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AARC Times

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Jon Carlson, BS, RRT-NPS, is director of respiratory care at Mercy Hospital of Buffalo in Buffalo, NY.

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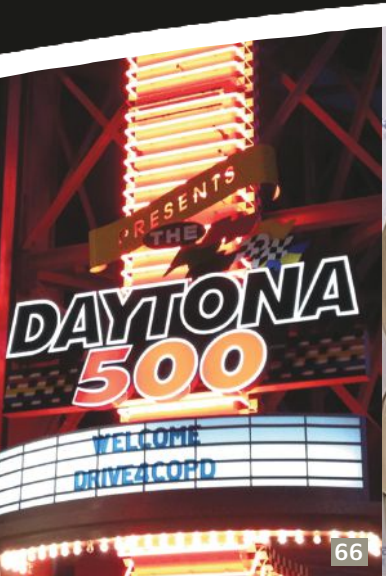

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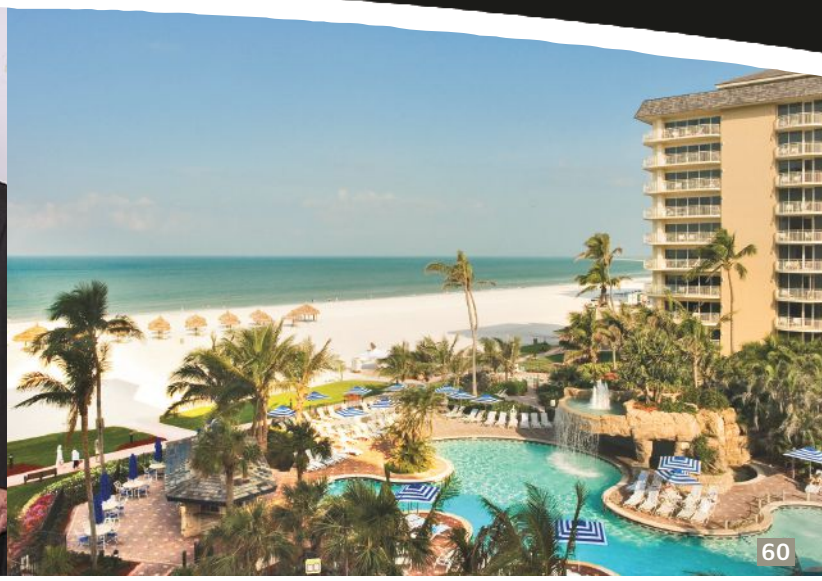
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AARC Strategic Plan

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

AARC Strategic Objectives

- Refine and expand the scope of practice for respiratory therapists in all care settings.
- Advance the knowledge base and educational preparation of respiratory therapists to ensure competent patient care and to foster patient safety initiatives.
- Support research and scientific inquiry to strengthen the scientific foundation and promote best practice for patient care.
- Establish professional standards and outcomes supported by scientific evidence.
- Advocate for federal and state health care policies that enhance patient care, patients' access to care and professional practice.
- Partner with governmental agencies, community organizations, third-party payers, professional societies and the public to promote healthy behaviors and prevent cardiopulmonary disease.
- Broaden consumer and health care providers' knowledge and understanding of the value of respiratory therapists in providing safe, competent and cost-effective care.

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

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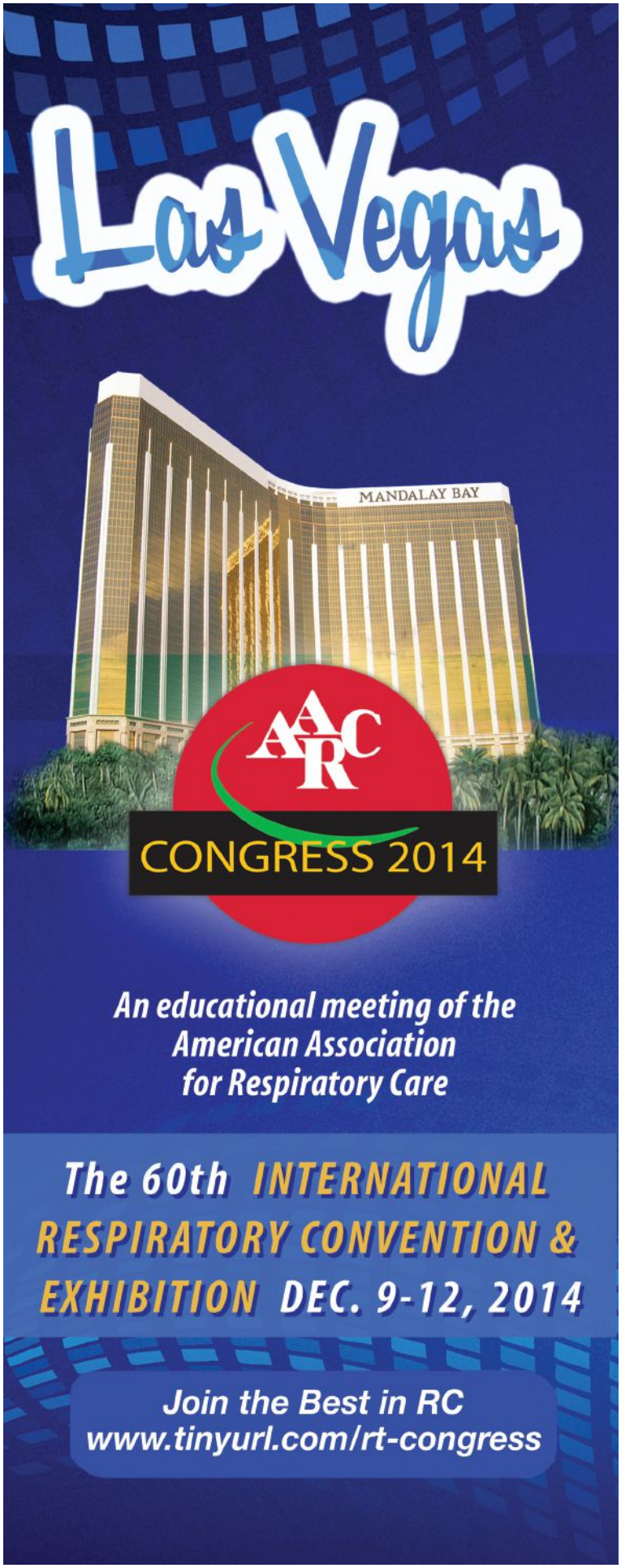

