in those patients where there may be some controversy, such as ARDS patients, immunocompromised patients, palliative-care patients, and others.

4:25 pm – 5:00 pm

Non invasive Mechanical Ventilation in High-risk Pulmonary Infections

PJ Papadakos MD FCCM FAARC,
Rochester NY

Content Category: Adult Critical Care
Noninvasive mechanical ventilation has a growing role in supporting patients with high-risk infections. The recent pandemics with H1N1 and SARS have brought to light the efficacy of using non invasive modes across large numbers of patients. This session will provide a clinical review of the data.

Julie Jackson BAS RRT-ACCS

Carl R Hinkson MS RRT-ACCS NPS FAARC

Brady Scott MS RRT-ACCS

PJ Papadakos MD FCCM FAARC

Honor Our Troops

ATTEND THE AARC FLAG FOLDING CEREMONY

November 8
9:30 AM in front of
the Exhibit Hall Entrance

Sunday, Nov. 8

Beyond the Numbers – Making a Difference in Managing COPD
2:25 pm – 3:00 pm

Beyond the Numbers – Making a Difference in Managing COPD

Richard M Ford RRT FAARC, San Diego CA

Content Category: Management
There is little doubt that the ACA brings new opportunity for respiratory practitioners to play a valued role in COPD disease management. How do you structure a program to better serve this patient population? How do you convince hospital administration to invest in you and your staff? Attend this program to find out how to best position practitioners for success.

Inhalation Challenges, Are They Really That Challenging? The Methacholine Challenge Test
2:25 pm – 3:00 pm

Inhalation Challenges, Are They Really That Challenging? The Methacholine Challenge Test

Jack Wanger MS RRT RPFT FAARC, Rochester MN

Content Category: Pulmonary Function
There are a number of inhalation challenge agents used to assess airway responsiveness including: methacholine, mannitol, hypertonic saline, and specific antigens. Of these, methacholine is the most widely used. The latest information and recommendations on performing the methacholine test will be presented.

Development of Respiratory Services in Skilled Nursing Facilities
2:25 pm – 3:00 pm

Development of Respiratory Services in Skilled Nursing Facilities

Claire Aloan MS RRT-NPS FAARC, Tully NY

Content Category: Clinical Practice
With the growing trend to care for patients in the least acute environment, skilled nursing facilities have become increasingly important settings for care of patients with respiratory disorders. This program will describe the types of services that can be offered in the SNF setting and will review different mechanisms for their implementation.

How To Sleep in the ICU
2:25 pm – 3:00 pm

How To Sleep in the ICU

Jessica Schweller RRT RN MS CNP, Columbus OH

Content Category: Sleep Medicine
How much sleep do patients actually get in the ICU? Are we doing more harm than good? This lecture will explore the changes in sleep architecture of patients in the ICU and how this impacts their healing process.

Richard M Ford RRT FAARC

Jack Wanger MS RRT RPFT FAARC

Jessica Schweller RRT RN MS CNP

Tobacco Cessation
2:25 pm – 5:00 pm

2:25 pm – 3:00 pm
The RT's Role in Ending Tobacco Use

Sarah M Varekojis PhD RRT, Columbus OH

Content Category: Clinical Practice
RTs specialize in the treatment of tobacco-related disease, and we should also specialize in understanding and treating the cause. We need to be comfortable and confident in our ability to provide smoking cessation advice to patients and families. This presentation will provide valuable information to develop value-added skills for RTs to use at the bedside.

3:05 pm – 3:40 pm
Bedside Smoking-cessation Counseling: Does It Work?

Krystal Craddock RCP RRT-NPS, Sacramento CA

Content Category: Clinical Practice
We are often asked to provide smoking cessation counseling to our hospitalized patients who currently smoke, but are our efforts successful? Learn how smoking cessation counseling does work during the patient's admission. This is an opportunity for RT's with little training in smoking cessation counseling to learn what tools are necessary to successfully assist patients in quitting.

3:45 pm – 4:20 pm
Educating Your Patients on Emerging Tobacco Products: Hookah and E-cigarettes

Mary Martinasek PhD RRT-NPS RPFT MPH MCHES, Tampa FL

Content Category: Clinical Practice
Attendees will gain a firm understanding of the product functions, epidemiology, constituents and both negative and positive self-reported effects related to respiratory and general health of both hookah smoking and electronic cigarettes. This presentation will provide a comprehensive summary of empirical literature on both topics.

4:25 pm – 5:00 pm
Electronic Cigarettes—Should Be Discussed As a Cessation in Helping Your Patients' Quit.

(Pro/Con)

Pro: Erna Boone PhD RRT FAARC, Little Rock AR

Con: Scott Cerreta RRT, Washington DC

Content Category: Clinical Practice
Electronic cigarettes have grown in popularity to the point that even non-smokers are trying them. Some clinicians argue there is a place for them on the basis of harm reduction. How will you answer your patients when asked about e-cigarettes? This Pro/Con session will give a lively review of the available data for both positions so you can make-up your mind on where you stand on this issue.

Developing a Pediatric Specialty Team in a Community Hospital
3:05 pm – 3:40 pm

Developing a Pediatric Specialty Team in a Community Hospital

Claire Aloan MS RRT-NPS FAARC, Tully NY

Content Category: Management
Overview of selection and training of pediatric specialists in a community hospital setting, including member selection, competency development, and use of specialty training programs such as STABLE, PALS, and NRP.

Sarah M Varekojis PhD RRT

Krystal Craddock RCP RRT-NPS

Mary Martinasek PhD RRT-NPS RPFT MPH

Erna Boone PhD RRT FAARC

Scott Cerreta RRT

Sunday, Nov. 8

Diffusing Capacity: A Decade of Decreasing the Noise – What Have We Learned?
3:05 pm – 3:40 pm

Diffusing Capacity: A Decade of Decreasing the Noise – What Have We Learned?

Susan Blonshine RRT RPFT AE-C FAARC, Mason MI

Content Category: Pulmonary Function
Over the past 10 years there have been many lessons learned to improve the measurement of DLCO. This presentation will review the practical application of these lessons to decrease the measurement noise and improve the accuracy of the diffusing capacity measurement.

Sleep and Obesity
3:05 pm – 3:40 pm

Sleep and Obesity

Lutana Haan MHS RRT RPSGT, Boise ID

Content Category: Sleep Medicine
Obesity has become an epidemic in our country; and though we hear a lot about diet and exercise, RTs need to learn the effect of poor sleep and its effect on obesity.

The Magic of Pediatric Home Ventilation
3:05 pm – 4:20 pm

3:05 pm – 3:40 pm
Gadgets and Devices

Jenni L Raake MBA RRT-NPS, Amelia OH

Content Category: Neonatal/Pediatric
There are a variety of home care ventilators in today's market. It must be stressed that not every home care ventilator is suited to provide care for pediatric patients. This presentation will explore the various types of home care devices and discuss the optimal approach to selecting the most appropriate equipment for our patients.

3:45 pm – 4:20 pm
Challenges and Obstacles

Nancy A Johnson RRT-NPS, Medina OH

Content Category: Neonatal/Pediatric
The opportunity to be free from the confines of the hospital also presents challenges for ventilator-dependent infants and children. This presentation will explore the challenges of pediatric home mechanical ventilation, offer thoughts on how to overcome those challenges, and identify various opportunities for our pediatric home-ventilated patients.

From the Very First Breath
3:05 pm – 5:00 pm

3:05 pm – 3:40 pm
Optimal Respiratory Management in the Delivery Room

Sherry E Courtney MD MS, Little Rock AR

Content Category: Neonatal/Pediatric
The clinical path of a neonate born with respiratory disease may be altered by the management from the infant's first breath. This presentation will overview the optimal respiratory management in the delivery room based on the available data and consensus guidelines. Time will be allocated for questions from the audience.

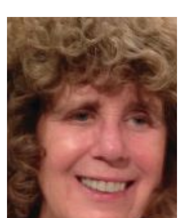
RESPIRATORY CARE
The peer-reviewed science journal of the American Association for Respiratory Care

Susan Blonshine RRT RPFT AE-C FAARC

Lutana Haan MHS RRT RPSGT

Jenni L Raake MBA RRT-NPS

Nancy A Johnson RRT-NPS


Sherry E Courtney MD MS

3:45 pm – 4:20 pm

Unplanned Extubations: Preventing the Risk

Kathleen M Deakins MSHA RRT-NPS FAARC, Cleveland OH

Content Category: Neonatal/Pediatric
Practice issues in the NICU remain at the forefront of day-to-day care. Unplanned extubations present serious challenges for the management of the smallest intubated infants. This presentation will be focused on identifying the common causes, interventions, and management of this problem while maintaining a developmental environment for the vulnerable infant.

4:25 pm – 5:00 pm

Challenges Following the NICU Course: Ethical or Not?

Jonathan Fanaroff MD, Cleveland OH

Content Category: Neonatal/Pediatric
Premature infants are surviving well beyond previous expectations. However, in some challenging cases, infants are faced with complex long-term care issues that must be addressed by caregivers and family members. This presentation addresses the complex ethical challenges related to survival of the smallest infants.

Open Forum Poster Discussions #7
3:10 pm – 5:05 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Open Forum Poster Discussions #8
3:10 pm – 5:05 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Too Much, Too Fast…Managing Change
3:45 pm – 4:20 pm

Too Much, Too Fast…Managing Change

Richard M Ford RRT FAARC, San Diego CA

Content Category: Management
More and more is demanded from both respiratory care leaders and staff. Between unfunded mandates, new programs, and new technology, how do you keep up with it all? The presenter will provide approaches to staying energized and engaged.

Debunking Myths and Dogma in Pulmonary Function Testing
3:45 pm – 4:20 pm

Debunking Myths and Dogma in Pulmonary Function Testing

Jeff Haynes RRT RPFT, Nashua NH

Content Category: Pulmonary Function
Myths and dogma are common in medicine, and pulmonary function testing is not immune from this phenomenon. Learn how common myths can result in misinterpretation of data and inconvenience for patients.

Kathleen M Deakins MSHA RRT-NPS FAARC

Jonathan Fanaroff MD

Richard M Ford RRT FAARC

Jeff Haynes RRT RPFT

Sunday, Nov. 8

Before You Go Under the Knife – Pre-operative OSA Screening
3:45 pm – 4:20 pm

Before You Go Under the Knife – Pre-operative OSA Screening

Jessica Schweller RRT RN MS CNP, Columbus OH

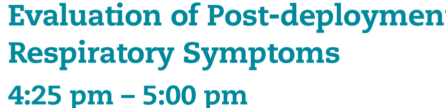
Content Category: Sleep Medicine
Each year, patients undergo multiple elective procedures with many resulting in post-operative complications. This lecture will provide insight into developing a screening protocol for possible OSA patients, as well as the types of testing and treatment involved.

Lung Partners – Primary Respiratory Care
4:25 pm – 5:00 pm

Lung Partners – Primary Respiratory Care

Russell Acevedo MD FAARC, Syracuse NY

Content Category: Management
Lung Partners is a unique in-patient disease management model where the primary RT and their COPD patient are linked for the current and all subsequent care episodes. They are responsible for their patient's treatments, education, assessments for comorbidities, and other disease management responsibilities. Outcomes related to COPD care, cost, readmissions, and patient and RT satisfaction will be presented.



Evaluation of Post-deployment Respiratory Symptoms
4:25 pm – 5:00 pm

Evaluation of Post-deployment Respiratory Symptoms

Michael J Morris MD MACP FCCP, Fort Sam Houston, TX

Content Category: Pulmonary Function
This session will discuss issues surrounding potential deployment exposures for military personnel and the recommended approach in evaluating these individuals for evidence of underlying pulmonary disorders.

Jessica Schweller
RRT RN MS CNP

Russell Acevedo
MD FAARC

Michael J Morris
MD MACP FCCP

Breathing with a Sick Heart
4:25 pm – 5:00 pm

Respiratory Management of Infants and Children with Cardiac Disease

Alex T Rotta MD FAACP FCCM, Cleveland OH

Content Category: Neonatal/Pediatric
The choice of respiratory support in children with cardiac disease can be complex and unforgiving if performed incorrectly. This presentation discusses common strategies employed in the critical care setting, applying a physiologic approach based on cardiopulmonary interactions.

Sensitivity Training in Preparation for Service Learning
4:25 pm – 5:00 pm

Sensitivity Training in Preparation for Service Learning

Crystal L Dunlevy EdD RRT RCP, Columbus OH

Content Category: Education
Students often perform service learning in environments that are new to them, including low SES and culturally diverse settings. We developed and delivered a sensitivity training program that resulted in significantly improved empathy levels. Open-ended reflection questions changed dramatically from negative to positive. The sensitivity program will be presented and discussed.

Identification and Retention of In-patients for Your Out-patient Hospital Sleep Lab
4:25 pm – 5:00 pm

Identification and Retention of In-patients for Your Out-patient Hospital Sleep Lab

Peter Allen BSRC RRT-NPS-SDS RST RPSGT, Radnor PA

Content Category: Sleep Medicine
Increasing OSA awareness of hospital staff that results in additional revenue for your facility.

Special Note

The largest respiratory care Exhibit Hall in the world will be open in Tampa, Florida Saturday through Monday, November 7-9.

Most all exhibitors will have clinical specialist on hand to answer questions on products, services and technology. Don't miss this unique opportunity with all companies in the respiratory care industry.

Alex T Rotta MD FAACP FCCM

Crystal L Dunlevy EdD RRT RCP

Peter Allen BSRC RRT-NPS-SDS RST RPSGT

AARC Congress 2015

Monday, Nov. 9

42nd Donald F Egan Scientific Memorial Lecture

8:30 am – 9:20 am

This lecture provides an overview of in-depth information about dynamic aspects of pulmonary physiology, pulmonary medicine, or clinical respiratory care. The lectureship is extended to a recognized world-class participant in the area of interest – investigator, clinician, or academician.

Monitors: Improving Safety or Increasing Risk?

Charles G Durbin Jr MD FAARC, Charlottesville VA

Content Category: Clinical Practice

Monitoring is a routine and common component of caring for critically ill patients and patients at risk for serious, unpredictable deterioration. This presentation will review the explosion of devices developed to provide monitoring for patients in and outside the ICU. Unintended consequences of this massive deployment of technology has led to problems with false alarms, caregiver distraction, environmental noise pollution, failure to respond to real alarms, and fatigue resulting in worsening patient outcomes. Using pulse oximetry as a prototype monitor and familiar device, the important issues of monitoring in general will be investigated. A paradigm that can be used to evaluate the impact of monitoring in general will be developed. Evaluation of a monitor requires understanding the care decisions and actions driven by its use, not by the presence or absence of the device itself. Confusion with making clinical diagnoses (e.g., "hypoxia") and monitoring (e.g., identifying "falling saturations and intervening") leads to the misunderstandings about the value and use of monitoring. This concept will be developed in detail during this presentation.

Open Forum Editors' Choice

9:30 am – 11:55 am

Supported by an unrestricted educational grant from

Presentations of the top abstracts in this year's OPEN FORUM. Researchers and clinicians present significant findings in respiratory care research in a 10-minute slide presentation, followed by 10 minutes of audience questions and discussions. Important- Posters of the Editors' Choice abstracts will be displayed in the Exhibit Hall on Saturday and Sunday, November 7-8, and in the meeting room on Monday, November 9.

Monday, Nov. 9

Adult Acute Care Section Membership Meeting
9:55 am – 10:25 am

Keith D Lamb RRT-ACCS/*Presiding*
Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section non-members, are invited to attend and participate.

Surface & Air Transport Section Membership Meeting
9:55 am – 10:25 am

Billy Hutchison BA RRT-NPS/*Presiding*
Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section non-members, are invited to attend and participate.

Overview of Patient Family-centered Care in the Hospital
10:30 am – 11:05 am

Overview of Patient Family-centered Care in the Hospital

Keith Hirst MS RRT-NPS RRT-ACCS, Boston MA

Content Category: Management
This lecture will discuss the four principles of patient family-centered care and the importance that organizations like National Patient Safety Foundation, Institute of Medicine, American Hospital Association, and others are stressing the importance of patient-family centered health. The speaker will discuss how these are affecting hospitals and health care.

Pediatric Disasters: Are We Really Ready?
10:30 am – 11:05 am

Pediatric Disasters: Are We Really Ready?

Michael R Anderson MD MBA FAAP, Cleveland OH

Content Category: Bioterrorism/Emergency Preparedness
Disaster preparedness has largely been focused on the adult population, but what about infants and children? Are we really ready? This presentation will review the current state of pediatric preparedness and offer thoughts for the future.

Simulation Best Practices
10:30 am – 11:05 am

Simulation Best Practices

Lutana Haan MHS RRT RPSGT, Boise ID

Content Category: Education
This lecture will discuss the educational philosophy of simulation. The presenter will describe how the structure of simulation can best obtain your objectives and will review models of best practice from published research.

Neonatal and Pediatric Airway Management: Drug Regimes, Techniques, and Controversies in the Transport Setting
10:30 am – 12:25 pm

10:30 am – 11:05 am

Neonatal/Pediatric Airway Management: What the Evidence Is Telling Us

Bradley A Kuch RRT-NPS FAARC, Pittsburgh PA

Content Category: Neonatal/Pediatric
Controversy surrounds which intubating techniques should be used during pediatric transport. Intubation techniques have been associated with neurologic and pulmonary outcomes. The lecture will discuss various intubation approaches used in the transport setting. Evidence will be discussed with emphasis on neurologic and success rate outcomes.