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INDICATION

SURFAXIN® (lucinactant) Intratracheal Suspension is approved by the FDA for the prevention of respiratory distress syndrome (RDS) in premature infants at high risk for RDS.

IMPORTANT SAFETY INFORMATION

SURFAXIN (lucinactant) Intratracheal Suspension is intended for intratracheal use only. The administration of exogenous surfactants, including SURFAXIN, can rapidly affect oxygenation and lung compliance. SURFAXIN should be administered only by clinicians trained and experienced with intubation, ventilator management, and general care of premature infants in a highly supervised clinical setting. Infants receiving SURFAXIN should receive frequent clinical assessments so that oxygen and ventilatory support can be modified to respond to changes in respiratory status.

Most common adverse reactions associated with the use of SURFAXIN are endotracheal tube reflux, pallor, endotracheal tube obstruction, and need for dose interruption. During SURFAXIN administration, if bradycardia, oxygen desaturation, endotracheal tube reflux, or airway obstruction occurs, administration should be interrupted and the infant's clinical condition assessed and stabilized. Overall the incidence of administration-related adverse events did not appear to be associated with an increased incidence of serious complications or mortality relative to the comparator surfactants.

SURFAXIN is not indicated for use in acute respiratory distress syndrome (ARDS).

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Please see package insert for full prescribing information.

INDICATIONS AND USAGE

SURFAXIN® is indicated for the prevention of respiratory distress syndrome (RDS) in premature infants at high risk for RDS.

CONTRAINDICATIONS

None.

WARNINGS AND PRECAUTIONS

Acute Changes in Lung Compliance

Administration of exogenous surfactants, including SURFAXIN, can rapidly affect lung compliance and oxygenation. SURFAXIN should be administered only by clinicians trained and experienced in the resuscitation, intubation, stabilization, and ventilatory management of premature infants in a clinical setting with the capacity to care for critically ill neonates. Infants receiving SURFAXIN should receive frequent clinical assessments so that oxygen and ventilatory support can be modified to respond to changes in respiratory status.

Administration-Related Adverse Reactions

Frequently occurring adverse reactions related to the administration of SURFAXIN include bradycardia, oxygen desaturation, reflux of drug into the endotracheal tube (ETT), and airway/ETT obstruction.

Increased Serious Adverse Reactions in Adults with Acute Respiratory Distress Syndrome (ARDS)

Adults with ARDS who received lucinactant via segmental bronchoscopic lavage had an increased incidence of death, multi-organ failure, sepsis, anoxic encephalopathy, renal failure, hypoxia, pneumothorax, hypotension, and pulmonary embolism. SURFAXIN is not indicated for use in ARDS.

Clinical Trials Experience

The efficacy and safety of SURFAXIN for the prevention of RDS in premature infants was demonstrated in a single randomized, double-blind, multicenter, active-controlled, multi-dose study involving 1294 premature infants (Study 1). Infants weighed between 600 g and 1250 g at birth and were 32 weeks or less in gestational age. Infants were randomized to received 1 of 3 surfactants, SURFAXIN (N = 524), colfosceril palmitate (N = 506), or beractant (N = 258). Co-primary endpoints were the incidence of RDS (defined as having a chest x-ray consistent with RDS and an $FiO_2 \geq 0.30$) at 24 hours and RDS-related mortality at 14 days. The primary comparison of interest was between SURFAXIN and colfosceril palmitate with the intent of demonstrating superiority. Beractant served as an additional active comparator. Compared to colfosceril palmitate, SURFAXIN demonstrated a statistically significant improvement in both RDS at 24 hours and RDS-related mortality through Day 14. A second multicenter, double-blind, active-controlled study involving 252 premature infants was also conducted to support the safety of SURFAXIN (Study 2). Infants weighed between 600 g and 1250 g and were less than 29 weeks in gestational age. Infants received 1 of 2 surfactants, SURFAXIN (N = 119) or poractant alfa (N = 124).

The safety data described below reflect exposure to SURFAXIN administered intratracheally to infants at a dose of 5.8 mL per kg (up to 4 doses) in either 4 aliquots (Study 1) or 2 aliquots (Study 2) in 643 premature infants.

Comparator surfactants colfosceril palmitate and beractant were administered at the recommended doses (5.0 and 4.0 mL per kg, respectively) while the first dose of poractant alfa administered (2.2 mL per kg) was less than the recommended dose of 2.5 mL per kg. Any subsequent doses of poractant alfa were at the recommended 1.25 mL per kg dose.

Overall, the incidence of administration-related adverse reactions was higher in infants who received SURFAXIN compared to other surfactants (Table 1) and resulted in a greater proportion of infants treated with SURFAXIN who experienced administration-related oxygen desaturation and bradycardia. For Study 1, oxygen desaturation was reported in 17%, 9%, and 13% and bradycardia for 5%, 2%, and 3% of infants treated with SURFAXIN, colfosceril palmitate, and beractant, respectively. For Study 2, oxygen desaturation was reported in 8% and 2% and bradycardia in 3% and 2% of infants treated with SURFAXIN and poractant alfa, respectively. These adverse reactions did not appear to be associated with an increased incidence of serious complications or mortality relative to the comparator surfactants (Table 2).