Keith Hirst MS RRT-NPS RRT-ACCS

Michael R Anderson MD MBA FAAP

Lutana Haan MHS RRT RPSGT

Bradley A Kuch RRT-NPS FAARC

11:10 am – 11:45 am

Intubation Regimes: Choosing the Correct Pharmacologic Adjuncts for Specific Clinical Situations

Jerome Spinnato RN RRT CCRN C-NPT, Pittsburgh PA

Content Category: Neonatal/Pediatric
Pharmacologic regimes for certain clinical situations are essential for successful management of children with respiratory failure resulting from differing etiologies. Clinicians continue to use single pharmacologic protocols to manage all types of neonatal/pediatric respiratory failure. Protocols for each agent and their indication will be reviewed.

11:50 am – 12:25 pm

Medication-assisted Neonatal Intubation: A Pro/Con Debate

Pro: Bradley A Kuch MHA RRT-NPS FAARC, Pittsburgh PA

Con: Jerome Spinnato RN RRT CCRN C-NPT, Pittsburgh PA

Content Category: Neonatal/Pediatric
Much controversy surrounds medication-assisted intubation in the neonatal population. The pro/con debate will review the evidence regarding the use of pharmacologic adjuncts to facilitate intubation. The lecture will conclude an interactive audience discussion surrounding the topic of medication-assisted intubation in the neonatal population.

Connecting the Dots from Inpatient to Outpatient Chronic Disease Management
10:30 am – 12:25 pm

10:30 am – 11:05 am

Pulmonary Disease Educator – Is You're Staff Ready to Teach?

Charley P Starnes RRT RCP, Charlotte NC

Content Category: Clinical Practice
This presentation will discuss how to prepare your staff to teach at the bedside and help transition the patient to home, successes and lessons learned in becoming a pulmonary disease educator, and the steps needed for continued success.

11:10 am – 11:45 am

Creating an Effective Transition of Care Program for Patients with COPD Who Are Leaving the Hospital: The Pittsburgh Regional Health Initiative Experience

Presenter: TBD

Content Category: Clinical Practice

This session will focus on the development and implementation of a transition of care program throughout seven different hospitals in Western Pennsylvania that was a component of a CMS Innovation Award Grant. An overview of the results of the program will also be discussed.

11:50 am – 12:25 pm

Connecting the Dots from Inpatient to Outpatient Chronic Disease Management

Charley P Starnes RRT RCP

Content Category: Clinical Practice
What are the positive clinical and financial outcomes of an RT driven COPD management program? This presentation will discuss the fundamentals of a COPD management program, involving respiratory therapists, across the continuum of care: from the hospital to physician offices to home.

Jerome Spinnato RN RRT CCRN C-NPT

Bradley A Kuch RRT-NPS FAARC

Charley P Starnes RRT RCP

Monday, Nov. 9

Open Forum Posters Only #2
10:00 am – 2:30 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present the results of their work in this Posters Only session. Authors available from 12:00 pm – 1:30 pm for questions and interaction.

The Potential Organ Donor: Safe Options for Your Patient
10:30 am – 12:25 pm

10:30 am – 11:05 am
Brain and Cardiac Death Defined

MaryAnn Couture MS RRT-ACCS, Hartford CT

Content Category: Adult Critical Care
Brain death studies are low-volume specialized procedures in large medical facilities. Attendees will learn about differences in brain and cardiac deaths, the physiology of brain death, and the American Association of Neurology apnea testing guidelines to determine brain death.

11:10 am – 11:45 am
Apnea Tests and Ventilation To Increase Lung Procurement

Maria Madden RRT-ACCS, Baltimore MD

Content Category: Adult Critical Care
Discuss traditional apnea tests and using the Carbogen method as a safer method. Review current literature on how APRV has increased lung procurement.

11:50 am – 12:25 pm
The Respiratory Therapist's Role in Organ Procurement

MaryAnn Couture MS RRT-ACCS

Content Category: Adult Critical Care
Organ procurement and recovery requires a host of partnerships between several disciplines. Managing lungs is the gateway to managing all organs. There are established best practices and policies under Medicare and Medicaid Services Conditions for participation in organ recovery. How is the respiratory therapist utilized? There's more to do than just protecting the lung

Patient–centric Care: Defining the Patient, Therapist and Physician Team
10:30 am – 12:25 pm

10:30 am – 11:05 am
We Are Patients: Let's Talk About Our Collective Needs

John Walsh, Miami FL

Jon Tiger, Wichita KS

Content Category: Clinical Practice
The presenters have been on the receiving end of respiratory care for many years and will candidly speak to both positive and negative experiences through evolving health care changes. Through leadership in patient-driven advocacy groups, both will discuss collective patient needs. As advocates of respiratory therapy disease management, they will offer opinions on needed change for improved patient-centered care.

MaryAnn Couture MS RRT-ACCS

Maria Madden RRT-ACCS

John Walsh

11:10 am – 11:45 am

The Therapist Is Key To Making Patient-centric Care Happen

Patrick J Dunne MEd RRT FAARC, Fullerton CA

Content Category: Clinical Practice
Successful care transition equals sustained patient engagement, which is the essence of patient-centric care. Respiratory therapists are clearly the best qualified to integrate the physician's intended care plan with the needs and expectations of chronic respiratory patients. Better chronic care is good for patients, therapists, physicians, and society in general.

11:50 am – 12:25 pm

The Physician's Role in Empowering Both the Therapist and the Patient

Kent L Christopher MD RRT FAARC, Aurora CO

Content Category: Clinical Practice
Physicians must embrace a collaborative care model. RTs across the continuum of care must be empowered to engage, assess, educate, instruct, and monitor patient self-management. Effective team communication along the continuum of patient-centric care is essential. The "art" of engaging patients throughout evolving emotional, psychological, and physical needs will be presented.

Sleep Center and DME Communication — Leading to Better Patient CPAP Compliance 10:30 am – 12:25 pm

10:30 am – 11:05 am

DME and the Sleep Center: Assessment, Treatment, and Follow-up Care

Karen S Schell DHSc RRT-NPS RRT-SDS RPFT AE-C CTTS, Emporia KS

Content Category: Sleep Medicine
The role of patient education and the responsibilites of the sleep center and the DME. Communication between the sleep center and the DME provide transitional care and education for improved compliance.

11:10 am – 11:45 am

Identifying Roles and Responsibilities of the Attending Physician for the Sleep Lab, and DME

Paul A Selecky MD FAARC FCCP, Newport Beach CA

Content Category: Sleep Medicine
Each participant has much to contribute toward making the patient compliant with treatment; and there frequently can be overlap that can be confusing and contradictive.

11:50 am – 12:25 pm

What Happens to Patients When They Leave the Sleep Center and Have Their Equipment Set Up by the DME?

TBD

Content Category: Sleep Medicine
Patients often forget CPAP instructions and do not seek help when addressing problems with CPAP usage. This lecture will discuss possible solutions for keeping the patient on track with treatment.

Patrick J Dunne MEd RRT FAARC

Kent L Christopher MD RRT FAARC

Karen S Schell DHSc RRT-NPS RRT-SDS RPFT AE-C CTTS

Paul A Selecky MD FAARC FCCP

Monday, Nov. 9

Using Social Media as a Way To Connect to Patients
11:10 am – 11:45 am

Using Social Media as a Way To Connect to Patients

Jason Moury MPH RRT, Miami FL

Content Category: Management
The use of social media can be a great way to connect with our patients. It does not come without potential issues. This section will provide information about how to utilize social media without violating HIPAA regulations. Examples of proper use and improper use will be shown as well as basic steps needed to getting started.

Driving in the Dark: Assessing NIV Treatment in ALS
11:10 am – 11:45 am

Driving in the Dark: Assessing NIV Treatment in ALS

Lee Guion MA RRT FAARC, San Francisco CA

Content Category: Clinical Practice
Using noninvasive ventilation to treat respiratory insufficiency in ALS is now the standard of care. However, there is no consensus on how to determine treatment success. Current practice in ALS clinics will be reviewed. Components of a best practice model will be proposed.

Clinical Controversies in Pediatric Respiratory Care
11:10 am – 12:25 pm

Clinical Controversies in Pediatric Respiratory Care

Michael R Anderson MD MBA FAAP, Cleveland OH

Ira M Cheifetz MD FCCM FAARC, Durham NC

Content Category: Neonatal/Pediatric
Brought back to the program by request from many attendees, this session will focus on various clinical controversies in pediatric respiratory care. Two experts in the field will debate current controversies with input from the attendees.

Getting Your Department Ready for Patient Family-centered Care!
11:50 am – 12:25 pm

Getting Your Department Ready for Patient-family Centered Care!

Keith Hirst MS RRT-NPS RRT-ACCS, Boston MA

Content Category: Management
Speaker will discuss strategies for implementing the four principals of patient family center care into your department and organization. Further discussion will be had on managing and sustaining patient family-centered care success within the department/organization.

Does Bulbar Dysfunction Render Respiratory Assessment by Standard PFTs Meaningless?
11:50 am – 12:25 pm

Does Bulbar Dysfunction Render Respiratory Assessment by Standard PFTs Meaningless?

Lee Guion MA RRT FAARC, San Francisco CA

Content Category: Clinical Practice
There is currently no consensus on the best assessment of pulmonary function in ALS. Common measures of bedside measures are profoundly limited in patients with bulbar weakness and cognitive impairment. Based on results of new research on phrenic nerve conduction studies, a case will be made for its use as a biomarker of respiratory function in ALS.

Jason Moury MPH RRT

Lee Guion MA RRT FAARC

Michael R Anderson MD MBA FAAP

Ira M Cheifetz MD FCCM FAARC

Keith Hirst MS RRT-NPS RRT-ACCS

Management Section Membership Meeting
12:30 pm – 1:00 pm

Cheryl A Hoerr MBA RRT CPFT FAARC/*Presiding*
Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section non-members, are invited to attend and to participate.

Open Forum Poster Discussions #9
12:30 pm – 2:25 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Open Forum Poster Discussions #10
12:30 pm – 2:25 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Sleep Section Membership Meeting
12:45 pm – 1:15 pm

Peter Allen BSRC RRT-NPS RRT-SDS RST RPSGT/Presiding
Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section non-members, are invited to attend and to participate.

Education Section Membership Meeting
1:00 pm – 1:30 pm

Ellen Becker PhD RRT-NPS AE-C /Presiding
Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section nonmembers, are invited to attend and participate.

Continuing Care/Rehab Section Membership Meeting
1:15 pm – 1:45 pm

Gerilynn Connors RRT FAARC/Presiding
Section members meet to determine their needs and priorities, as well as how to use AARC resources to accomplish them. All Congress attendees, including section nonmembers, are invited to attend and participate.

Earning Respect Is Job 1 for RTs
1:45 pm – 2:20 pm

Earning Respect Is Job 1 for RTs

Duke Johns BA, New Orleans LA

Content Category: Management
Respect should be the No. 1 goal for every RT. It must be earned. If you are respected by administration, nursing, physicians, patients, and peers, you will achieve all of your goals.

Duke Johns BA

Monday, Nov. 9

Pediatric Critical Care Transport: What Makes the Biggest Difference?
1:45 pm – 2:20 pm

Pediatric Critical Care Transport: What Makes the Biggest Difference?

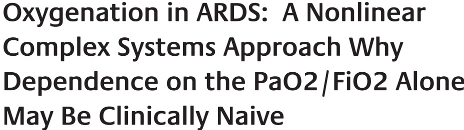
Steve E Sittig RRT-NPS FAARC, Hartford SD

Content Category: Neonatal/Pediatric
Children and babies compose about 10 % of emergency cases. Faced with how best to transport to definitive care, the critical decision for the physician is to use a local standard adult transport team or call for a pediatric specialty team. This lecture will present data that pediatric specialty teams are a better choice for critical medical care transport of pediatric patients.

Disclosure of Faculty Conflict of Interest

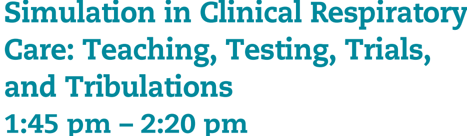
- The AARC remains strongly commited to providing the best available evidence-based clinical information to participants of this educational activity and requires an open disclosure of any potential conflict of interest identified by our faculty members.
- It is not the intent of the AARC to eliminate all situations of potential conflict of interest, but rather to enable those who are working with the AARC to recognize situations that may be subject to questions by others.
- All disclosed conflicts of interest are revived by the AARC Program Committee to ensure that such situations are properly evaluated and , if necessary, resolved.
- The AARC educational standards pertaining to conflict of interest are intended to maintain the professional autonomy of the clinical experts, which is essential in promoting a balanced presentation of science.
- Through our review process, all AARC CRCE activities are ensured of independent, objective, scientifically balanced presentations of information,
- Disclosure for all presecters will be acknowledged in the on-site final program..

Oxygenation in ARDS: A Nonlinear Complex Systems Approach Why Dependence on the PaO2/FiO2 Alone May Be Clinically Naive
1:45 pm – 2:20 pm


Oxygenation in ARDS: A Nonlinear Complex Systems Approach Why Dependence on the PaO2/FiO2 Alone May Be Clinically Naive

David M Wheeler MEd RRT-NPS, Charleston SC

Content Category: Adult Critical Care
The significant nonlinear patho-specific milieu of the P/F ratio will be discussed. The P/F fluctuates dramatically with changes in the pathobiological context of the patient. This talk will discuss this nonlinear relationship and inform the clinician in the formulation of evidence-based care maps for their patients and highlight the influence of V/Q and FiO2 on the authenticity of the P/F ratio.


Simulation in Clinical Respiratory Care: Teaching, Testing, Trials, and Tribulations
1:45 pm – 2:20 pm

Simulation in Clinical Respiratory Care: Teaching, Testing, Trials, and Tribulations

Brady Scott MS RRT-ACCS, Chicago IL

Content Category: Education
Simulation technology is commonly used to train medical skills and enhance performance of clinicians. This lecture describes the initial development and integration of simulation into a respiratory care department's clinical training program. Current trends and future possibilities of respiratory care simulation will also be described.

Steve E Sittig RRT-NPS FAARC

David M Wheeler MEd RRT-NPS

Brady Scott MS RRT-ACCS

Optimizing Aerosol Therapy in All Patient Populations: Concepts and Practice

1:45 pm – 3:00 pm

1:45 pm – 2:20 pm

Patient-focused Aerosol Therapy in Adults

Arzu Ari PhD RRT PT CPFT FAARC, Atlanta GA

Content Category: Adult Critical Care

Effective aerosol therapy in adults is dependent on matching a number of key variables with the specific patient population and care environment. Selection of aerosol generator device and patient interface are key to prescription adherence and optimal therapeutic outcomes.

2:25 pm – 3:00 pm

Patient-focused Aerosol Therapy in Critical Care

Arzu Ari PhD RRT PT CPFT FAARC

Content Category: Adult Critical Care

This presentation explains the types of aerosol devices available on the market and provides strategies for their selection and use for optimal treatment of patients receiving mechanical ventilation and noninvasive ventilation as well as spontaneously breathing patients with a tracheostomy.

Pediatric Safety: Raising the Bar

1:45 pm – 4:20 pm

1:45 pm – 2:20 pm

Overview of Pediatric Safety

Timothy R Myers MBA RRT-NPS FAARC, Irving TX

Content Category: Neonatal/Pediatric

Patient safety is the foundation of all patient care. This session will overview the key initiatives and strategies to optimize patient safety in the neonatal and pediatric populations.

2:25 pm – 3:00 pm

Pediatric Safety in the Ambulatory Care Setting

Amber L Galer RRT, West Point UT

Content Category: Neonatal/Pediatric

Patient safety is essential throughout the continuum of care. This presentation will highlight the needs and initiatives for improved safety measures in the pediatric ambulatory setting.

3:05 pm – 3:40 pm

Pediatric Safety in the Non-ICU Inpatient Setting

Natalie Napolitano MPH RRT-NPS FAARC, Philadelphia PA

Content Category: Neonatal/Pediatric

Although much attention has been paid to patient safety in the intensive care setting, we cannot forget about the routine inpatient wards. This presentation will review the priorities and initiatives to improve patient safety in the non-ICU inpatient setting.

3:45 pm – 4:20 pm

Pediatric Safety in the Critical Care Setting

Kyle J Rehder MD, Durham NC

Content Category: Neonatal/Pediatric

The neonatal and pediatric critical environments are some of the most risky areas in clinical care. This session will review strategies to optimize patient safety in the intensive care units.

Arzu Ari PhD RRT PT CPFT FAARC

Timothy R Myers MBA RRT-NPS FAARC

Amber L Galer RRT

Natalie Napolitano MPH RRT-NPS FAARC

Kyle J Rehder MD

Monday, Nov. 9

How Do We Optimize Management of Respiratory Failure Across the Continuum of Care Within a Changing Reimbursement Environment?

1:45 pm – 4:20 pm

1:45 pm – 2:20 pm

Acute Care Setting: From Avoiding To Managing Acute Respiratory Failure

Russell Acevedo MD FAARC, Syracuse NY

Content Category: Clinical Practice

ED care can allow discharge home or observation, but reimbursement may impair care access. NIV on medical floors and ICU may fail. Invasive ventilation liberation can be difficult. Proper care acceleration and deceleration is needed. RTs on discharge planning teams must assess clinical needs and payment coverage for discharge to long-term acute care, post-acute care, or home.

2:25 pm – 3:00 pm

The Long-term Acute Care Hospital (LTACH): Major Reimbursement Changes and Update on Management Strategies

Sean Muldoon MD MPH, Louisville KY

Content Category: Clinical Practice

Medicare LTACH policy requires three ICU days, but non-Medicare LTACH policy does not. Who will benefit from LTACH care? What are group clinical characteristics? Does post-acute care impact readmission and death? The RT's role in prolonged mechanical ventilation, chronic critical illness, and assessment and placement in high-level transitional care units or home will be discussed.

3:05 pm – 3:40 pm

Post-acute Care: What Does That Mean and How Can Patients with Respiratory Compromise Benefit?

Eric S Yaeger MD, Denver CO

Content Category: Clinical Practice

Respiratory transitional care units (RTCUs) manage ventilated patients, often with complex airways and chronic critical illness. Admission criteria for reimbursement must be met. Some patients can be liberated from ventilators. RTs require specialized skills and knowledge. RTs should properly evaluate and prepare patients with chronic home ventilation or home oxygen therapy for discharge.

3:45 pm – 4:20 pm

Chronic Home Mechanical Ventilation: Addressing Reimbursement Obstacles and Improving Quality of Life and Clinical Outcome

Peter C Gay MD MS FCCP, Rochester MN

Content Category: Clinical Practice

Distinct clinical populations on home mechanical ventilation (HMV) have different equipment and management needs. Reimbursement rules, regulations and terminology are outdated, and payment only covers durable medical equipment and excludes reimbursement for RT management of HMV. New technology and ventilator strategies are focused upon efforts to improve quality of life and clinical outcomes.

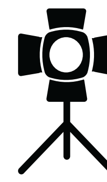
Russell Acevedo MD FAARC

Sean Muldoon MD MPH

Eric S Yaeger MD

Peter C Gay MD MS FCCP

Sleep Waves: What Is the Future



1:45 pm – 5:00 pm

1:45 pm – 2:20 pm

Integrating the Sleep Technologist into the Clinic: The Certification in Clinical Sleep Health (CCSH)

Chad Ruoff MD, Redwood City CA

Content Category: Sleep Medicine
New credentialing by the Board of Registered Polysmnographic Technologists signals migration by the profession to better support sleep technologists and therapists in the clinic environment. The presenter will discuss the CCSH certification and what it means to sleep technologists and therapists.

2:25 pm – 3:00 pm

Dental Devices: Educating Patients and Families About Options and Proper Use

Brad Eli MD, Encinitas CA

Content Category: Sleep Medicine
Dental devices are an emerging treatment option in treating the SDB patient. This presentation will discuss better understanding of dental device treatment options and opportunities to better educate patients for maximal therapeutic benefit.

3:05 pm – 3:40 pm

The Bi-directional Relationship Between Sleep and Obesity

Chad Ruoff MD, Redwood City CA

Content Category: Sleep Medicine
This presentation will address the implications of obesity and discuss basic weight-loss strategies for patients.

3:45 pm – 4:20 pm

Anything but CPAP! Alternatives to CPAP Therapy

Anthony L Daclan MBA RRT RCP, Fontana CA

Content Category: Sleep Medicine
Finding a therapy that a patient will be compliant with is crucial for the successful treatment of OSA. For patients at the Kaiser Fontana Sleep Disorders Center who cannot tolerate or who refuse CPAP, we offer several alternatives for them to choose from. This presentation will discuss four alternatives to CPAP for the treatment of OSA.

4:25 pm – 5:00 pm

Application of Adaptive Servoventilation or ASV for Complex Sleep Apnea

Peter C Gay MD MS FCCP, Rochester MN

Content Category: Sleep Medicine
Use of adaptive servo ventilation for the treatment of central or complex sleep disordered breathing will be discussed.

Effective Transitions – Reducing Readmissions by Partnering with Post-acute Care Resources

2:25 pm – 3:00 pm

Effective Transitions – Reducing Readmissions by Partnering with Post-acute Care Resources

Cheryl A Hoerr MBA RRT CPFT FAARC, Rolla MO

Content Category: Management
Chronic illness is responsible for 75 % of total health care costs and poor disease management results in re-hospitalizations. This presentation will share the details of a readmission prevention strategy that has been successful as a result of the collaborative efforts of acute care, home health, physician clinics, and long-term care facilities.

Chad Ruoff MD

Brad Eli MD

Peter C Gay MD MS FCCP

Cheryl A Hoerr MBA RRT CPFT FAARC

Monday, Nov. 9

Transport of the Trauma Patient
2:25 pm – 3:00 pm

Transport of the Trauma Patient

Joe C Hylton BSRT RRT-ACCS RRT-NPS NREMT-P FAARC, Charlotte NC

Content Category: Adult Critical Care
Trauma patients are often the most tenuous and usually require transport to an alternate facility better equipped to manage the patient's injuries. This presentation will cover the key challenges in intra-hospital transport. Strategies will be provided on how to avoid common pitfalls and mistakes.

Decreasing Herd Immunity and the Potential for a Pandemic
2:25 pm – 3:00 pm

Decreasing Herd Immunity and the Potential for a Pandemic

Kathleen O Ververeli MD, Allentown PA

Content Category: Bioterrorism/Emergency Preparedness
This presentation will focus on the practice of withholding vaccination for children and the potential risks it creates for causing a pandemic.

Using Diagnostic and Therapeutic Simulations To Build Interdisciplinary Teams
2:25 pm – 3:00 pm

Using Diagnostic and Therapeutic Simulations To Build Interdisciplinary Teams

Douglas E Masini EdD RPFT RRT-NPS AE-C FCCP FAARC, Savannah GA

Content Category: Education
New practitioners must learn to work in interdisciplinary teams while they master curricular content. When monitoring an interdisciplinary team, the diagnostic and therapeutic domains (cognitive, affective, and psychomotor) are audible, visible, and measurable. This presentation explains how the interdisciplinary department can use simulations to teach, reinforce, and measure skills.

Be Your Own Superhero: Dealing with Villains in the Workplace
3:05 pm – 3:40 pm

Be Your Own Superhero: Dealing with Villains in the Workplace

Dana Evans MHA RRT-NPS, Chesterfield MO

Content Category: Management
Working with difficult or disruptive personalities often leads to conflict, which can challenge the leaders' ability to maintain strong working relationships. How you respond in moments of conflict can help to resolve the situation or make it worse. The presenter will discuss conflict resolution strategies for dealing with major "villains" in the health care workplace.

The Most Interesting Neonatal/Pediatric Transport Cases I've Ever Seen
3:05 pm – 3:40 pm

The Most Interesting Neonatal/Pediatric Transport Cases I've Ever Seen

Steve E Sittig RRT-NPS FAARC, Hartford SD

Content Category: Neonatal/Pediatric
Medical transport is a dynamic environment where best-laid plans may go astray. Anyone who does transport knows you could write a book with each potential transport as a chapter in that book. This lecture will recount three interesting transport cases experienced by the speaker and how adaptability and creativity can be major assets in transport.

Joe C Hylton BSRT RRT-ACCS RRT-NPS NREMT-P FAARC

Douglas E Masini EdD RPFT RRT-NPS AE-C FCCP FAARC

Dana Evans MHA RRT-NPS

Steve E Sittig RRT-NPS FAARC

Overcoming the Stigma of Asthma
3:05 pm – 3:40 pm

Overcoming the Stigma of Asthma

Tonya Winders MBA, McLean VA

Content Category: Clinical Practice
Asthmatics of all ages feel a stigma about their disease. Learn tips on how to help overcome and eliminate this stigma.

Simulation: Styles of Debriefing
3:05 pm – 3:40 pm

Simulation: Styles of Debriefing

Lutana Haan MHS RRT RPSGT, Boise ID

Content Category: Education
When the simulation is completed, it is time to assess and assure that learning has occurred. Simulation instructors indicate that the magic of simulation is in the debriefing. The question is "How do we make magic?' Attend this session and learn the different styles of debriefing and how to assure learning.

International Medical Mission Symposium — Viewpoints of Respiratory Care from Around the Globe
3:05 pm – 5:00 pm

3:05 pm – 3:40 pm

From Your Door to Theirs: Ensure Your Donations Are Delivered to the Hands That Need Them

Lisa Trujillo DHSc RRT, Ogden UT

Content Category: Clinical Practice
As health care providers, we have a great opportunity to impact health care in other countries through donating supplies and equipment. This presentation will discuss what donations are most helpful, how to collect and inventory them, cost-effective means of transporting donations, challenges that may be faced in the process, and how to overcome them.

3:45 pm – 4:20 pm

Respiratory Care in Resource-limited Settings

Michael D Davis RRT, Richmond VA

Content Category: Clinical Practice
The presentation will provide a detailed overview of obstacles present in resource-limited environments that affect respiratory care and are relevant to providers. The presentation will include a detailed description of several curriculums that have been developed for health care providers in resource-limited settings as well as several case studies based in Liberia, West Africa.

4:25 pm – 5:00 pm

It's a Big Elephant… Why Participate in International Medical Missions and Who Really Benefits?

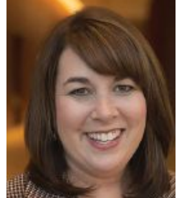
Lisa Trujillo DHSc RRT

Content Category: Clinical Practice
Many countries suffer from extreme lack of resources and health care infrastructure. It is easy to see the whole elephant on our plate rather than small bites we can take though our work. This presentation will examine the importance and the impact of mission work on a personal and professional level, as well as how the work we do is making a difference in the world of the individuals we serve.

Open Forum Poster Dicsussions #11
3:15 pm – 5:10 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.


Tonya Winders MBA

Lutana Haan MHS RRT RPSGT

Lisa Trujillo DHSc RRT

Michael D Davis RRT

Monday, Nov. 9

Open Forum Poster Discussions #12
3:15 pm – 5:10 pm

Supported by an unrestricted educational grant from

Researchers and clinicians present research results on hot topics in respiratory care. Audience and authors review the posters during the first part of the session. A brief oral presentation (no slides) and audience questions and discussion allow presenters to expand on the work featured on the posters.

Creating a Culture of Safety: Not Just the Concern of the Respiratory Therapist
3:45 pm – 4:20 pm

Creating a Culture of Safety: Not Just the Concern of the Respiratory Therapist

Ronda Bradley MS RRT FAARC, St Louis MO

Content Category: Patient Safety
The AAMI, FDA, AARC, equipment manufacturers, engineers, and health care providers have formed a consortium to address medical equipment concerns, ventilator technology and patient monitoring due to alarm fatigue. The presenter will discuss specific information discussed at this health care summit, and attendees will be updated on project goals and deliverables as of the date of the meeting. In addition, this lecture will also discuss the National Patient Safety Goal on alarm fatigue, what is to be expected of hospitals in 2016 related to this NPSG, and existing best practices.

Is Spirometry for Classification and Treatment of COPD Dead?
3:45 pm – 4:20 pm

Is Spirometry for Classification and Treatment of COPD Dead?

Scott Cerreta RRT, Washington DC

Content Category: Pulmonary Function
Spirometry tells us overall lung function, but it cannot tell us the type of disease and where it is located in the lung. People with COPD and an FEV_1 of 50% are not the same. We learned from COPDGene that CT scans with novel new color mapping software can provide much more useful information than spirometry results.

A Tenuous Equilibrium; Pulmonary Mechanics and the Pulmonary Capillary Bed
3:45 pm – 4:20 pm

A Tenuous Equilibrium; Pulmonary Mechanics and the Pulmonary Capillary Bed

David M Wheeler MEd RRT-NPS, Charleston SC

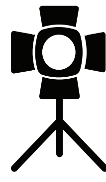
Content Category: Adult Critical Care
This talk will center on the alveolar-capillary interphase discussing this delicate configuration in all of its poetic forms. Evidence argues this relationship is enormously tenuous yet robust under duress. Inflammatory mediators and their influence on the alveolar-capillary model and alveolar influence on molecular signals, plus their cardiopulmonary and systemic consequences will be discussed.

Ronda Bradley MS RRT FAARC

Scott Cerreta RRT

David M Wheeler MEd RRT-NPS

Tell Me Something I Should Know 3:45 pm – 5:00 pm



Bill Galvin MSEd RRT CPFT AE-C FAARC

Tell Me Something I Should Know: Current and Future Issues Impacting Respiratory Care Educators

Ellen Becker PhD RRT-NPS AE-C, Chicago IL

Garry W Kauffman MPA FACHE RRT FAARC, Winston-Salem NC

Brad Leidich MSEd RRT FAARC, Harrisburg PA

Crystal L Dunlevy EdD RRT RCP, Columbus OH

Content Category: Education
The syndicated TV program, "The Chris Matthews Show" had a segment entitled, "Tell Me Something I Don't Know" that consisted of a panel of experts (expert journalists and thought leaders) who provided insightful, profound, and/or futuristic fragments of news related to their area of expertise. This session will entail a similar format where seasoned and experienced professional colleagues will provide similar commentary on issues of significance to the RC educator. Attend this session for an insightful and spirited discussion of some of the pressing issues, both current and futuristic, that we as RC educators should know.

Tips for Making It Right When You Make a Mistake 4:25 pm – 5:00 pm

Tips for Making It Right When You Make a Mistake

Dana Evans MHA RRT-NPS, Chesterfield MO

Content Category: Management
Being in charge does not make you infallible. Leaders make mistakes too; sometimes we even put our foot in our mouths and make a challenging situation worse. The presentation will discuss methods for owning up to your mistakes, how to make it right with the affected person(s), and how to remain respected in the process.

Pediatric Delirium and Its Effects on Mechanical Ventilation 4:25 pm – 5:00 pm

Pediatric Delirium and Its Effects on Mechanical Ventilation

Chani Traube MD, New York NY

Content Category: Neonatal/Pediatric
Delirium is a real problem in the pediatric critical care environment. Increasing data support the need to recognize and treat this important clinical condition. One of the true pioneers in this emerging field will provide information and insight, which may improve outcomes for your neonatal and pediatric patients.

Ellen Becker PhD RRT-NPS AE-C

Garry W Kauffman MPA FACHE RRT FAARC

Brad Leidich MSEd RRT FAARC

Crystal L Dunlevy EdD RRT RCP

Dana Evans MHA RRT-NPS

Chani Traube MD

Exhibit Hours at The Buying Show:

Saturday, Nov. 7, 11:00 am - 4:00 pm
Sunday, Nov. 8, 9:30 am - 3:00 pm
Monday, Nov. 9, 9:30 am - 2:00 pm

Monday, Nov. 9

Palliative Care Issues in COPD – What's Old? What's New?
4:25 pm – 5:00 pm

Palliative Care Issues in COPD – What's Old? What's New?

Helen Sorenson MA RRT CPFT FAARC, San Antonio TX

Content Category: Pulmonary Function
This presentation will present practical suggestions for incorporating PC (palliative care/patient comfort) into daily therapy routines.

Industry Support Statement

- The AARC is proud of the collaboration we have had with friends in industry for many years, and we wish to acknowledge our appreciation for their unrestricted educational grants for AARC Congress 2015.
- All sponsored sessions will be identified in the program, with signage, and verbally at the lectern.
- The AARC accepts support only on the condition that the Program Committee be the sole owner of all sessions, including selection of speakers and topics.

Outcomes in Home Care – You Are What You Track
4:25 pm – 5:00 pm

Outcomes in Home Care – You Are What You Track

Robert Messenger RRT CPFT FAARC, Elyria OH

Content Category: Clinical Practice
This presentation will look at what data the post-acute care provider should collect, and how that data can be obtained, tracked and evaluated. The session will conclude with a discussion on how outcomes data can be used to improve patient services and bolster hospital referrals.

Liberation from Mechanical Ventilation: Are SBTs Still the Way To Go, or Is There Something New?
4:25 pm – 5:00 pm

Liberation from Mechanical Ventilation: Are SBTs Still the Way To Go, or Is There Something New?

John D Davies RRT MA FAARC, Durham NC

Content Category: Adult Critical Care
Spontaneous breathing trials (SBTs) have been the gold standard for liberation for over a decade. With the advancement of closed loop ventilation and automatic weaning, should we consider using something other than SBTs?

RESPIRATORY CARE
The peer-reviewed science journal of the American Association for Respiratory Care

Helen Sorenson MA RRT CPFT FAARC

Robert Messenger RRT CPFT FAARC

John D Davies RRT MA FAARC

— 2015 —

Since 1947, the AARC has been leading the effort to advance the respiratory care profession and promote quality respiratory care. Collaborating with our 50 state organizations, we have successfully advocated for the profession at the federal, state and local level.