Table 1. Administration-Related Adverse Reactions in SURFAXIN Controlled Clinical Studies[a]

	Study 1[b]			Study 2[c]	
	SURFAXIN (N = 524)	Colfosceril palmitate (N = 506)	Beractant (N = 258)	SURFAXIN (N = 119)	Poractant alfa (N = 124)
Total Doses Administered	994	1038	444	174	160
	Total Number of Events (Events per 100 Doses)				
ETT Reflux	183 (18)	161 (16)	67 (15)	47 (27)	31 (19)
Pallor	88 (9)	46 (4)	38 (9)	18 (10)	7 (4)
Dose Interruption	87 (9)	46 (4)	30 (7)	7 (4)	2 (1)
ETT Obstruction	55 (6)	21 (2)	19 (4)	27 (16)	1 (1)

[a] Table includes only infants who received study treatment.
[b] Study 1 doses were administered in 4 aliquots.
[c] Study 2 doses were administered in 2 aliquots.

Table 2. Common Serious Complications Associated with Prematurity and RDS in SURFAXIN Controlled Clinical Studies Through 36-Weeks Post-Conceptual Age (PCA)

	Study 1			Study 2	
	SURFAXIN (N = 527) %	Colfosceril palmitate (N = 509) %	Beractant (N = 258) %	SURFAXIN (N = 119) %	Poractant alfa (N = 124) %
Apnea	52	52	46	66	75
Intraventricular hemorrhage, all grades	52	57	54	39	38
-Grade 3/4	19	18	21	13	8
Periventricular leukomalacia	10	10	12	4	9
Acquired sepsis	44	44	44	45	52
Patent ductus arteriosus	37	35	37	43	44
Retinopathy of prematurity, all grades	27	26	25	32	31
-Grade 3/4	6	7	6	5	9
Necrotizing enterocolitis, all grades	17	17	19	13	15
-Grade 2/3	6	8	14	8	8
Pulmonary air leak through Day 7, all types	15	17	14	9	7
-Pulmonary interstitial emphysema	9	10	10	3	5
-Pneumothorax	3	4	2	4	1
Pulmonary hemorrhage	10	12	14	6	9

All-cause mortality through 36-weeks PCA was similar regardless of which exogenous surfactant was administered.

Adverse reactions reported in the controlled clinical studies through 36-weeks PCA occurring in at least 10% of infants were anemia, jaundice, metabolic acidosis, oxygen desaturation, hyperglycemia, pneumonia, hyponatremia, hypotension, respiratory acidosis, and bradycardia. These reactions occurred at rates similar to the comparator surfactants.

No assessments for immunogenicity to SURFAXIN were performed in these clinical studies.

Follow-up Evaluations

Twelve-month corrected-age follow-up of 1546 infants enrolled in the 2 controlled clinical studies demonstrated no significant differences in mortality or gross neurologic findings between infants treated with SURFAXIN and those treated with the comparator surfactants (colfosceril palmitate, beractant, or poractant alfa).

OVERDOSAGE

There have been no reports of overdose following the administration of SURFAXIN.

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Ventilation for Life

Independent Lung Ventilation

by Keith D. Lamb, BS, RRT, RRT-ACCS

Unilateral or asymmetric lung injury or disease can have many etiologies. Chest trauma, pulmonary infection, and lung transplantation are among them. Some of these complications can be managed with extreme positioning of the patient. When ventilation-perfusion mismatching is severe enough or when there is an air leak syndrome preventing the healing of airway injuries, it may be necessary to employ a treatment strategy that includes independent lung ventilation.

The technique of independent lung ventilation (ILV) permits intentional segregation of specific pulmonary anatomy when there is asymmetric lung disease or injury. ILV allows the clinician to employ separate and distinctly different mechanical ventilation strategies. The result may be improved gas exchange and less iatrogenic injury to both the diseased/injured parts of the lung as well as the unaffected lung units as well.[1] Indications for ILV include but are not necessarily limited to chest trauma, airway injuries, severe pulmonary infections, and single-lung transplantation. Unilateral lung disease often exhibits increased airway resistance, decreased compliance, and worsening ventilation-perfusion mismatch.

Because of these characteristics, there is a high likelihood of hyperinflation and over-distension of the side contra-lateral to the injury. This can cause iatrogenic lung injury to the side that was initially unaffected or less injured.

Independent lung ventilation was first introduced as a technique during thoracic surgery when there was a need to deflate one lung and reduce volume of the other. This tactic facilitates better exposure to the heart or other anatomy required for surgical interventions. This approach is commonly used intra-operatively.

about the author...

Keith D. Lamb, BS, RRT, RRT-ACCS, is the adult critical care supervisor at UnityPoint Health System in Des Moines, IA, and chair of the AARC's Adult Acute Care Specialty Section.

Indications

There are several indications for implementing a strategy that includes ILV. Focal infections or sources of hemorrhage can be isolated from each other. One lung can be ventilated so the other may be excised during pneumonectomy. If there is a traumatic injury to the chest that results in severe contusion or bronchopleural fistula, the unaffected or less affected side can be ventilated normally while the injured side is ventilated using a more gentle protective strategy. In the case of pulmonary contusion, this may allow for more effective ventilation/perfusion matching. If ILV is used for bronchopleural fistula, ILV may minimize the effects of a resultant air leak syndrome and allow for more effective healing.[1]

Interestingly, when single lung transplantation is performed, the donor lung and native lung may have distinctively different mechanical properties. In these cases, ILV may be necessary in order to maintain appropriate synchrony and ventilation until extubation can occur.

Additionally, ILV may be used when there is difficulty maintaining appropriate gas exchange using other more frequently utilized strategies, particularly when settings are required that are known to be injurious.

Potential difficulties, logistical issues, and problems

There are several potential difficulties with placing and maintaining independent lung ventilation. Placing the double lumen tube too distal may occlude the upper lobe. Conversely, placing the tube too proximal may prevent appropriate differential ventilation. The smaller lumen also

causes difficulty. Smaller suction catheters need to be used, and suctioning may not be as effective in clearing secretions. Optimal humidification must be provided to help prevent tube blockage. This is especially true due to the smaller lumen of the tube(s). Sedation should be optimized, and neuromuscular blockade may be needed to ensure safe management. Cuff pressures as they relate to airway size of the bronchus may be more likely to cause ischemia and resultant injury and sequelae. Small movements of a double lumen tube can easily disrupt ventilation, and arterial carbon dioxide tension may get worse as you improve air-leak syndrome by isolating the injury.

There is the possibility of further airway injury due to use of endobronchial tubes. Airway ischemia, necrosis, and luminal injury are possible and should be monitored. These injuries can lead to pneumomediastinum, subcutaneous emphysema, hemorrhage, massive air leaks, and death.

Synchronization

There is no strong evidence supporting the concept that ILV must be synchronized. Many modern mechanical ventilators have provided the option to synchronize two ventilators by using a cable that connects them to each other. Given that the biggest advantage of implementing ILV is the ability to segregate each lung and provide customized ventilation, it appears that there is no clear advantage gained by attempting to synchronize.

Evaluation for effectiveness

Strategy effectiveness can be evaluated by monitoring and targeting improvements in gas exchange, and the ability to decrease injurious ventilator settings such as less tidal volume, less pressure, and lower fraction of inspired oxygen (FiO_2). A cessation or improvement of pulmonary hemorrhage, an improvement in radiographic findings, and an improvement in the presence of air-leak syndrome are also indications that ILV is effective.

Equipment

The list of necessary equipment is fairly short. The majority that is needed can already be found in most adult intensive care units. One exception is the double lumen endobronchial tube. This tube incorporates two lumens, each communicating with a different cuff, pilot tubing, and circuit adapter. One lumen communicates with the distal end of the tube that is placed into a bronchus. The other lumen communicates with a port that is situated between the distal cuff which sits inside a bronchus and the proximal cuff that sits in the trachea. Other necessary equipment includes, but is not limited to, two mechanical ventilators. Depending on strategy decisions, these may include one ventilator and one continuous positive airway pressure (CPAP) generator, or high-frequency oscillatory ventilation (HFOV) ventilator. Spare endotracheal and endobronchial tubes, a small-caliber fiber-optic bronchoscope, appropriately sized suction catheters, and user-preferred back-up emergent airway solutions should also be available on standby.

Procedure

The first step after ensuring that all preparation is done and the necessary equipment is immediately available is to decide which bronchus should be intubated. It is simpler and safer to intubate the left main stem bronchus due to basic anatomy. There is more distance between the carina and the left upper lobe bronchus than the carina and the right upper lobe bronchus. Intubating the left main stem bronchus avoids inadvertent occlusion of the right upper lobe bronchus and resultant collapse. If one main stem bronchus is injured, then the contralateral bronchus should be intubated.

Once the decision is made regarding which side to intubate, placement is accomplished via fiber-optic bronchoscopy using a small-caliber bronchoscope. Both cuffs are inflated, and breath sounds are evaluated as usual.[2]

Finally, each circuit adapter is used to ventilate the appropriate lung with the appropriate ventilation strategy. Care should be taken to ensure that the appropriate ventilation strategy is being applied to the corresponding lung. This can easily be accomplished by labeling each adapter and ventilator.

It should be remembered that independent lung ventilation is a low-volume procedure. Policies, procedures, equipment, and strategies must be reviewed on a regular basis in order to maintain competency.

Experience counts

Independent lung ventilation has been performed for many years. Having started out as a method used intra-operatively to provide optimal exposure during thoracic surgery, it has evolved into an effective strategy to isolate lungs with separate pathologies to allow for better ventilation and efficient healing. It is relatively safe when done by experienced hands and can be achieved primarily with equipment that most intensive care units already have available. ILV is a complex procedure that should not be entered into lightly. Personnel who have experience with advanced airway management and the understanding of complex airway anatomy are pivotal to making this strategy work. ■

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Changes Planned for the NBRC's CPFT and RPFT Credentialing Programs

by Robert C. Shaw Jr., PhD, RRT, FAARC, and Gregg L. Ruppel, MEd, RRT, RPFT, FAARC

Representatives of the National Board for Respiratory Care have recently spoken and written about the plan to transition to one multiple-choice examination for the program through which Certified Respiratory Therapist (CRT) and Registered Respiratory Therapist (RRT) credentials will be achieved. A purpose behind this article is to alert stakeholders that an analogous change is planned for the Certified Pulmonary Function Technologist (CPFT) and Registered Pulmonary Function Technologist (RPFT) credentialing programs. Some similarities and differences exist between the changes respectively planned within the therapist and technologist credentialing programs, which will be described in this article.

Rationale

A recent assessment of overlapping content between examinations for the CPFT and RPFT programs revealed a very similar result as had been observed when the same kind of assessment was made for CRT and RRT programs three years ago. Among tasks that the 2006 CPFT and RPFT job analyses had found were critical to assess in examinations, more than 95% of tasks were critical for both the CPFT and RPFT programs. In other words, the vast majority of content that was critical to the assessment of RPFT competencies also was critical to assessments of CPFT competencies. NBRC trustees interpreted this result as evidence of sufficient convergence between what had been more strongly distinct roles for persons holding the CPFT and RPFT credentials in the past.