A SALUTE to Our CORPORATE PARTNERS

The combined efforts between the respiratory care profession and manufacturers in seeking ways to improve the quality and outcomes of our patients make us natural partners in today's healthcare continuum.

As health care budgets shrink and patient care becomes increasingly complex, our mutual challenges become greater. The synergy of the corporate partner concept is an effective way to address those needs utilizing our combined skills and resources.

IKARIA
ADVANCING CRITICAL CARE

AARC Congress 2015

Tuesday, Nov. 10

31st Phil Kittredge Memorial Lecture

8:00 am – 8:50 am

This lecture provides a critical and incisive evaluation of an aspect of clinical respiratory care of emerging or increasing importance.

E-Cigarettes: The Science Behind the Smoke and Mirrors

Nathan Cobb MD, Washington DC

Content Category: Clinical Practice
Pharmacotherapies and other support aids have long been proven to enhance the quit rates of most smokers. But there's a new kid on the block alleging its success in tobacco cessation. E-cigarette manufacturers want you to believe that using their product is a safer alternative than the traditional cigarette, but is it really? In this presentation, the presenter will examine e-cigarettes and share the science behind the newest craze in tobacco use. Is the FDA justified in their oversight and regulation of these devices? Are they a safe resource to help patients quit smoking? As the pre-eminent experts in tobacco-cessation counseling, RTs should be well informed as to the real evidence of these devices. Are they a safe alternative or simply good marketing? Attend this lecture to find out.

Creating an Infrastructure to Effectively Evaluate the Skills and Knowledge Base of the Respiratory Therapist

9:15 am – 9:50 am

Creating an Infrastructure to Effectively Evaluate the Skills and Knowledge Base of the Respiratory Therapist

Teresa A Volsko MHHS RRT FAARC, Youngstown OH

Content Category: Management
This panel discussion will promote dialog between different hospitals on their implementation strategies for assessing knowledge, developing competencies; and creating ongoing education initiatives to best support the bed-side therapist.

Shades of Gray – Critical Neonatal Radiographs Every RT Should Recognize

9:15 am – 9:50 am

Shades of Gray – Critical Neonatal Radiographs Every RT Should Recognize

Howard Stein MD, Toledo OH

Content Category: Neonatal/Pediatric
Neonatal respiratory therapists are often expected to review their patients' chest radiographs. This presentation uses an interactive case-study based format that allows participants to interact with the presenter and discuss radiograph findings, clinical implications, and treatment options.

Nathan Cobb, MD

Teresa A Volsko MHHS RRT FAARC

Howard Stein MD

Tuesday, Nov. 10

Experience from a Pulmonary Function Accreditation Program
9:15 am – 9:50 am

Experience from a Pulmonary Function Accreditation Program
Carl D Mottram RRT RPFT FAARC, Rochester MN

Content Category: Pulmonary Function
The presenter will describe the Pulmonary Function Laboratory Diagnostic Accreditation Program of British Columbia.

Affirmative Action: Negative Self-talk and Depression Can Impede Self-care – Use Positive Affirmations To Improve Care
9:15 am – 9:50 am

Affirmative Action: Negative Self-talk and Depression Can Impede Self-care – Use Positive Affirmations To Improve Care
Elissa Williams RRT-NPS CPFT, Gardner KS

Content Category: Management
RTs are caregivers who often neglect their own self-care needs. Many of us are plagued with depression and are ill equipped to override our own negative thoughts. This lack of self-care impacts our patients through mood swings, missed workdays, job dissatisfaction, and friction between co-workers. But what if we could change? Could our patients benefit? Could our positive change mentor our patients?

The Patient Handoff – Fumbles Can Be Fatal
9:15 am – 9:50 am

The Patient Handoff – Fumbles Can Be Fatal
Kyle J Rehder MD, Durham NC

Content Category: Patient Safety
Much attention has been paid to MD-MD and RN-RN handoffs, but what about RT-RT handoffs? Effective communication is essential to optimal patient care and family satisfaction. This presentation will review the successes and pitfalls to the handoff of a patient.

Is There a Role for Electronic Etiquette Education in the Curriculum of the Therapist?
9:15 am – 9:50 am

Is There a Role for Electronic Etiquette Education in the Curriculum of the Therapist?
PJ Papadakos MD FCCM FAARC, Rochester NY

Content Category: Education
How have portable electronic devices (PDEs) affected the practice of medicine? How can early education in professionalism affect the therapist patient relationship? What level of addiction to devices is present in health professionals?

Disease State Marketing for Your Sleep Disorders Center
9:15 am – 9:50 am

Disease State Marketing for Your Sleep Disorders Center
Peter Allen BSRC RRT-NPS-SDS RST RPSGT, Radnor PA

Content Category: Sleep medicine
This lecture will focus on market segmentation and approach to the many specialty areas that have identified obstructive sleep apnea as contributing or causative. Disease state marketing enables the sleep disorders lab to educate many new referral sources before they become your competitors.

Carl D Mottram RRT RPFT FAARC

Elissa Williams RRT-NPS CPFT

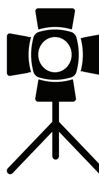
Kyle J Rehder MD

PJ Papadakos MD FCCM FAARC

Peter Allen BSRC RRT-NPS-SDS RST RPSGT

COPD Readmissions

9:15 am – 10:30 am



9:15 am – 9:50 am

COPD Readmissions…We Can't Do It Alone

Robin Kidder BA RRT AE-C, St Louis MO

Content Category: Clinical Practice

Reducing COPD readmissions is a priority for all. While RTs can help reduce re-admissions, a collaborative team connecting inpatient to outpatient care is essential. The presenter will share the unique, innovative, and multidisciplinary approaches utilized by a large inner-city teaching hospital's COPD readmissions committee with respiratory therapy being an integral part of this team.

9:55 am – 10:30 am

Extending Services: A Clinician's Perspective

Arianna Villa RRT, San Diego CA

Content Category: Clinical Practice

The presenter will review the different skills needed in assessing and treating different populations of patients beyond the pulmonary rehabilitation clinic.

Respiratory Care Symposium

RESPIRATORY CARE

9:15 am – 12:30 am

9:15 am – 9:50 am

I Want To Publish, But Where Do I Start?

Richard D Branson MSc RRT FAARC, Cincinnati OH

Content Category: Clinical Practice

This lecture will serve as a primer on how to get started with a research project.

9:55 am – 10:30 am

How To Lie with Statistics and Figures; What's a P Anyway?

Dean R Hess PhD RRT FAARC, Boston MA

Content Category: Clinical Practice

This lecture will take some of the mystery out of the language of research.

10:35 am – 11:10 am

Research Does Not Need To Come from an Ivory Tower

Jeff Haynes RRT RPFT, Nashua NH

Content Category: Clinical Practice

This lecture will describe how anyone can do research regardless of their work setting.

11:15 am – 11:50 am

Five Common Reasons Why the Editor Will Reject Your Paper

Dean R Hess PhD RRT FAARC

Content Category: Clinical Practice

This lecture describes common reasons why papers are not accepted for publication, which should help anyone who is considering the submission of a paper.

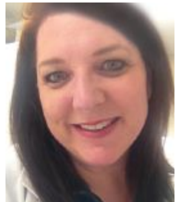
11:55 am – 12:30 pm

The Five Best Papers Published in Respiratory Care in 2015

Richard D Branson MSc RRT FAARC

Content Category: Clinical Practice

This lecture will describe the five best papers published in Respiratory Care in 2015.



Robin Kidder BA RRT AE-C,

Arianna Villa RRT

Richard D Branson MSc RRT FAARC

Dean R Hess PhD RRT FAARC

Jeff Haynes RRT RPFT

Tuesday, Nov. 10

Manage Up To Get Ahead
9:55 am – 10:30 am

Manage Up to Get Ahead

Cheryl A Hoerr MBA RRT CPFT FAARC, Rolla MO

Content Category: Management
Managers are being asked to do a lot more with a lot less. So you need to be an expert at "managing up". If you're not familiar with this term you need to attend this session and learn effective techniques for exerting your influence. If you are successful you will add value in your job and be able to use your influence to get the resources and support that are critical to achieving your goals.

Treating Bronchiolitis in the 21st Century – New Recommendations from the AAP
9:55 am – 10:30 am

Treating Bronchiolitis in the 21st Century – New Recommendations from the AAP

Shari A Toomey MBA RRT-NPS, Roanoke VA

Content Category: Neonatal/Pediatric
Treatment and management of bronchiolitis vary widely across the country. This presentation will review the American Academy of Pediatrics' (AAP) recommendations for the treatment of bronchiolitis. The presenter will share adopted algorithms and protocols that have been created for the treatment of the infant with bronchiolitis. Outcomes and lessons learned will be shared.

CPET vs 6MWT: What Is the Better Test in COPD?
9:55 am – 10:30 am

CPET vs 6MWT: What Is the Better Test in COPD?

Carl D Mottram RRT RPFT FAARC, Rochester MN

Content Category: Pulmonary Function
Debate the utility of each test in the assessment of COPD patients and their exercise tolerance.

Can You Turn the Noise Down, Please?
9:55 am – 10:30 am

Can You Turn the Noise Down, Please?

Paul F Nuccio MS RRT FAARC, Boston MA

Content Category: Adult Critical Care
The ICU is filled with noise, both from critical alarm alerts and from nuisance alarms. This presentation will focus on noise levels within an ICU and the impact this can have on the patient who is subjected to such noise. The actions of the respiratory therapist can make a significant contribution toward minimizing noise levels in this environment.

New Needs Require New Techniques...Using Digital Media To Make an Impact
9:55 am – 10:30 am

New Needs Require New Techniques...Using Digital Media To Make an Impact

Sherry Whiteman MS RRT, Joplin MO

Content Category: Education
Videos are a very visual and emotional medium that can be used to create a unique personal or educational experience. This presentation will review the literature, identify best practices, and discuss ways to harness the power of video media to impact in any teaching/learning environment.

Cheryl A Hoerr MBA RRT CPFT FAARC

Shari A Toomey MBA RRT-NPS

Carl D Mottram RRT RPFT FAARC

Paul F Nuccio MS RRT FAARC

Sherry Whiteman MS RRT

OSA, Life After Diagnosis
9:55 am – 10:30 am

OSA, Life After Diagnosis

Andrea N Sakovitch BSRT RRT RCP, Fontana CA

Content Category: Sleep Medicine
National compliance with positive airway pressure is as low as 50%, with complaints ranging from mask issues to aerophobia. As skilled professionals we have the tools to troubleshoot, educate and make a more enjoyable experience for our patients, and increase compliance in the process. Learn effective protocols to care for your OSA population.

Critical Care Case Reports: Putting the Evidence into Practice, and Interactive Exercise
9:55 am – 12:30 am

9:55 am – 10:30 am
Severe Asthma in the ED – What Would You Do?

Brady Scott MS RRT-ACCS, Chicago IL

Content Category: Adult Critical Care
Severe asthma can be life threatening. What is the evidence today regarding the treatment of these difficult patients? This will be an interactive case report presentation discussing the strategies that are supported by the literature.

10:35 am – 11:10 am
Traumatic Brain Injury

Joe C Hylton BSRT RRT-ACCS RRT-NPS NREMT-P FAARC, Charlotte NC

Content Category: Adult Critical Care
Traumatic brain injury can be devastating. There are times when mild TBI can be misleading, and the decision to intubate may not be so easy to make. This will be an interactive case report presentation discussing the strategies that are supported by the literature. At what Glasgow Coma Scale (GCS) should be used to intubate? Hyperventilate?

11:15 am – 11:50 am
COPD in the ICU

Carl R Hinkson MS RRT-ACCS NPS FAARC, Seattle WA

Content Category: Adult Critical Care
Sick COPD patients are challenging. This will be an interactive case report presentation discussing the strategies that are supported by the literature. NIPPV? Pharmacology?

11:55 am – 12:30 pm
Drug Overdose and the Respiratory System

Keith D Lamb RRT-ACCS, Des Moines IA

Content Category: Adult Critical Care
Drug overdose can cause serious metabolic derangement and create serious consequence on the respiratory system. This presentation will discuss one of these cases through an interactive case review.

Career Development Planning
10:35 am – 11:10 am

Career Development Planning

Sherry Whiteman MS RRT, Joplin MO

Content Category: Management
It's a dog-eat-dog world in the workforce and for those who want to join it and move forward, preparation may make all the difference! This presentation will describe important steps to take to create a career development plan that can help you reach your goals.

Andrea N Sakovitch BSRT RRT RCP

Brady Scott MS RRT-ACCS

Joe C Hylton BSRT RRT-ACCS RRT-NPS NREMT-P FAARC

Carl R Hinkson MS RRT-ACCS NPS FAARC

Keith D Lamb RRT-ACCS

Sherry Whiteman MS RRT

Tuesday, Nov. 10

Airway Clearance During Mechanical Ventilation – Effective or Just Adding to Cost of Care?

10:35 am – 11:10 am

Airway Clearance During Mechanical Ventilation – Effective or Just Adding to Cost of Care?

Kathleen M Deakins MSHA RRT-NPS FAARC, Cleveland OH

Content Category: Neonatal/Pediatric

Airway clearance is often added to the arsenal of pediatric mechanical ventilation. This presentation describes the indications, appropriate use, and expected outcomes of using airway clearance in infants and children requiring mechanical ventilation.

Stabilization of the Pediatric Patient for Transport: What Community RTs Need To Know

10:35 am – 11:10 am

Stabilization of the Pediatric Patient for Transport: What Community RTs Need To Know

Tabatha Dragonberry MEd RRT-NPS AE-C ACCS CPFT, Madera, CA

Content Category: Neonatal/Pediatric

In this session we will discuss how the community RT can prepare for a pediatric patient and transport team. What steps can you take to stabilize these patients as you wait for the referral facility? We will discuss the transition of care and how best this is facilitated.

Your Breathing Support Group: Planning Meetings for Long-term Success

10:35 am – 11:10 am

Your Breathing Support Group: Planning Meetings for Long-term Success

Jane Martin BA LRT CRT, Washington DC

Content Category: Clinical Practice

A breathing support group is an important component of optimal lung health management, providing ongoing information as well as social and emotional support. This presentation discusses information and resources on over 40 presentation topics and five different formats to develop a plan that will help keep your meetings fresh and interesting for years to come.

The Ventilator as a Drug To Reduce ARDS Incidence

10:35 am – 11:10 am

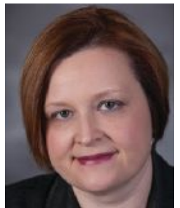
The Ventilator as a Drug To Reduce ARDS Incidence

Gary Nieman BA, Syracuse NY

Content Category: Adult Critical Care

Recent animal and clinical studies have shown that ARDS is a progressive disease, similar to cancer, and that early application of protective mechanical ventilation can reduce the incidence. This lecture will discuss how properly set mechanical breaths can block progression of acute lung injury and prevent the development of ARDS.

Kathleen M Deakins MSHA RRT-NPS FAARC



Tabatha Dragonberry MEd RRT-NPS AE-C ACCS CPFT

Jane Martin BA LRT CRT

Gary Nieman BA

Can’t I Just Stay a Kid Forever?

10:35 am – 11:10 am

Transition from Pediatric to Adult Care

Denise Willis RRT-NPS, Little Rock AR

Content Category: Clinical Practice

Children who would not have normally survived are now living longer and becoming young adults due to advancements in technology and medical care. This has created the need for transition from pediatric to adult care for those with special health care needs. This presentation will review the rationale for transition and discuss the six core elements of transition.

Are Your Skills Truly Where You Think They Are? A New Approach To Assess and Maintain Clinical Competency

10:35 am – 11:10 am

Are Your Skills Truly Where You Think They Are? A New Approach To Assess and Maintain Clinical Competency

Lisa Cracchiolo BA RRT, St Louis MO

Content Category: Education

How can we ensure ALL therapists can consistently perform all aspects of respiratory care? Traditional annual skill competencies may not fully assess each therapist’s true skills and needs. The discussion will include a model that starts with the RTs’ perception of their skills and then measures it objectively to deliver a customized, hands-on training and ongoing skills verification.

Keeping the Road Safe: The Role of a Respiratory Therapist in Managing Commercial Drivers with Sleep Apnea

10:35 am – 11:10 am

Keeping the Road Safe: The Role of a Respiratory Therapist in Managing Commercial Drivers with Sleep Apnea

Michael Tran RRT BSRT, Fontana CA

Content Category: Sleep Medicine

Drivers with sleep apnea can pose a danger on the road when they are not well managed. The role of RTs in sleep medicine has an impact on keeping commercial drivers from falling asleep on the road, thus keeping the road safe. This lecture will discuss the role of Respiratory Therapists as physician extenders in managing commercial drivers with sleep disorders, while adhering to the U.S. Federal Motor Carrier Safety Administration Guidelines.

A Pulmonary Population Health Management Program Staffed by RTs Partnering with a National Health Insurance Payer

11:15 am – 11:50 am

A Pulmonary Population Health Management Program Staffed by RT’s partnering with a National Health Insurance Payer

Alan Greene RRT, Nashville TN

Content Category: Management

The speaker will share details of proven, innovative programs that utilize RCPs in unique ways to improve outcomes related to positive impact on hospitalizations, reducing 30-day readmissions, and improving quality of life for the COPD population.