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A job analysis study of pulmonary function technologists was repeated in 2013. Before the study began, the NBRC decided to transition to a conceptual model for the examination program that was the same as the model under which the new Therapist Multiple-Choice Examination was developed. The model assumes that candidates for CPFT and RPFT credentials in the future will be assessed over the same body of content. The two credentials will be differentiated based on the expectation that RPFTs will be more proficient than CPFTs while performing within the body of content. After (1) assembling items for an examination based on results of the 2013 job analysis and (2) administering the examination to a sample from the population of technologist candidates, the proficiency difference is expected to manifest in higher examination scores among those who achieve the RPFT credential as compared to those who achieve the CPFT credential.

Examination characteristics

A sufficient level of test-score reliability has been observed within CPFT results of the past to persuade the NBRC to retain the plan to assemble 100 items into the scored portion of the new examination for pulmonary function technologists. An additional 15 items will be added for the purpose of pretesting, which is consistent with examination assembly specifications of the past. Candidates will continue to have two hours to respond to the 115 items on the examination. No change is planned for the number of options candidates will be asked to consider

within each item; four options will be offered. Among the 100 scored items, one of the four options will be the keyed response that will add one point to a candidate's score when it is selected. There will still be no penalty for guessing, since selecting an option other than the key will yield zero points for a candidate.

Both the new Therapist Multiple-Choice Examination and the new Pulmonary Function Technologist Examination will have two cut points. However, the implications of achieving a score that equals the high cut point will be different for the technologist program as compared to the therapist program. Equaling the high cut point within the therapist program will make a person eligible to take the Clinical Simulation Examination. Only after someone passes the Clinical Simulation Examination will they achieve the RRT credential. Equaling the high cut point with a test score from the new examination for pulmonary function technologists will be associated with achievement of the RPFT credential straightaway.

Timeline for changes

The new Therapist Multiple-Choice Examination will be implemented and affect persons who will seek CRT and RRT credentials starting in January 2015. The new Pulmonary Function Technologist Examination will be implemented and affect persons who seek the CPFT and RPFT credentials six months later, starting in June of 2015.

Stakeholders who monitor the NBRC website will detect that a free practice examination has been released for the Therapist Multiple-Choice Examination. Self-assessment examinations will be released soon. Having just completed the job analysis of pulmonary function technologists at the end of 2013, the practice examination is planned for release in the fall of 2014 followed by release of a self-assessment examination in early 2015.

Therapist and technologist practice and self-assessment examinations will have been respectively developed by the same committee of experts while using the same procedures that will be used to develop the first live forms of each examination. Hence, therapist and technologist candidates will have several months of opportunities to interact with the new content and expectations associated with the new examinations before they make an attempt to achieve CRT, RRT, CPFT, or RPFT credentials.

Changes to the examination for pulmonary function technologists

Content — Focusing on content that has been and will be expected of persons seeking the CPFT credential, only a couple of topics emerge for discussion about changes since most of what has been assessed will continue to be assessed. Items related to the start of cardiopulmonary resuscitation (CPR) have been included, but they will not have a place on the new examination. The skill of most technologists and their knowledge of the CPR procedure is assessed by their employers each year, so the examination committee concluded that space on the examination could be better used for other topics. Exercise testing with blood gas analysis was not found to be done by a sufficient percentage of technologists to justify assessing candidates over the topic in the future. The same was true for noninvasive blood pressure monitoring.

Focusing on content of the RPFT examination, proficiency with devices that record a patient's pulmonary function information to paper will not be expected in the new examination while acknowledging the complete integration of these results into computerized systems. Quality control methods that rely on mastery of statistics and interpretations of graphically presented data will not be covered any longer.

Weights by content domain and cognitive level — Content of the CPFT and RPFT examinations is divided into three domains as shown in Table 1. The CPFT Examination has emphasized domain II while the RPFT Examination has emphasized domain III. The new Pulmonary Function Technologist Examination will emphasize do-

Table 1. Content Domain Weights

Content Domains	CPFT	RPFT	New PFT
I. Instrumentation/Equipment	25	25	30
II. Procedures	50	30	45
III. Data Management	25	45	25
Totals	100	100	100

Table 2. Cognitive Level Weights

Cognitive Levels	CPFT	RPFT	New PFT
Recall	27	6	16
Application	41	31	44
Analysis	32	63	40
Totals	100	100	100

main II, so the content weighting looks more similar to the CPFT Examination. As a reminder, current candidates for the RPFT must first demonstrate their competence as CPFTs, so observing similarity in content emphasis between the new Pulmonary Function Technologist Examination and the CPFT Examination is expected. However, content emphasis is only one of two dimensions that affect the challenge presented to candidates by an examination.

Table 2 compares weightings among levels of cognition. The mixture of items among these three types of cognition affects how complex an examination will be for candidates. The story that Table 2 tells is one of moderation. The RPFT Examination has particularly emphasized analysis level items. The new examination for pulmonary function technologists pulls back from that degree of emphasis on analysis level items. However, compared to the number of recall items in the CPFT Examination, those types of items will be deemphasized in the new Pulmonary Function Technologist Examination. Hence, the net change is a movement of item complexities toward the middle.

Administrative process

Each candidate is expected to apply to take the new examination for pulmonary function technologists without indicating the credential that he or she seeks. A candidate who applies will pay one fee. The fee could wind up associated with one of three outcomes — (1) no credential, (2) CPFT, (3) RPFT — depending on the test score. In other words, the NBRC will **not** return to candidates with scores that equal or exceed the high cut point and ask them whether they want to pay another fee to be awarded the RPFT credential.

Summary

CPFT and RPFT credentialing programs will transition to a one-examination, two-cut scores model in the summer of 2015, which will be six months after the same transition occurs for the CRT and RRT credentialing programs. Evidence from job analyses persuaded the NBRC to make both changes to therapist and technologist credentialing programs.

The new examination for pulmonary function technologists will contain 115 multiple-choice, four-option items, which candidates will take within a two-hour time limit. Candidates' scores will be based on responses to 100 of the items while the other 15 items will be evaluated for a transition to a status as a scored item in the future.

Candidates will pay one fee to take the new examination for pulmonary function technologists without indicating whether they seek the CPFT credential or RPFT credential. Among these applicants, those who demonstrate an RPFT level of proficiency will need to have only paid the one fee. Within the current system, such candidates pay a fee to achieve the CPFT credential before they are eligible to apply and pay a second fee for the RPFT credential, so this is an administrative change.

Achieving a score high enough to equal the high cut score will be directly associated with the RPFT credential. This differs from the implementation of the one-examination, two-cut score model that will be deployed for the CRT and RRT credentialing programs. A candidate who takes the new examination for pulmonary function technologists and achieves a score between the low- and high-cut points will achieve the CPFT credential. The candidate can opt to retake the new pulmonary function testing examination again in an attempt to produce a score high enough to achieve the RPFT credential.

Content of the new examination for pulmonary function technologists will emphasize the performance of procedures related to assessments of pulmonary function, which is similar to topics the current CFPT Examination emphasizes. Compared to the current CPFT and RPFT Examinations, the general level of cognition will moderate within the new examination for pulmonary function technologists. ■

Contact the NBRC

The NBRC Board of Trustees and its committees are interested in your questions, comments, and concerns. You may contact the NBRC by email at nbrc-info@nbrc.org, by phone at (888) 341-4811, or visit the NBRC website at www.nbrc.org. ■

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Rhinosinusitis and Asthma

by Ellen A. Becker, PhD, RRT, AE-C, FAARC, and Jo E. Bartel, MS, RRT-NPS

Sinusitis is more accurately referred to as rhinosinusitis since sinusitis usually involves nasal congestion. Rhinosinusitis involves inflammation of the paranasal sinuses and the nasal cavity.[1] It can be separated into acute and chronic rhinosinusitis. Chronic rhinosinusitis has a longer course of sinusitis, which lasts 12 weeks or longer and encompasses the mucopurulent drainage, nasal congestion, facial pain, and even decreased sense of smell.[1] The prevalence of chronic sinusitis in the United States ranges anywhere from 2–16% depending upon the methodology of the study design and definition of chronic rhinosinusitis.[2]

Etiology and treatments

The precise etiology of rhinosinusitis remains unknown, but two hypotheses are being considered. The superantigen hypothesis proposes that an outside source such as a pathogen disrupts the immune response by shifting the T lymphocytes toward a Th2 response that increases the release of inflammatory cytokines and results in a local IgE response. The immune barrier response hypothesis explores a predisposition in the sinus/nasal cavity that prevents sinonasal mucosa from defending against entering pathogens.[3] Despite not knowing the exact etiology, there are effective treatments for rhinosinusitis. Pain relievers decrease the discomfort.[4] More specific treatment is dependent on whether the causative agent is viral or bacterial. Viral rhinosinusitis can be symptomatically relieved with intranasal corticosteroids, saline irrigation, and decongestants. Bacterial rhinosinusitis responds to the same relief medications as viral rhinosinusitis in addition to antibiotics and oral corticosteroids.[1,3] However, the best therapy is one that will reduce the mucosal inflammation as well as prevent pathogens from entering the epithelial barrier.[3]

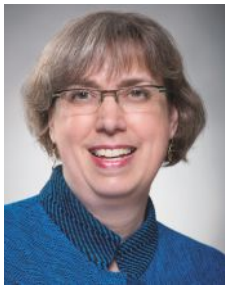
Surgery is another option if conventional treatments fail. Nasal surgery can include removal of nasal polyps, enlarging nasal passages, and correcting structural defects. Surgery can improve nasal blockage and sinus drainage; however, symptoms can still exist afterwards.[4]

Rhinosinusitis is an upper airway disease in contrast to asthma, which is a lower airway disease.[5] Lower airway diseases such as asthma can have a greater effect on lung function. One study found that the degree to which allergic rhinitis symptoms affect lung function depends upon the patient's baseline asthma severity. The group with greater asthma severity was defined as those individuals who had a baseline peak flow <80% predicted. The patients who had allergic rhinitis and greater asthma severity exhibited more asthma symptoms as measured by the Asthma Symptom Utility Index.[5] The patients' onset of asthma also affects lung function. Those with early severe onset of asthma, defined as onset at <12 years of age, had more allergic responses, longer duration of disease, and higher number of lifetime hospitalizations. In contrast, late severe onset asthma, as defined as asthma onset at >12 years of age, was shown to have lower forced vital capacity values and more cases of sinusitis.[6]

The link between asthma and rhinosinusitis

The prevalence of having both sinusitis and asthma is 18–40%.[2] The precise link between chronic rhinosinusitis and asthma is not clear; however, there are two primary theories. One theory explores the relationship of

about the authors...