Denise Willis RRT-NPS

Lisa Cracchiolo BA RRT

Michael Tran RRT BSRT

Alan Greene RRT

Tuesday, Nov. 10

What We Exhale – More Important Than What We Inhale?

11:15 am – 11:50 am

What We Exhale – More Important Than What We Inhale?

Michael D Davis RRT, Richmond VA

Content Category: Neonatal/Pediatric
More attention is paid to what we inhale than what we exhale. This presentation will offer insight into the gas we exhale and how an assessment of this gas can help with diagnosis and management in those with respiratory conditions. This session will offer a novel approach to the assessment of breathing.

A Detailed Look at Respiratory's Role in the Transport Industry

11:15 am – 11:50 am

A Detailed Look at Respiratory's Role in the Transport Industry

Thomas Bang RRT NPS BSHCM, Atlanta GA

Content Category: Clinical Practice
RTs on the move! Where we started, where we are now, and what the future holds for respiratory therapy involvement on transport teams.

Carbon Monoxide: A Deadly Gas That May Have a Purpose!

11:15 am – 11:50 am

Carbon Monoxide: A Deadly Gas That May Have a Purpose!

Paul F Nuccio MS RRT FAARC, Boston MA

Content Category: Adult Critical Care
Is it possible that this deadly gas may have the potential to provide beneficial effects to some of our sickest patients? This presentation will examine the reasons why researchers believe this is true and explore the possible illnesses where the administration of carbon monoxide may provide these beneficial effects.

Telehealth! A New Frontier, Good for the Patient, Good for Sleep Medicine — How To Make Technology Work for You

11:15 am – 11:50 am

Telehealth! A New Frontier, Good for the Patient, Good for Sleep Medicine – How To Make Technology Work for You

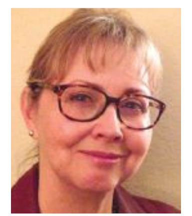
Dara T Vega RN RPSGT CRTT, Fontana CA

Content Category: Sleep Medicine
The presenter will discuss the role of telehealth as a tool for engaging the patient into effectively managing their sleep apnea and therapy use. Discover how incorporating telehealth's education and automated follow up programs can maximize patient engagement in managing their sleep disorder and maximize sleep center staff efficiency.

Michael D Davis RRT

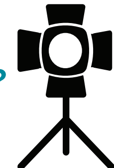
Thomas Bang RRT NPS BSHCM

Paul F Nuccio MS RRT FAARC


Dara T Vega RN RPSGT CRTT

Robin Kidder BA RRT AE-C

Patient Education - Are You Ready for It?
11:15 am – 12:30 pm



11:15 am – 11:50 am
Can You Keep Up? New Inhalers… Get Help Keeping Up with Patient's Home Meds

Robin Kidder BA RRT AE-C, St Louis MO

Content Category: Clinical Practice
With so many new inhalers continually coming on the market, it's understandable why health care providers find it challenging to keep up with what patients are taking, what to recommend for therapy, or what to suggest as a substitute. The presenter will review the most frequently used newer inhalers and classes of medications that have been FDA approved in the U.S. over the last five years. Handouts will be available.

11:55 am – 12:30 pm
Don't Reinvent the Wheel! Implementation of the Pulmonary Education Program (PEP)

Deborah Bennett RRT, St Louis MO

Content Category: Clinical Practice
Are your respiratory therapists confident in delivering COPD education? Do your patients understand the education they receive? The speaker will share the implementation of a standardized program. The COPD Foundation PEP program offers RTs and patients high quality materials. As a result, the program today consistently delivers excellent results consistently.

Agencies Update
11:15 am – 12:30 pm

Agencies Update

Frank R Salvatore Jr MBA RRT FAARC – AARC President

Michael T Amato MBA – ARCF Chair

Kathy J Rye EdD RRT FAARC – CoARC President

Carl F Haas MLS RRT-ACCS FAARC – NBRC President

The leadership of the AARC, ARCF, CoARC and NBRC will present the most updated information affecting the profession, research, accreditation, and credentialing. This is a must-attend session in your agenda!

Do You Know How Much Your Products Really Cost?

11:55 am – 12:30 pm
Do You Know How Much Your Products Really Cost?

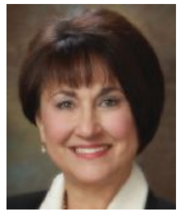
Cheryl A Hoerr MBA RRT CPFT FAARC, Rolla MO

Content Category: Management
Price is usually a primary consideration during negotiations with your suppliers but shouldn't be the only consideration. Our new cost-conscious, outcomes-focused health care model demands an evaluation of other aspects of care including quality, efficiency, and outcomes when calculating the true cost of any purchase. Let's talk about the factors to evaluate an optimized purchases.

Deborah Bennett RRT

Frank R Salvatore Jr MBA RRT FAARC

Michael T Amato MBA


Kathy J Rye EdD RRT FAARC

Carl F Haas MLS RRT-ACCS FAARC

Cheryl A Hoerr MBA RRT CPFT FAARC

Tuesday, Nov. 10

Carbon Dioxide Elimination – Demystified…
11:55 am – 12:30 pm

Carbon Dioxide Elimination – Demystified…

Craig Smallwood RRT BSRT, Boston MA

Content Category: Neonatal/Pediatric
Carbon dioxide elimination monitoring is increasingly being incorporated into modern mechanical ventilators. But what are these measurements, and how should they be interpreted? What are typical values for healthy and sick infants, children, and adults? This presentation will demystify volumetric capnography and provide attendees with tools to better interpret these data and, hopefully, make an outcome difference at the bedside.

It's Alright To Cry; PTSD in the EMS/Transport Settings
11:55 am – 12:30 pm

It's Alright To Cry; PTSD in the EMS/ Transport Settings

Robert V Smith RRT NCEMT-B, Charlotte NC

Content Category: Clinical Practice
This presentation will discuss post-traumatic stress disorder (PTSD) in the emergency medical services (EMS)/Transport settings.

Seeing Is Believing: Real Time Visualization of Dynamic Alveolar Ventilation as a Mechanism of Ventilator-induced Lung Injury
11:55 am – 12:30 pm

Seeing Is Believing: Real Time Visualization of Dynamic Alveolar Ventilation as a Mechanism of Ventilator-induced Lung Injury

Gary Nieman BA, Syracuse NY

Content Category: Adult Critical Care
Ventilator-induced lung injury (VILI) significantly increases the morbidity and mortality associated with acute lung injury and ARDS. However, the mechanism of VILI remains unclear. This lecture will identify the mechanical mechanism of VILI at the alveolar level using a novel in vivo microscope to visualize dynamic alveolar mechanics during tidal ventilation.

Code Blue, Sleep Center: Emergencies During and Due to Polysomnography
11:55 am – 12:30 pm

Code Blue, Sleep Center: Emergencies During and Due to Polysomnography

TBD

Content Category: Sleep Medicine
A polysomnography is a minimal to no risk procedure, but being prepared for emergencies is vital to assure a positive outcome should emergencies arise. RTs are prepared for anything, but the sleep center is one place where we could be caught off guard.

Craig Smallwood RRT BSRT

Robert V Smith RRT NCEMT-B

Gary Nieman BAFAARC

CLOSING CEREMONY
12:45 pm – 2:15 pm

Overcoming Obstacles Big and Small

Amy Van Dyken, Phoenix AZ

Amy Van Dyken is one of the most decorated female Olympic swimmers in United States history. Amy is a former world record-holder and 6-time Olympic gold medalist. She's a survivor of a near fatal ATV accident in 2014 that severed her spinal cord and she inspires people around the globe with her positive attitude and engaging personality. To this day, Amy attributes her ability to control her asthma as one of her life's greatest accomplishments.

Attend the AARC Closing Ceremony as Amy shares her story of living as a child with asthma and how the recommendations of her pediatric pulmonologist led her on a path to Olympic stardom. She will also discuss the role of the respiratory therapist in her care and the role they played in allowing her to better manage her asthma. Amy will also share insights of her Olympic journey and share some of her favorite stories. In conclusion, Amy will discuss her near death experience when she severed her spinal cord last summer. Like everything in her life, Amy will discuss how she overcame what was likely the darkest moment of her life and turned it into triumph. Attendees will leave the Closing Ceremony feeling inspired, knowing that anything is possible with the right mindset!

Amy Van Dyken

2015 Exhibitors

as of July 26, 2015

A

AARC
Abbott Point of Care
Airgas
Airon Corporation
Airways Development LLC
Alere
Allergy & Asthma Network
Analytical Industries, Inc
ARC Medical Inc
Aureus Medical Group

B

B&B Medical Technologies
Baitella AG
Baxter
Bay Corporation
Besmed Health Business Corp
Better Rest Solutions
Bio-Med Devices Inc.
Biovo Technologies
Boehringer Ingelheim Pharmaceuticals, Inc.
Boston Scientific
Bunnell Incorporated

C

Cadwell Laboratories Inc
CAIRE
CareFusion
Chiesi USA, Inc.
Clippard Instrument
Commission on Accreditation For Respiratory Care (CoARC)

D

Dale Medical Products Inc.
Discovery Labs Inc
Draeger Medical Systems Inc.
Drive Medical

E

Electromed, Inc.
Elsevier
Epiphany Healthcare

F

Fisher & Paykel Healthcare Inc
Flexicare Inc.
Flight Medical

G

GaleMed Corporation
GE Healthcare
GEICO
Goldstein & Associates Inc
Grand Canyon University

H

Halyard Health
Hamilton Medical Inc
Hill-Rom
Hollister Incorporated

I

I.V. League Medical
IKARIA
IngMar Medical Ltd
Inova Labs
Instrumentation Industries Inc
Instrumentation Laboratory
International Biomedical
International Biophysics Corporation
Intersurgical, Inc
IPI Medical Products

J

Jones & Bartlett Learning

K

Kettering National Seminars

L

Lambda Beta Society
Linde Healthcare
Lupin Pharmaceuticals

M

MAQUET Medical Systems, USA
MARPAC, Inc.
Masimo
Maxtec
Mayo Clinic
Med One Capital
Mediware
Medtronic
Mercury Medical
Methapharm
MGC Diagnostics
MicroBase
MIR - Medical International Research
Monaghan Medical Corporation

N

National Board For Respiratory Care (NBRC)
NDD Medical Technologies
Neotech Products Inc
Nonin Medical Inc.
Nova Biomedical
NSpire Health

O

Ohio Medical Corporation
Omneotech
Omnimate Enterprise Co., Ltd.
Oricare, Inc

P

Passy-Muir Inc
Philips Healthcare
Praxair Healthcare Services
Precision Medical, Inc.
Pulmodyne

R

Radiometer America Inc.
RemZzzs
ResMed
RT/Sleep Review

S

Salter Labs
Seoil Pacific Corp.
Siemens Healthcare Diagnostics
Smiths Medical
Soundway
SunMed
Sunovion Pharmaceuticals

T

Tampa General Hospital
Tecme Corporation
Teleflex
Thayer Medical
TRACOE medical GmbH
Tri-anim Health Services
TSI, Inc.

U

UCLA Health
UNC Charlotte
Universal Hospital Services
University of Virginia Health System

V

Vapotherm, Inc.
Vitalograph Inc

W

Westmed Inc

Z

ZOLL Medical Corporation

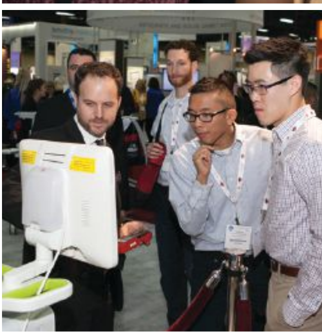


Exhibit Hours at The Buying Show:

Saturday, Nov. 7, 11:00 am - 4:00 pm

Sunday, Nov. 8, 9:30 am - 3:00 pm

Monday, Nov. 9, 9:30 am - 2:00 pm

Registration Information

Registration and Fees

REGISTRATION FEES (SEE NEXT PAGE FOR THE FORM)

Congress (4 days)	Through Sept 18	After Sept 18 And On-site 4 Days
AARC Member	$389	$424
AARC Student Member	$69	$89
Non-member	$534*	$554*
Non-member Student	Not Available	$150 (Must register on-site)
Retired	$69	$89
Spouse	Not Available	$50 (Must register on-site)

*You may become an AARC Member prior to registering (www.aarc.org). If you opt to pay the non-member Congress 4 days fee, you are entitled to a complimentary12-month AARC membership.

Congress Daily Fees (Must register on-site)	Saturday - Monday	Tuesday
AARC Member	$219	$135
AARC Student Member	$30	$20
Non-member	$314	$190
Non-Member Student	$40	$30
Retired	$30	$20
Spouse	Not Available	Not Available

Active Duty Military

We have a special offer for all health care professionals, not just respiratory therapists, on active duty in all branches of the US armed forces, as well as military reservists recalled to active duty. Go to http://tinyurl.com/registration-aarc-congress2015.

Congress Day Tripper Package

A cost-saving group rate is available for AARC members and nonmembers.

Group Package
$657 for 4 one-day prepaid vouchers

Equates to $164.25 per day, a savings of about 25% from the daily full-day rate for AARC members.

See page 115 for complete details.

REGISTRATION FORM

AARC Congress 2015

November 7 - 10, 2015 • Tampa, Florida, USA

INTERNET: Go to www.AARC.org to register online and to receive a confirmation.
or MAIL: Send this form to: AARC Congress 2015, 9425 N. MacArthur Blvd. Ste. 100, Irving, TX 75063-4706 U.S.A.
Full payment must be included with your registration form.
or FAX: If paying by American Express, MasterCard, or VISA, you may fax your registration form to (972) 484-2720.

PLEASE PRINT

AARC Member # ______ *Membership Expiration Date* ______

First/Last Name for Badge ______

Credential (check up to three to be printed after your name): ☐ *RRT* ☐ *CRT* ☐ *PhD* ☐ *MA* ☐ *MD* ☐ *Other* ______

Job Responsibility (check one): ☐ *Dept. Director* ☐ *Supervisor* ☐ *Therapist* ☐ *Educator* ☐ *Other* ______

Employment Setting (check one): ☐ *Hospital* ☐ *School* ☐ *Skilled Nursing Facility* ☐ *Subacute Care* ☐ *Home Care/DME* ☐ *HMO* ☐ *Home Health Agency* ☐ *Manufacturer /Supplier* ☐ *Other* ______

Job Title ______ *E-Mail Address* ______

Employer ______

Preferred Mailing Address: ☐ *Home* *or* ☐ *Business* *Daytime Telephone (   )* ______

______

City ______ *State* ______ *Zip* ______

Pre-Course

All pre-courses will be held on Friday, November 6, 2015.
Courses run concurrently. You may register for only one course.
You must attend the entire course to receive CRCE credit;
no partial credit will be given.
Course capacities are limited. Pre-registration is required.

Deadline: Friday, October 16 or when course is full.

#1 - Management of Chronic Hypoxemia Across the Continuum of Care

8:00 am - 4:00 pm

#2 - Mechanical Ventilation: Adult & Pediatric Considerations

8:00 am - 5:00 pm

Please register me for ☐ #1 or ☐ #2
(Also check the appropriate fee box below.)

CHECK ONE	*AARC Member*	*Non Member*	*AARC Student*
Before Sept. 19			
Course Only	☐ $100	☐ $210	☐ $15
With Congress Reg	☐ $90	☐ $90	☐ $15
Sept. 19 - Oct. 16			
Course Only	☐ $110	☐ $225	☐ $15
With Congress Reg	☐ $100	☐ $100	☐ $15

#3 -Vascular Line Insertion Workshop

12:30 pm - 5:00 pm

Please register me for ☐ #3
(Also check the appropriate fee box below.)

CHECK ONE	*AARC Member*	*Non Member*	*AARC Student*
Before Sept. 19			
Course Only	☐ $35	☐ $60	☐ $15
With Congress Reg	☐ $25	☐ $25	☐ $15
Sept. 19 - Oct. 16			
Course Only	☐ $50	☐ $75	☐ $15
With Congress Reg	☐ $40	☐ $40	☐ $15

Congress Registration

Payment of appropriate fee entitles registrant to attend all Congress activities and social events November 7 - 10.

Spouses register on-site only.

CHECK ONE:	*Through Sept. 18*	*After Sept. 18 (and on-site 4-Days)*
AARC Active/Associate Member	☐ $389	☐ $424
AARC Student	☐ $69	☐ $89
Retired	☐ $69	☐ $89
Non-member*	☐ $534	☐ $554

Spouse may register on-site for $50

Method of Payment

Check or Money Order enclosed ☐

Charge my ☐ Visa ☐ MasterCard ☐ American Express

Name of Card Holder (print) ______

Credit Card # ______

Expiration Date ______

Signature ______

***You may become a Member prior to registering by going to www.AARC.org. If you opt to pay the non-member fee, you are entitled to complimentary, automatic 1-year AARC membership.**

Check here ☐ if you **DO NOT** wish to receive this complimentary 1-year AARC membership.

No invoices will be issued. Cancellations must be in writing. There will be either a 25% or $50 handling fee, whichever is less, for cancellations received by Thursday, October 29. No refunds will be made thereafter.

Educational sessions will be electronically recorded by the AARC. By attendance or participation in discussion, registrant agrees that the AARC may electronically record, copy, and distribute registrant's attendance and involvement in the program discussions and question-and-answer periods. **No individual or entity other than the AARC may record (audio or video) any portion of this program.**

OFFICE USE ONLY:
☐ BC ☐ PC ☐ C ☐ CC

Total Received ______ Check # ______ Date ______

Revised 7/02/15

Registration Policies

- American Express, MasterCard, and VISA are the only credit cards accepted.
- Members who have paid the current year's dues and are in good standing or whose applications are in process will be admitted at the member rate.
- Members registering on-site will be required to present their current membership card. Any person who does not present a current membership card must register at the non-member rate.
- All students will be required to pay a registration fee. AARC members with student status can register at the student rate. Students who are not members of the AARC are required to pay the non-member student rate. Non-member students must register on-site and show proof of current enrollment.
- An active member is not permitted to register as an exhibitor or to assist in a booth unless he/she is an employee of the exhibiting firm.
- Spouses may register for the Congress on-site only. Any logical proof indicating that the person is a member's spouse will be accepted.
- Advance registration fees must be prepaid. No invoice will be issued. An acknowledgement will be made of the fee paid.
- **Refund requests must be in writing and must be received by Thursday, October 29.** A processing fee of 25% or $50, whichever is less, will be deducted from the refund.
  No refunds will be made after **October 29.**
- No soliciting from exhibitors or attendees is permitted without AARC permission.

Registration (continued)

Pre-Congress Courses

All pre-courses will be held on Friday, November 6, 2015.

- Courses run concurrently. You may register for one full-day or one half-day course.
- You must attend the entire course to receive CRCE credit; no partial credit will be given.
- Course capacities are limited.
- Pre-registration is required. Deadline: Fridy, October 16, 2015 or when course is full.

Pre-Congress Course #1 — Management of Chronic Hypoxemia Across the Continuum of Care • 8:00 am to 4:00 pm

Pre-Congress Course #2 — Mechanical Ventilation: Adult & Pediatric Considerations • 8:00 am to 5:00 pm

Fees for Each Course

Before Sept 19	AARC Member	Non-member	AARC Student
Course only	$100	$210	$15
With Congress Registration	$90	$90	$15

Sept 19–Oct 16	AARC Member	Non-member	AARC Student
Course only	$110	$225	$15
With Congress Registration	$100	$100	$15

Pre-Congress Course #3 —Vascular Line Insertion Workshop • 12:30 pm to 5:00 pm

Before Sept 19	AARC Member	Non-member	AARC Student
Course only	$35	$60	$15
With Congress Registration	$25	$25	$15

Sept 19–Oct 16	AARC Member	Non-member	AARC Student
Course only	$50	$75	$15
With Congress Registration	$40	$40	$15

Online Registration

If you are using a credit card, go to http://tinyurl.com/registration-aarc-congress2015.

Faxed or Mailed Registrations

Complete the Registration Form on **page 109** and mail or fax it to the AARC. Details are on the form.

Receipts

A receipt for your registration fee(s) will be sent to you prior to your departure for Tampa. Present this receipt on-site to receive your name badge and your registration packet(s).

On-site Congress Registration Hours

Friday, November 6	10:00 am–6:00 pm
Saturday, November 7	7:00 am–4:00 pm
Sunday, November 8	7:30 am–4:00 pm
Monday, November 9	8:00 am–4:00 pm
Tuesday, November 10	8:00 am–10:00 am
	8:00 am–3:00 pm—CRCE Assistance Available

You can fill out the Registration Form and bring it with you for on-site registration.

Site and Travel Discounts

Site

All official Congress lectures and exhibits, unless otherwise noted, will take place at the Tampa Convention Center, 333 South Franklin Street, Tampa, Florida, 33602; (813) 274-7765.

The headquarters hotel is the Tampa Marriott Waterside Hotel & Marina, 700 S. Florida Avenue, Tampa, FL 33602. The official social functions will be held at the Marriott.

Travel Discounts

Discounts are offered to AARC Congress attendees, family members and friends.

AIRLINES

Tampa International Airport (TPA) is approximately 10 miles from downtown Tampa.

DELTA

- Online at www.delta.com. Select Advanced Search and enter NMKA4 in the Meeting Event Code box.
- Call, or have your travel agent call, Delta Meeting Network at (800) 328-1111 (booking fee added). Refer to meeting code NMKA4.

UNITED

- **Online** at www.united.com. Enter ZTHV345145 in the Offer Code box (receive an additional 3% off and no booking fee).
- **Call** United Meetings at (800) 426-1122 (booking fee added). Refer to Z code ZTHV and Agreement Code 345145.

GROUND TRANSPORTATION

There is a variety of ground transportation options between Tampa International Airport and the convention hotels. Go to www.tampaairport.com/ground-transportation.

CAR RENTAL

Budget

- **Online** at www.budget.com. Click "Use an Offer Code" box. Enter U064639 in the Offer Code (BCD) box.
- **Call** (800) 842-5628. Refer to Discount Offer Code U064639.

enterprise

- **Online** at www.enterprise.com. Enter Discount Rate Code L9D0194 in the "Optional" code box. On the following page enter **AME** in the Sign In box.
- **Call** (800) 736-8222. Refer to Discount Rate Code L9D0194.

Hertz

- **Online** at www.hertz.com. Click "Enter a Discount or Promo Code" box. Enter 049T0011 in the Convention Number (CV) discount box.
- **Call** (800) 654-2240 or (405) 749-4434. Refer to Convention Discount Code 049T0011.

Site and Hotel Information

AARC Congress 2015 • Tampa Convention Center

333 South Franklin St., Tampa, Florida 33602
November 7–10, 2015

1. **Tampa Marriott Waterside Hotel & Marina**
   Headquarters Hotel
   700 South Florida Ave., Tampa, FL 33602
   *$189 Single; $189 Double
2. **Embassy Suites Tampa Downtown Convention Center**
   513 S. Florida Ave., Tampa FL 33602
   *$189 Single; $189 Double
3. **Westin Tampa Harbour Island**
   725 S. Harbour Island Blvd., Tampa, FL 33602
   *$185 Single; $185 Double
4. **Hilton Downtown**
   211 N. Tampa Street, Tampa, FL 33602
   *$187 Single; $187 Double
5. **Aloft Hotel**
   100 W. Kennedy Blvd., Tampa, FL 33602
   *$169 Single; $169 Double
6. **Sheraton Tampa Riverwalk Hotel**
   200 N. Ashley Drive, Tampa, FL 33602
   *$179 Single; $179 Double
7. **LeMeridien Tampa Downtown**
   601 N. Florida Ave, Tampa, FL 33602
   *$165 Single; $165 Double
8. **Courtyard by Marriott**
   102 E. Cass St., Tampa, FL 33602
   *$159 Single; $159 Double
9. **Residence Inn Tampa**
   101 E. Tyler St.
   Tampa, FL 33602
   *$179 Single; $179 Double
10. **Barrymore Hotel Tampa Riverwalk**
    111 W. Fortune St., Tampa, FL 33602
    *$115 Single; $115 Double

*Single/Double represents the number of people in the room, not the bed type.
The rates above are per room per night, and plus 12% tax (subject to change without notice).

Housing Guidlines

*Notice: Unauthorized housing entities are contacting attendees and exhibitors to book Tamp hotel reservations. **Only the phone numbers, links and codes shown below are authorized by the AARC.** Neither the AARC, nor the AARC Congress Housing Bureau, will be making unsolicited calls regarding hotel reservations. Booking through an unofficial housing company puts you at risk for losing significant deposits and hotel reservations, and incurring hidden costs.*

- **To receive discounted rates for AARC Congress 2015, reservations must be booked through the AARC Housing Bureau by Wednesday October 14, 2015.** After this date, the AARC cannot guarantee discounted rates or availability at the Congress hotels. **Do not send the housing form to the AARC Executive Office or individual conference hotels; it will delay processing your request.**
- A credit card guarantee of one night's room and tax is required with each reservation request. Housing forms received without a valid credit card will be returned without being processed. Credit cards must be valid after November 30, 2015 to be considered a proper guarantee. NO CASH OR CHECK DEPOSITS ARE ACCEPTED. If you need assistance setting up special billing, please e-mail **AARC@experient-inc.com.**
- Contact the AARC Housing Bureau with new reservations, changes or cancellations through October 14, 2015. No new reservations, changes or cancellations can be made October 15-18 while the Housing Bureau transfers the reservations to the hotels. Starting Monday, October 19, direct all changes to your designated hotel.
- Your confirmed hotel may assess an early departure fee for departure date changes after check-in.

CANCELLATION POLICY:

- A valid credit card with an expiration date after November 30, 2015 must be used to guarantee your room(s). Rooms must be cancelled 72 hours prior to arrival to avoid a penalty of one night's room and tax.
- If you do not cancel your reservation and/or do not show, the first night's deposit will be charged to your credit card the night of your reserved arrival, and your reservation will be forfeited.

Housing Reservation Form

AARC
Congress 2015
Tampa, Florida

Instructions

Reservations can be made by choosing one of the following methods:

Internet: Book your reservations online by logging onto www.aarc.org

Phone: (800) 696-7353 (Toll Free USA/Canada) or (847) 996-5880, M-F 8 am - 5 pm Central Time

Fax: Send a completed form, one copy per room request to:
(301) 694-5124 (Secure Line)

Mail: Send a completed form, one copy per room request to:

AARC Housing Bureau
5202 President Court, Suite 310
Frederick, MD 21703

E-Mail: Due to privacy laws, do not e-mail this form. All reservations with a credit card number must be faxed. No forms with credit card numbers will accepted.

Confirmations

Confirmations will be sent after each reservation booking, modification, or cancellation. Review it carefully for accuracy. If you do not receive a confirmation via e-mail within 3 business days after any transaction, please contact the Housing Bureau via the phone number above or e-mail AARC@experient-inc.com. You will not receive a written confirmation from the hotel.

Deadlines/Room Rates/Taxes

To take advantage of the special conference rates, book your reservations by **Wednesday, October 14, 2015**. AARC cannot guarantee discounted rates or availability at the conference hotels after that date. All rates are per room per night, and plus 12% tax *(subject to change without notice)*.

Guarantee

All hotels require a credit card guarantee of one night's room and tax with each reservation request. Housing forms received without a valid credit card will be returned without being processed. Credit cards must be valid after November 30, 2015 in order to be considered a proper guarantee. NO CASH OR CHECK DEPOSITS ARE ACCEPTED. If you need assistance with setting up special billing, please send email to AARC@experient-inc.com.

Changes/Cancellation/No Show/Penalties

- Please contact the AARC Housing Bureau with new reservations, changes or cancellations through Wednesday, October 14, 2015. No new reservations, changes or cancellations can be made October 15-18 while the housing Bureau transfers the reservations to the hotels. Starting Monday, October 19, 2015 direct all changes to your designated hotel.
- Your confirmed hotel may assess an early departure fee for departure date changes after check-in.
- A valid credit card with an expiration date after November 30, 2015 must be used to guarantee your room(s). Rooms must be cancelled 72 hours prior to date of arrival to avoid a penalty of one night's room and tax.
- If you do not cancel your reservation and/or do not show, the first night's deposit will be charged to your credit card the night of your reserved arrival, and your reservation will be forfeited.

Arrival Date:____/____/____ **Departure Date:**____/____/____

Hotel Selection: (Please number the hotels in order of preference)

____ **Tampa Marriott Waterside Hotel & Marina -** Headquarters Hotel
____ **Aloft Tampa Downtown**
____ **Barrymore Hotel Tampa Riverwalk**
____ **Courtyard by Marriott Tampa Downtown**
____ **Embassy Suites Tampa Downtown Convention Center**
____ **Hilton Tampa Downtown**
____ **LeMeridien Tampa Downtown**
____ **Residence Inn Tampa Downtown**
____ **Sheraton Riverwalk Hotel**
____ **Westin Tampa Harbour Island**

Reservations will be processed on a first come, first served basis. If all hotels are sold out, you will be placed on a wait list until a room becomes available.

Please process this reservation according to (please check one):
❑ Comparable room rate
❑ Proximity to conference site

Check one:
Attendee: __________ Exhibitor:__________

Room Type: (required)
Number of people in room:_____ Number of beds in room (one or two):________

Special Requests: ____ ADA ____ Other:______________________________

All Marriott brand hotels are smoke free. Hotels will assign specific room types upon check in, based upon availability. Requests are not guaranteed.

List all occupants in room: (include yourself)

1________________________ 2.________________________
3. ________________________ 4.________________________

Hotel Rewards #: ____________________

Send Confirmation to: (Fill out this portion completely)

Last: ________________________ First: ____________________
Phone: ________________________ Fax: ____________________

Check the preferred method of delivery for your confirmation
❑ E-mail Address: ________________________________
❑ Company: ________________________________
Address: ________________________________
City:________________________ State: _____ Postal Code: ________
Country: ________________________________

Payment Information: All hotels require a valid credit card guarantee of one night's room and tax with each reservation request. Credit cards must be valid after November 30, 2015.

Type of Card:

____American Express ____Visa ____Discover
____MasterCard ____Other ____________________

Account Number: ____________________________
Exp. Date: ____________________________
Card Holder Name (Print):____________________________
Signature: ____________________________

Reward your staff with a trip to Congress

This year the AARC is again offering everyone a flexible opportunity to attend this premier event.

Individual Attendees… Want to attend AARC Congress 2015, but can't get the time off from work for all 4 days of the meeting? Perhaps a single day registration is more affordable and right up your alley. The AARC Day Tripper Package is a great opportunity for you and three other therapists to attend the 4-day event that is loaded with education, exhibits, networking, and many other activities.

Managers… Maybe you've wanted to send your staff in the past, but your budget can't absorb multiple, 4-day registrations. Even more importantly, department staffing won't let you give multiple employees off all at the same time.

Here's how it works:

- Order the Day Tripper Voucher Package any time between now and Friday, September 18.
- You will receive 4 one-day vouchers to Congress 2015 in Tampa.
- Each voucher is good for one person for any one of the 4 days of Congress (November 7-10).
- The attendee brings the voucher to the onsite Special Services registration counter on the desired day and uses it to register for that day.
- The attendee has all the same privileges as other attendees who purchase a one-day registration onsite at the rate of $219 for members or $314 for nonmembers, a savings of up to $149 per person!

Benefits to Attendees

- Earn CRCEs at premier educational programs
- Opportunity to visit the largest respiratory care exhibit hall in the world
- Network with other professionals and meet the "who's who" in respiratory care

Make it easy on yourself:

- Collaborate with your colleagues and decide at the last minute whom will attend—or change it if circumstances change.
- Mix and match any way that you want. A different person can attend each day. Or 4 people can all attend on one day. Or 2 people can use vouchers for 2 days each. Make it work for you and your schedule.
- Anyone you select can attend… members or non-members.

Day Tripper Group Package $657.00

Package includes: 4 one-day vouchers to AARC Congress 2015. Price equates to $164.25 per day, a savings of about 25% from the daily full-day rate for AARC members.

ANSWERS TO FAQs:

- Day Tripper is a special advance purchase program available only between now and Friday, September 18.
- Payment is required in advance with a check or credit card. Sorry, no purchase orders.
- **The package is nonrefundable.**
- Vouchers may be used by AARC members or nonmembers.
- Vouchers are fully transferable by the purchaser or within the purchasing company, and are not specific to a day of the event or to an individual. They may be used at any time during AARC Congress 2015.
- *Lectures will be presented November 7-10, Saturday through Tuesday. Note that exhibits are on November 7-9 only.*
- Registration for specific names and dates is not required in advance. The attendee simply brings the voucher to the onsite Special Services registration counter upon arrival.
- Vouchers can be used on four different days, or all on the same day, by 1 person for 4 days, 2 people at 2 days each, or 4 people each attending one day… or any one of the many different combinations. The choice is yours!

To take advantage of this great Day Tripper package visit http://tinyurl.com/daytripper-aarc-congress2015.

Questions?
Contact info@aarc.org or call Customer Service at (972) 243-2272.

RC Currents

IN THE NEWS

Read *AARC Times* Online

Have You Tried Our “Text Only” Format? It’s Easy on the Eyes!

If you read *AARC Times* on your computer or tablet, you know the online version of the magazine looks just like the printed version — all the photos and graphics that appear in the print edition are right there for you, too.

If you’re the type of person who just wants to “cut to the chase” and read the articles in a streamlined fashion, however, you can do that online as well. Just click on the headline in any of our stories, and you’ll be taken to a text-only viewing pane (www.aarc.org/resources/publications/AARC-times/). Try it out and see whether this “nothing fancy” reading format works better for you! We would love to get feedback on what you think; contact *AARC Times* Editor Marsha Cathcart at Cathcart@aarc.org. ■

The third annual American Respiratory Care Foundation’s (ARCF) fundraiser reception will be held on the evening of Friday, Nov. 6, preceding the AARC Congress 2015 in Tampa, FL.

This year’s fundraiser will be held on Tampa Bay aboard the Yacht Starship — Florida’s largest dining yacht! At 180-feet, this exquisite yacht has three decks, with four separate rooms to explore together or enjoy separately. Plus, it is the only dining yacht in Tampa Bay equipped with an elevator to all three decks.