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a single pathophysiology of the upper and lower airway. An irritant enters the airway and begins the inflammatory response. The inflammatory mediators produce hypersecretion of mucus, edema, and ciliary impairment to the sinuses, which can breed infection. This rhinosinusitis infection creates an inflammatory response in the lower airways resulting in bronchoconstriction and inflammation. The sino-nasal-bronchial reflex theory suggests that sinus drainage stimulates a vagal response in the pharynx and promotes bronchoconstriction of the lower airways. These theories can explain why chronic rhinosinusitis has been shown to clinically exacerbate asthma.[7,8] When patients with asthma have rhinosinusitis, the rhinosinusitis symptoms are more severe and refractory compared to patients without asthma.[8] Postnasal drip associated with a cough has also been linked to rhinosinusitis. However, not every person suffering from rhinosinusitis has a cough or postnasal drip. Identifying the exact cause of the cough is challenging. Practitioners need to consider that postnasal drip, cough, and rhinosinusitis may be linked; but also there are other causes of cough such as gastroesophageal reflux disease (GERD) and asthma. Postnasal drip and rhinosinusitis can further exacerbate GERD. Treatment for rhinosinusitis helps reduce the cough regardless of whether the cough was caused by GERD or asthma.[9]

For those suffering with asthma and recurrent rhinosinusitis, there are few prophylactic measures that they can take to help mitigate symptoms. First, distinguishing whether the rhinosinusitis is bacterial or viral helps identify the patient's appropriate treatment regimen. Nasal saline irrigation has been shown to help decrease symptoms and minimize medication use for acute bacterial rhinosinusitis and chronic rhinosinusitis.[1,3] As stated previously, asthma exacerbations increase for individuals at all levels of asthma severity who have sinusitis.[5] Therefore, those with asthma should strictly adhere to their asthma controller medications to reduce the increased risks of exacerbations. The global prevalence and financial burden of these combined conditions warrants continued research for both treating and preventing exacerbations.[2]

RT roles in management and education

Respiratory therapists have demonstrated expertise in numerous roles related to asthma inhaler education and asthma self-management training. Studies have demonstrated the effectiveness of respiratory therapists in teaching proper inhaler technique for children in outpatient asthma clinics,[10] pediatric inpatients,[11] and adult inpatients.[12] The documentation of effective asthma self-management education, a comprehensive educational approach that includes trigger recognition and remediation, symptom monitoring, and an understanding of which medications to take under varying conditions, has also been taught by RTs in pediatric[13,14] and adult populations.[15] Given the numerous teaching opportunities, RTs must be familiar with the relationship between rhinosinusitis and asthma to optimize their patients' conditions. Specifically, respiratory therapists need to consider the link between these two disease processes when assessing patients to be able to educate patients so that they understand the symptoms and treatments for each disease process. Additionally, people who smoke have an increased likelihood to have acute, recurrent, and chronic sinusitis.[1] Thus, therapists should conduct brief smoking-cessation interventions for all patients

The prevalence of chronic sinusitis in the United States ranges anywhere from 2–16% depending upon the methodology of the study design and definition of chronic rhinosinusitis.

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Tobacco Prevention and Smoking-cessation Issues

by Cheryl West, MHA

This column has not addressed tobacco prevention or smoking-cessation issues in quite some time. It might be worthwhile to point out some of the more noteworthy developments — what some state and local governments are doing and how you and your state respiratory society can have a voice in the deliberations. Important activity is happening on a range of tobacco-control issues on state, national, and international stages. Space constraints, however, prevent discussions of the current happenings at the national and international level; but those will be addressed in a later column.

Public perception of smoking has radically changed

That is certainly an understatement. I'm sure many of you older readers can recall that in the past one could "light up" nearly everywhere: office buildings (including at your desk), restaurants, movie theaters, public areas of hospitals, airplanes, just to name a few. Back then folks could puff away without raising so much as an eyebrow.

That certainly has changed over the last 20 years as federal policies, state laws, and often city and local town councils pass new prohibitions against smoking in public and confined spaces (privately owned businesses and corporate policies nearly unanimously follow suit). Depending on the proposed restriction, those new public policies can be met with some pushback from certain quarters, especially from the bar, casino, and restaurant interests fearing a negative financial impact on their places of business. Nevertheless, as the incontrovertible evidence continues to roll in on the devastating effects that smoking has on the health of the individual smoker and the equally detrimental health impact to non-smokers when exposed to second-hand smoke, the expansion of these bans continues to take hold.

about the author...

Cheryl West, MHA, serves as director of government affairs for the AARC.

New legal prohibitions

As most state legislatures (where much of the action is taking place) are in full swing now, there is a great deal of legislation addressing several often-diverse areas of the tobacco-control issue.

First there are the increased restrictions on where someone may smoke tobacco products. Now that there is practically a universal ban on smoking in public and privately owned buildings, state legislatures are addressing other more specific sites. States or municipalities are prohibiting the sale of tobacco products within a specified distance from certain buildings, most notably schools. Hawaii just implemented a law that prevents the sale of cigarettes to anyone under the age of 21. In previous years, several states introduced (but did not pass) legislation that would ban anyone from smoking in a vehicle with children under a specific age. Also, last year one state had legislation that would ban smoking on public beaches; another state proposed banning smoking in publically funded housing. Two other states proposed banning smoking on college campuses that were state funded.

Looking at another area, most states already provide Medicaid coverage of smoking-cessation medications for pregnant women. Another state health service provides Medicaid coverage of smoking-cessation programs for anyone, in addition to pregnant women.

Other legislation, not directly aimed at the "health consequences" of tobacco smoking, is directly focused on raising revenue by increasing state tobacco taxes. States

continually look for ways to increase revenues to fund state programs, and hiking tobacco taxes is an annual favorite. Since the majority of the general public's view of smoking is highly negative, legislators feel relatively "safe" in proposing this type of tax increase. Higher tobacco prices not only raise money, but studies have shown that teenagers and young adults are particularly price sensitive and, of course, the hope is that the high cost of tobacco — especially for cigarettes — may prevent them from picking up the addictive habit in the first place.

Another layer of the tax issue is the growing concern of legislators regarding Internet sales of tobacco products. Using the Internet to buy tobacco lets consumers (who could also be underage) circumvent state sales taxes and buy the products at a "reduced cost" (and lost tax revenue for states). Internet sales can impact the federal coffers as well if the tobacco is produced and sold outside the United States, thereby avoiding federal tariffs as well.