Individual tickets for the 2015 Fundraiser are $150, which covers the cruise ticket, dinner and open bar, and one entry for the evening’s grand prize and can be purchased online (www.arcfoundation.org/support/yacht/). The event will be sponsored in part by an unrestricted grant from Vapotherm. ■

Check Out the AARC New Members List Online

The "New Members" column can now be accessed at http://c.AARC.org/new_members. Current AARC members are encouraged to check this site on the first of each month to view the names of individuals who have been approved as "Active Members" of the Association. Any current member may object to a new membership by filing a written objection with the AARC Executive Office at info@aarc.org within 30 days. ■

Respiratory Care Week 2015

Respiratory Care Week — scheduled for Oct. 25–31 — is that special time of year when you and your respiratory care colleagues are honored for your contributions and for improving patients' lives. This year's theme, "Respiratory Care — Changing the World One Breath at a Time," reflects the commitment of respiratory therapists to respiratory health and awareness. Use this week to share your enthusiasm for your chosen profession by planning events for recognition, fun, and awareness with your RT team, your patients, your community, local students, and more.

Resources are available online to help you plan your team events, health fairs, and festivities. As the official sponsor for Respiratory Care Week, the AARC provides a useful website at www.AARC.org/rcweek where you can get event ideas, planning tips, photo sharing, and more. Themed products for RC Week are also available at the Official 2015 RC Week store (www.jimcolemanstore.com/rcweek) operated by AARC partner Jim Coleman, Ltd. Here you'll find everything you need for RC Week events: t-shirts, banners, décor, and gifts that will help you promote the profession and celebrate the week with your staff and patients.

You'll also want to stay tuned in October for the release of AARC's special RC Week discount code that you can use for one of our most popular CRCE courses. It's AARC's way of saying "thank you" for all you do as a dedicated RT. So don't miss your chance to plan ahead — now's the time to make RC Week a priority and boost awareness about respiratory health and the profession. Do it for yourself, your colleagues, and your patients! ■

Bring it to life with AARC + Edison NATION MEDICAL

Submit Your Idea To Improve Mechanical Ventilation

The AARC and Edison Nation Medical, the premier health care innovation marketplace, encourage AARC members to submit ideas that improve mechanical ventilation for patients.

Edison Nation Medical brings 12+ years experience working with individuals and small businesses to commercialize their innovation ideas. Do you have a great product idea for improving mechanical ventilation? Submit your idea today! If your idea is selected for development, you will receive an advance of $2,500, 50% of licensing royalties, and be named as the inventor on any patent application.

To learn more or to submit your idea, go to www.aarc.org/resources/programs-projects/edison-nation-medical-innovation-search/. ■

$5,000 Grant Puts RTs in the Driver's Seat

Five thousand dollars isn't a lot of money in the grand scheme of things; but Carrie Bates, RRT, AE-C, and her colleagues at North Valley Hospital in Whitefish, MT, are proving it can go quite a long way when it comes to improving asthma care. Thanks to a $5,000 grant they received earlier this year from the Montana Asthma Control Program (MACP), they've been able to develop an asthma education protocol they believe will make a real difference in the lives of their patients.

MACP has been a great partner in the process. "A team from MACP came to our facility and trained our entire team on the "Expert Panel Report 3" guidelines and evaluated 26 patients from 2013 to see how well we did with education and disease management," says the AARC member. They were specifically looking at things like asthma severity assessments, identification of asthma triggers, appropriate use of medications, lung function measurements, smoking cessation (if applicable), inhaler techniques, and development of home management asthma action plans.

Based on that feedback, the North Valley team developed an "All About Asthma" booklet for RTs to use when reviewing asthma care with their patients. The booklet can be customized for each patient to identify their individual asthma triggers and provide specific instructions on medication usage. From there, RTs work with patients to develop action plans specific to each person's age and symptoms.

"The protocol includes education about the disease, how to recognize signs and symptoms, what can trigger an attack, and how to reduce triggers in the home environment," explains Bates. The patients also demonstrate inhaler technique and receive a spacer, peak flow meter, and peak flow diary when indicated — all free to the family — to help reduce asthma symptoms and help everyone better understand their disease and what they can do to get it under control.

RTs put the protocol into operation this past spring and are collecting outcomes data that will be used to evaluate the overall effectiveness of the intervention. "In January 2016 we will invite the MACP back to our facility to see our progress and hopefully see an improvement in our quality and management of asthmatics in our area," says Bates. "Eventually, we hope to see a reduction in admissions and more people in our community having their asthma symptoms controlled." ■

Carrie Bates works with a young asthma patient at North Valley Hospital.

Enter for a Chance To Win a Free Membership Renewal

AARC Times is looking for creative AARC members to enter our annual AARC Photo Contest. Finalists will receive a **free** one-year membership with the chance of their photo being chosen and featured on the cover of the April 2016 *AARC Times*. For information on how to enter, go to www.AARC.org/resources/publications/aarc-times and click on the "Photo of the Year Contest" link. Deadline to submit photos is **Nov. 10, 2015.** ■

Success Story: Perseverance Pays Off!

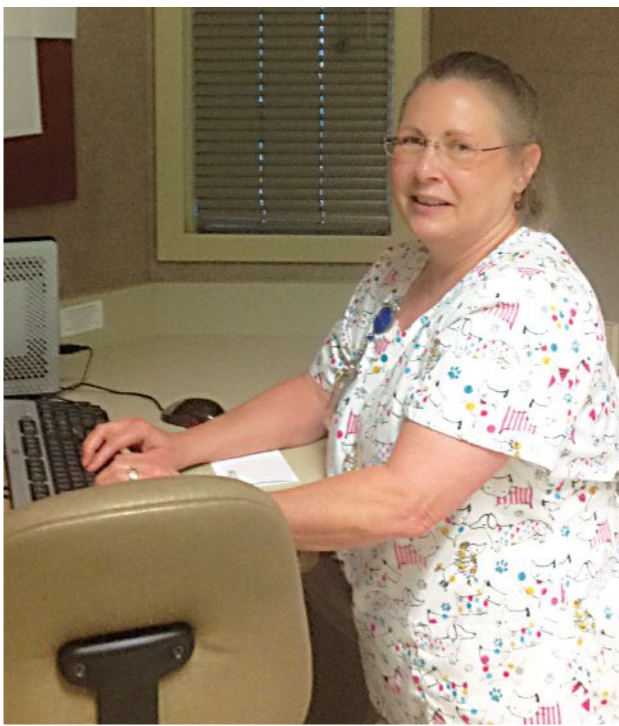
As respiratory therapists, you're known for your ability to adapt to new technology and services. Of course, your willingness to step outside the box often depends on just how wonderful you may perceive that new technology or new services.

AARC member Mary Lou Guy, MBA, RRT, CHT, found that out a few years ago when she was charged with taking over phlebotomy on two campuses of Saint Luke's Northland Hospital in Kansas City, MO. While her staff (whom she applauds for being self-starters and great critical thinkers) were already handling a range of other nontraditional roles like electrocardiograms, Holter monitoring, and hyperbaric oxygen therapy, they weren't thrilled with this one.

"Many of the RT staff felt they should not be doing the specimen collection, and we actually lost three staff members," says the AARC member. To make matters worse, lab staff were unhappy as well. Even though no one lost a job due to the transition, they felt their jobs were in jeopardy.

Guy stuck with it, though, and eventually overcame the problems. It helped to have the lab director, who was her previous supervisor, in her corner. Together they developed the pros and cons for the move and offered the training necessary to ensure respiratory therapists were up to the task. They made sure all new hires were aware of the expectations as well.

It all paid off big time in the end. "By doing this, we have conservatively saved $100,000 or more per year in salaries and maintained and grown RT staff," says Guy. Patient care is better with RTs collecting the specimens, too. "The biggest benefit, in my opinion, has been that the therapists have grown tremendously in their assessment skills and have saved a number of lives by using their assessment skills while doing the lab draws on patients whom we might not have seen otherwise," says Guy. "Their understanding of the patient's overall care needs has improved greatly." ■



Mary Lou Guy has saved her hospital $100,000 per year by crosstraining its therapists in phlebotomy.

Contribute to Our "Transitions" Column

The AARC "Transitions" column is devoted to sharing news about the passing of AARC members.

You can submit news about your colleague's recent passing by going to http:c.AARC.org/transitions. Please provide any information about the member's recent obituary so that we can share it with the membership and pay tribute. ■

RT Student Members: Send Us Your Stories

AARC Times is always looking for good stories from AARC student members that relate special experiences and give the RT student perspective on the respiratory care profession they have chosen as a career.

If you have a story to tell, please contact *AARC Times* Editor Marsha Cathcart at cathcart@aarc.org and include in the subject line, "Student Member Story." Be sure to give us your full name, AARC member number, a brief description of the story subject, and why you would like to have it published. Then attach a Word document of the story. We hope to hear from you soon! ■

Strange But True…

Asthma perk? Johns Hopkins researchers who analyzed data from 47,880 men found those with a history of asthma were 29% less likely to have been diagnosed with metastatic prostate cancer and 36% less likely to die of the disease. Men with hay fever, however, were 10–12% more likely to have prostate cancer that had spread or to have died from the condition. Since asthma and prostate cancer are both tied to inflammation, the investigators were surprised by these findings but plan more studies to uncover an explanation.

Turnabout is fair play: An Ohio State University investigator is putting to better use studies on taste in nicotine products conducted by the tobacco companies over the years: improving the understanding of how taste sensitivities may impact adherence to nicotine replacement therapy. Specifically, she has found people who are genetically inclined to be "super tasters" of a bitter component in nicotine may respond better to non-oral nicotine replacement therapy products.

Wild about Harry: Researchers at the University of Texas Medical Branch at Galveston are stripping out the lung cells from the lungs of deceased animals and people (leaving just the elastic protein structure forming the lung's skeleton) and replacing them with lung cells from living creatures. A little pig named Harry was the first to get a pair of the laboratory-built lungs; and as of last spring, he was doing just fine. Dr. Joaquin Cortiella, who directs the laboratory of regenerative and nano medicine, has a personal interest in the project: he suffers from pulmonary fibrosis.

Painful lesson: A 41-year-old Australian woman who reached into her purse to retrieve her asthma inhaler at a party got something besides the needed medication. Since she hadn't replaced the cap on the inhaler, a heart-shaped stud earring also loose in her bag had become lodged in the device, and she ended up inhaling it into her right bronchus. She immediately started coughing up blood and wheezing. The surprising finding was made on a chest x-ray after she was rushed to the hospital. (April *BMJ Case Reports*)

Sweet! A concentrated extract of maple syrup made disease-causing bacteria more susceptible to antibiotics in a McGill University study. The researchers believe combining maple syrup extract with common antibiotics could increase the microbes' susceptibility to the drugs, leading to lower antibiotic usage. ■

One Picture…

When it comes to encouraging people to give up tobacco, it turns out one picture really is worth a thousand words. Researchers from the University of North Carolina at Chapel Hill who synthesized the results of 37 different experiments conducted among 33,613 people worldwide found picture-based warnings on tobacco products were more effective than text warnings on 20 of 25 different outcome measures, including increasing intentions not to start smoking or to quit smoking, getting and keeping people's attention, triggering people to think about the negative impacts of smoking, and credibility.

Picture warnings on tobacco products began in Canada in 2001. In response to a 2009 federal law, the U.S. Food and Drug Administration (FDA) issued a rule in 2011 requiring cigarette packs sold in the United States to include color graphic images aimed at depicting the negative health effects of smoking cigarettes, along with one of nine new text warnings. Although the U.S. Court of Appeals for the District of Columbia blocked the graphic warnings from moving forward in response to a legal challenge from the tobacco companies, the agency is expected to try again to comply with the law.

The study appeared in a recent issue of *Tobacco Control*. ■

Money Talks for Smokers Trying To Quit

A year-long study conducted among 2,538 employees of a pharmacy company suggests money talks when it comes to getting people to quit smoking — but how you offer the incentives makes a difference.

Researchers from the Perelman School of Medicine at the University of Pennsylvania assigned each of the participants to one of five groups: individual reward (reward based on individual performance), collaborative reward (reward based on group performance), individual deposit (requiring an upfront deposit of $150 with subsequent matching funds), competitive deposit (competing for other participants' deposits and matching funds), or usual care (informational resources and free smoking-cessation aids only).

Ninety percent of the participants assigned to the reward-based programs accepted the assignment, compared to just 14% of those assigned to the deposit-based programs. Among those assigned to the rewards-based programs, 16% were smoke-free at six months, compared to 10% of those initially assigned to the deposit-based groups. Only 6% of participants in the usual care group were still abstaining at six months. Contrary to the authors' expectations, the group-oriented programs were not significantly more successful than the individual-oriented programs (14% vs. 12%).

Interestingly, however, among the 14% of people in the deposit-based group who actually made the required deposits, 55% were still smoke-free at six months. The authors believe that finding suggests smoking-cessation rates could be improved if researchers could find more ways to get people to invest up front in the quit attempt.

"We found that the reward-based programs were more effective than deposits overall because more people accepted them in the first place," lead author Scott D. Halpern, MD, PhD, was quoted as saying. "However, among people who would have accepted any program we offered them, the deposit contracts were twice as effective as rewards and five times more effective than free information and nicotine replacement therapy, likely because they leveraged people's natural aversion to losing money. With such unprecedented success rates, the trick now is to figure out how to get more people to sign up — to feel like they have skin in the game."

The study was published in a recent online first issue of the *New England Journal of Medicine*. ■

Asthma Lands More Women in the Hospital Than Men

Do you feel like more of the adult asthma patients you see in the hospital are women than men? According to a new study in the *Annals of Allergy, Asthma and Immunology*, that may be the case. They found women are 60% more likely to be hospitalized for asthma after coming to the emergency room with an attack.

The study was conducted among 2,000 ER patients with acute asthma. Analysis of the data showed most were not using controller medications, and many were overweight. Some were active smokers as well, and many did not have health insurance — although women were more likely to have insurance than men. After adjusting for all of these factors, however, they found women were still 60% more likely to be hospitalized. ■

Thumbs Up…

… To the Canadian province of Ontario for passing Ryan's Law, legislation requiring every school in the province to institute a seven-step guide to ensure the school environment is safe for children with asthma. The law is named after 12-year-old Ryan Gibbons, who died in 2012 after suffering an asthma attack at school. ■

Unraveling COPD's ORIGIN

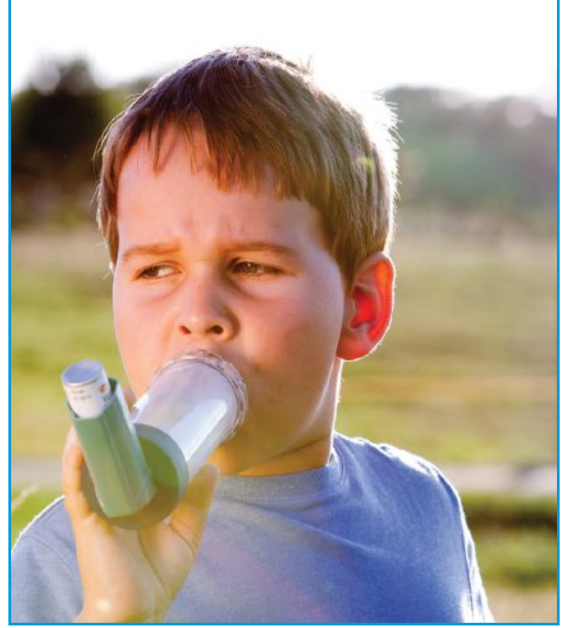
A mitochondrial protein and pathway may be to blame for smoking-induced COPD, report Brown University researchers publishing in a recent issue of the *Journal of Clinical Investigation*.

The investigators explored the relationship between cigarette smoke exposure, NLRX1, and the MAVS/RIG-I-like helicase pathway in a mouse model. Mice exposed to smoke exhibited lower levels of NLRX1 expression than controls, and those engineered to lack the gene for NLRX1 developed an enhanced degree of emphysema when exposed to smoke. These mice also exhibited a cascade of molecular responses, particularly an unbalancing of protease proteins that other researchers have previously associated with COPD. The researchers also noted exaggerated levels of lung cell death.

With these findings in hand, they then looked at whether mice that were genetically engineered to overexpress NLRX1 would fare better when exposed to cigarette smoke. They found significantly less lung damage after six months in those mice than in mice without that advantage. The investigative team has filed for a provisional patent on the idea.

Further experiments connected NLRX1 with the MAVS/RIG-I-like helicase pathway. For example, the researchers showed that while smoke-exposed mice lacking the NLRX1 gene developed enhanced emphysema, smoke-exposed mice lacking both the NLRX1 gene and the MAVS gene, which is a central integrator of the MAVS/RIG-I-like helicase pathway, had much less lung damage, suggesting that the absence of the protein was not a problem for mice that also lacked the pathway that it suppresses.

The investigators plan to further their study by looking at how cigarette smoke suppresses NLRX1 in people, noting that when smoke exposure ends in mice, the inflammation tends to die down, whereas in people it does not. They are also planning to investigate variations in the protein's gene to see if they may affect a patient's susceptibility to COPD. ■



Is a Cure for Asthma on the Horizon?

British researchers working with colleagues at the Mayo Clinic believe they have identified the root cause of asthma. Using mouse models of the disease and airway tissue from humans with and without asthma, they found asthma triggers that release chemicals that activate the calcium sensing receptor (CaSR) in airway tissue, driving asthma symptoms like airway twitchiness, inflammation, and narrowing. Perhaps most importantly, the investigators have also identified a class of drugs known as calcilytics they believe can be successful in manipulating CaSR to reverse all symptoms associated with the condition.

"Our findings are incredibly exciting," principal investigator Daniela Riccardi, from the Cardiff University School of Biosciences, was quoted as saying. "For the first time, we have found a link between airways inflammation, which can be caused by environmental triggers (such as allergens, cigarette smoke, and car fumes) and airways twitchiness in allergic asthma.... Using calcilytics, nebulized directly into the lungs, we show that it is possible to deactivate CaSR and prevent all of these symptoms."

Calcilytics were first developed 15 years ago to treat osteoporosis. Although unsuccessful in that case, these researchers believe they may now be repurposed to treat asthma. The current study appeared in a recent issue of *Science Translational Medicine*. ■

Researchers Identify the Origin of Pulmonary Hypertension

A new study out of Brigham and Women's Hospital has pinpointed the origin of pulmonary hypertension (PH): specifically, disruptions in mitochondria lead to alterations in the metabolism of blood vessels of the lungs.

In a mouse model of the disease, the researchers first found that microRNAs tamp down a critical human protein called ISCU that generates factors called iron-sulfur clusters essential for normal mitochondrial function. This can then incite catastrophic molecular consequences culminating in PH. From there, they studied a 29-year-old woman with two defective copies of the ISCU gene. At rest, the woman's blood pressure and heart function appeared relatively normal, but unambiguous dysfunction of the blood vessels in her lungs was revealed during exercise testing. The patient improved when placed on a PH drug to relax and widen the smooth muscle lining of her lung blood vessels.

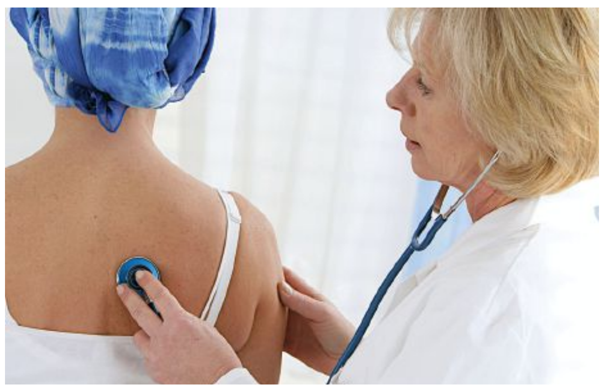
"This is the first known observation of pulmonary vascular dysfunction in a person with ISCU deficiency," study author Stephen Chan, MD, PhD, was quoted as saying. "Her case helps draw a definitive connection between ISCU and PH. Perhaps even more exciting is that we were able to catch her disease and treat it at an early stage. We hope this will prevent or at least slow down the progression over time." The study was published in a recent issue of *EMBO Molecular Medicine*. ■

Researchers Get New Insights into How Cancer Spreads

Boston researchers have developed a microfluidic chip that can capture rare clusters of circulating tumor cells (CTCs), a finding that could yield important new insights into how cancer spreads. CTCs break away from a tumor and move through a cancer patient's bloodstream. Scientists have been aware of their existence for more than 50 years, and studies have linked them to higher mortality rates in some cancers. CTCs' prevalence in the blood as well as their role in metastasis has not been thoroughly investigated, mostly because they are so elusive.

Investigators used the new technology — called Cluster-Chip — to capture and analyze CTC clusters in 60 patients with metastatic breast, prostate, and melanoma cancers. CTC clusters were found in 30–40% of the patients, suggesting a possibly greater role for clusters in the metastatic cascade than was previously believed.

"The presence of these clusters is far more common than we thought in the past," noted study author



Mehmet Toner, PhD, professor of surgery at the Massachusetts General Hospital and the Harvard-MIT Division of Health & Sciences Technology. He said the fact that they saw clusters in that many patients was quite remarkable. Dr. Toner and his fellow investigators published the study results online in *Nature Methods* on May 18, and scientists look to this as one more way they're gaining ground to beat cancer. The National Institutes of Health funded the study. ■

Approval of New Asthma Drug Recommended to FDA

An advisory committee to the U.S. Food and Drug Administration (FDA) recommended approval of GlaxoSmithKline Plc's drug mepolizumab for severe asthma in patients aged 18 and older. If approved, the drug would be marketed under the trade name Nucala and be the first new biologic treatment for severe asthma in more than a decade.

Mepolizumab is a monoclonal antibody that binds to a receptor known as interleukin-5, which promotes the growth of eosinophils. These are a type of white blood cell that can accumulate in the lungs of patients with asthma. The extent of these accumulations correlate with the frequency and severity of asthma exacerbations. There are currently no products designed to treat patients based on predefined eosinophil levels. ■

Industry Watch

AstraZeneca making headway on asthma identification

AstraZeneca has signed an agreement with Abbott Laboratories to develop a diagnostic blood test that will be used to identify patients with severe asthma who may be most likely to benefit from the company's experimental asthma medication, tralokinumab, an antibody drug currently in Phase III clinical trials. A similar deal has been struck with scientists at the Montreal Heart Institute to study genes associated with cardiovascular disease and diabetes. Both moves reflect the company's growing interest in developing drugs based on personalized medicine to tailor treatments to meet the patient's specific genetic profile.

Grant awarded for the study of pulmonary rehabilitation and COPD

The ATS Foundation and Breathe California of Los Angeles have awarded $80,000 to Harry Rossiter, PhD, of the Los Angeles Biomedical Research Institute to study the effectiveness of pulmonary rehabilitation in reducing COPD symptoms in an underserved population in Los Angeles. "This study will be a vital first step in personalizing rehabilitation to maximize its effectiveness in improving the lives of COPD patients," Dr. Rossiter was quoted as saying. He noted that the ultimate goals of the research are to improve outcomes in COPD and reduce health care expenditures.

Masimo announces study results

According to Masimo, a clinical study presented at the International Anesthesia Research Society's 2015 Annual Meeting showed the company's latest noninvasive patient monitoring parameter, Oxygen Reserve Index™ (ORI™), could help clinicians in the early detection of an impending desaturation in patients receiving supplemental oxygen. Researchers from Loma Linda University School of Medicine evaluated the relationship between ORI and PaO_2 in 103 patients who underwent surgery in which arterial catheterization was planned. The analysis included 1,540 ORI samples using a Masimo Radical-7® Pulse CO-Oximeter®. Regression analysis was used to compare PaO_2 from clinically indicated arterial blood gas samples to ORI and calculated changes in ORI to calculated changes in PaO_2. Masimo reports that during 2,377 monitored hours, researchers found that ORI could be calculated about 91.5% of that time and indicated that ORI was a noninvasive method for measuring moderate hyperoxia.

Aeolus files patent application

Aeolus Pharmaceuticals Inc. has filed a provisional patent application with the U.S. Patent Office for a new series of compounds demonstrating anti-microbial and anti-inflammatory action. Brian J. Day, PhD, at National Jewish Health in Denver, CO, developed the compounds under an Aeolus-sponsored research grant. "Currently available anti-inflammatory drugs work by suppressing the immune system, which can be counterproductive during active infection," Dr. Day was quoted as saying. "This series of compounds has been shown to be effective at killing multiple drug-resistant clinical strains of ***Pseudomonas aeruginosa*** isolated from cystic fibrosis patients and {to} improve bacterial clearance and diminish lung inflammation in a cystic fibrosis mouse model of ***P. aeruginosa*** lung infection."

Aseptika receives patent for sputum diagnostic test

A U.S. patent has been awarded to Aseptika for its sputum test to identify respiratory infections. The test, which is designed for both home and hospital use, looks for two biomarkers produced by the bacteria that cause lung infections in patients with chronic lung conditions such as COPD, cystic fibrosis, and asthma. By measuring the levels of these biomarkers over time, acute exacerbations may be predicted and monitored. The test is currently being used in a clinical trial conducted among COPD patients in the United Kingdom, and the company looks to the U.S. patent to open the door to partnerships with pharmaceutical com-

panies in America that could distribute it.

Case Western Reserve launches TB study

After discovering a unique group of people resistant to tuberculosis infection, Case Western Reserve researchers are leading an international team dedicated to understanding exactly how these individuals fight off the disease. The initiative, which combines a $3.5 million award from the National Institutes of Health and a $650,000 grant from the Bill & Melinda Gates Foundation, will examine the phenotypes and gene expression involved. The overriding goal is to use the lessons learned from these resistant individuals to develop a more effective approach to treating TB.

University of Louisville to study asthma in older adults

Understanding the personal and environmental influences of asthma in older adults is the focus of a $2.3 million National Institute on Aging grant awarded to the interdisciplinary team led by Barbara Polivka PhD, the Shirley B. Powers endowed chair in nursing at the University of Louisville School of Nursing. "As the population ages and the number of older adults with asthma in the United States increases to an estimated 4 million by 2030, the information from this study can be used to develop and test patient-centered interventions to help seniors with asthma better manage their symptoms, reduce trips to the emergency room, and improve their overall well-being," noted Dr. Polivka.

Health Canada issues license for Benson Medical spirometer

According to Benson Medical Instruments, Health Canada has issued a Class II device license for the company's CCS-200 Computer Controlled Spirometer. ElectroMedical Instrument Co., Benson's Canadian distributor, reports that CCS-200 Spirometer data can be completely integrated with data from Benson Medical audiometers, which gives users the ability to store and manipulate both hearing-conservation and spirometry-testing data without opening another program. Now, they can also get accessories, disposables, and support from a single vendor.

Bellerophon to partner with Flextronics

Bellerophon Therapeutics Inc. has selected Flextronics International Ltd. as its manufacturing partner for the INOpulse® Mark2, the company's next-generation pulsatile nitric oxide delivery device. Bellerophon and Flextronics have entered into an agreement under which Flextronics will manufacture, repair, and service the Mark2 devices to be used in Bellerophon's INOpulse clinical development programs. "Flextronics' experience with manufacturing medical devices, including portable drug delivery systems, was important to us, and we look forward to working with them to have devices ready for our upcoming Phase 3 trials for the treatment of pulmonary arterial hypertension, which we expect to commence in the second half of 2015," Bellerophon Therapeutics Chair and CEO Jonathan Peacock was quoted as saying.

Arch to test new drug in CF patients

Arch Biopartners Inc. has identified a new candidate drug to treat *Pseudomonas aeruginosa* respiratory infections. Developed as the result of work performed during 2014 and early 2015 by Dr. Daniel Hassett at the University of Cincinnati, the drug will be tested for its safety and efficacy in treating *P. aeruginosa* respiratory infections in cystic fibrosis patients. The company believes the compound has potential as a new treatment against other bacterial lung and skin infections as well.

Mediware signs agreement with Rock-Pond

Mediware Information Systems Inc. has signed an agreement with Rock-Pond Solutions to jointly distribute reporting and analytics software that are essential for post-acute providers to operate in today's complex clinical and reimbursement environments. They report the expanded relationship is expected to increase collaboration between the two businesses and deliver great solutions as the companies release new products together.

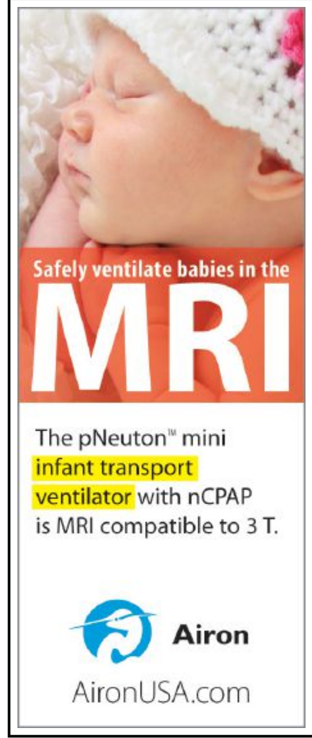
FDA calls for more study on Breo® Ellipta® use in teens

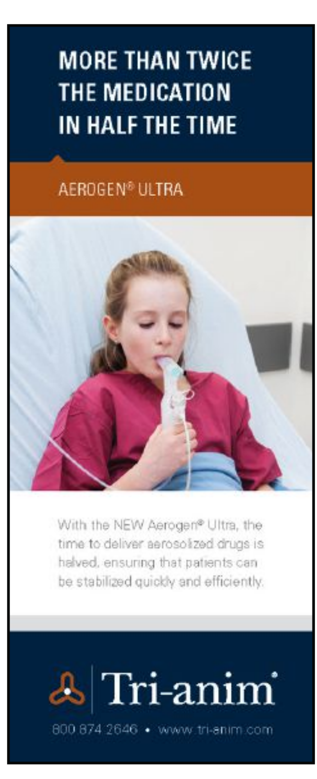
Last March, the FDA denied approval for the supplemental New Drug Application for Breo Ellipta (fluticasone furoate/vilanterol) as a once-daily inhaled treatment for asthma in patients age 12–17 reports GlaxoSmithKline plc and Theravance Inc. The FDA advisory committee cited insufficient data to demonstrate the benefit of the drug in those under age 18 and called for a large long-acting beta agonist (LABA) safety trial in both adults and 12–17 year olds, similar to the ongoing LABA safety trials being conducted as an FDA post-marketing requirement by each of the manufacturers of LABA-containing asthma treatments. Breo Ellipta once daily has been approved by the FDA for those age 18 and older.

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

Industry Update

Featuring information on products and equipment from manufacturers





iOS Health Application

Built in partnership with Mount Sinai-National Jewish Health Respiratory Institute, LifeMap's COPD Navigator is an iOS mobile health application aimed at empowering patients to better manage their condition. By leveraging evidence-based care guidelines, behavioral science, and patient data, the COPD Navigator delivers personalized, doctor-specified interventions with the goal of achieving better outcomes at lower cost. HealthKit-enabled "smart" inhalers are supported by the device, and the care team is provided with a clinician dashboard they can use to monitor patient status between visits. www.lifemap-solutions.com

Toothbrush Spirometer

The FlowBrush™ is a combination toothbrush and electronic spirometer that allows people with moderate-to-severe persistent asthma to measure their FEV$_1$ each morning just after brushing their teeth. Results are wirelessly transmitted via the Verizon national network to the FlowBrush database cloud for daily analysis. If FEV$_1$ readings begin to drop, the company's trained asthma care coordinators will call to help the patient implement his/her asthma action plan or access medical care. www.flowbrush.com

Oxygen Filling Station

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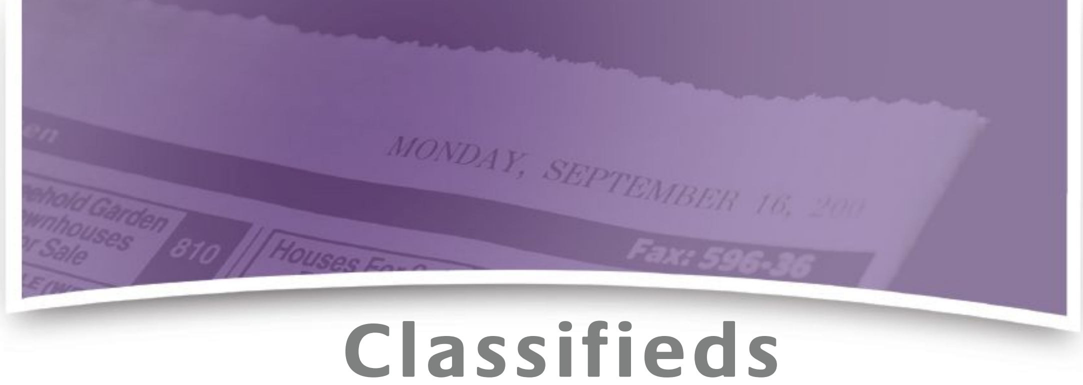
▶ Press releases and photos on new products are welcome. Send to Marsha Cathcart, *AARC Times* editor, at cathcart@aarc.org.



Classifieds

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United States

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Calendar of Events

AARC & State Society Programs

September 8–11

Myrtle Beach, South Carolina

South Carolina Society for Respiratory Care's 44th Annual Conference

Contact: Scott Lane, www.scsrc.org, SML97@scdmh.org

September 30–October 2

Hot Springs, Arkansas

44th Annual Arkansas Society for Respiratory Care State Meeting

Contact: John.Lindsey@Mercy.net

October 1–2

Bridgeport, West Virginia

West Virginia Society for Respiratory Care's Fall Health Care Conference

Contact: www.wvsrc.org, Cynthia.Keely@gmail.com

October 20–21

Honolulu, Hawaii

42nd Annual Hawaii Society for Respiratory Care Conference

Contact: Jung Eun Kim, jungeun@Hawaii.edu, (808) 734-9243

Submissions for the next available issue are due July 20.

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

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1 Needham D et al. *Archives of Physical Medicine and Rehabilitation* Vol 91, Issue 4, PP 536–542, April 2010.
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