States are also turning their attention to other forms of tobacco and its harmful effects. Initially, "smoking" regulations (usually part of a state's Clean Indoor Act law) primarily addressed cigarettes and swept up pipes and cigars in their wake. States are now fine-tuning the concept of tobacco control to include smokeless tobacco products, most notably chewing tobacco. The so-called "flavored cigarettes" are increasingly popular among the young, and health policymakers are quite concerned that the intense promotion of these products — which are aimed directly at kids — will set young people on the path to addiction.

Nicotine delivery devices such as e-cigarettes or personal vaporizing devices have exploded onto the scene and have gained rapid popularity. Some will use the devices as substitutes for tobacco, some in an effort to wean off the "real" products, and others to use in places where actual tobacco products are banned. State and local governments are scrambling somewhat to revise current smoking ban policies to include these nicotine-delivery devices.

RTs are key voices locally and nationally

Just by the very nature of the profession, respiratory therapists are uniquely qualified to not only provide the clinical care for those suffering from lung conditions brought on by tobacco smoke, but are also advocates — first-line "testifiers" — to state and local policymakers on the hazards of tobacco. The more support state and local officials have in passing more extensive tobacco regulations, the easier it is to do so. Quite frankly, another upside of RTs taking an active vocal role is that it can raise the profile of the profession. You never know when another issue not having to do with tobacco concerns may arise and these same policymakers will remember the respiratory therapy profession.

Keep your state respiratory therapy society's leadership informed of any developments at the local level as they keep an eye on state legislation. RTs can and should be key voices for greater public education and awareness of the terrible hazards of smoking (in whatever form) and staunch supporters of smoking prevention efforts and cessation programs. ■

As undeniable evidence continues to roll in on the devastating effects that smoking has on the health of smokers and also those exposed to second-hand smoke, the expansion of smoking bans will continue to grow.

Sleep Credentialing

by Camden J. McLaughlin, BS, RRT, FAARC

Holding a credential in any medical specialty embodies the dedication of that individual to professional excellence. Additionally, this same dedication demonstrates a commitment to providing care at the highest possible level. The value of sleep credentials also demonstrates a high level of commitment to the field of sleep medicine and provides potential opportunities for career advancement, enhancement of professional reputation, and credibility.

The demand for credentialed sleep technologists continues to rise. More than 2,200 centers for sleep disorders currently hold American Academy of Sleep Medicine (AASM) accreditation. Such accreditation requires the employment of at least one registered (or credentialed) sleep technologist.[1] Other organizations that provide accreditation services are The Joint Commission and the Accreditation Commission of Health Care and have similar requirements. The urgency to become credentialed is also increasing as legislation in many states requires the credentialing of sleep technologists.

Sleep disorders medicine continues to be a rapidly progressing field as an independent medical subspecialty and has earned formal recognition and endorsement from the medical community. The Committee on the Health Professions (from the Institute of Medicine of the National Academies) has developed a vision for clinical education in the health professions. Their recommendations stipulate that all health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality-improvement approaches, and informatics.[2]

This evolution, in terms of newer diagnostic techniques, informatics, and therapeutic technology, will dictate the need for an increased educational and clinical experience.[3] This experience will ultimately need to be translated to patient care and validated through credentialing.

Credentialing and certification processes are available for professionals who provide care for patients with sleep disorders from three organizations. These include certification of technologists and therapists through the Board of Registered Polysomnographic Technologists (BRPT) and the National Board for Respiratory Care (NBRC), along with certification by the American Board of Sleep Medicine (ABSM).

Board of Registered Polysomnographic Technologists

The BRPT offers Registered Polysomnographic Technologists (RPSGT) and the Certified Polysomnographic Technician (CPSGT) credentials. The RPSGT is an internationally recognized credential representing their highest certification in the field for the health care professionals who clinically assess patients with sleep disorders. CPSGT is an entry-level certification earned by individuals new to the sleep field, and it is time-limited. Certificate holders must earn the RPSGT credential within three years or lose their CPSGT designation.[4,5]

The BRPT credentialing process has been changed in an effort to make examination requirements for clinical experience more accommodating for those working flexible schedules. These changes pertain to how candidates track their clinical experience requirement and became effective March 1, 2013. Additionally, to meet clinical ex-

about the author...

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perience requirements in states where on-the-job training is not permitted, obtaining a BRPT credential no longer requires paid clinical work experience. However, clinical experience remains a cornerstone of an applicant's training through Pathways 1, 2, and 4 for the RPSGT exam. The BRPT announced an additional pathway — Pathway 5 — geared toward international candidates performing polysomnography after completion of post-secondary education required for practice in their country. Additionally, Pathway 6 is for those whose credentials have expired, who did not originally recertify, and over a year has passed since the original recertification date.

There are six eligibility pathways with requirements for completion and submission for the RPSGT exam:

- RPSGT Pathway 1: Clinical Experience
- RPSGT Pathway 2: Healthcare Credential
- RPSGT Pathway 3: Commission on Accreditation of Allied Health Education Programs (CAAHEP)/ Commission on Accreditation for Respiratory Care (CoARC) Graduate
- RPSGT Pathway 4: Focused Training
- RPSGT Pathway 5: International Option
- RPSGT Pathway 6: Expired RPSGT Credential

The CPSGT exam was developed for individuals who are new to polysomnography and have limited clinical experience or are not ready to take the CPSGT exam.

There are three eligibility pathways with requirements for completion and submission for the RPSGT exam:

- CPSGT Pathway 1: Clinical Experience
- CPSGT Pathway 2: CAAHEP/CoARC Graduate
- CPSGT Pathway 3: Focused Training[4]

American Board of Sleep Medicine

The American Board of Sleep Medicine (ABSM) sleep specialist's certification program for sleep is the Registered Sleep Technologists (RST), and candidates must meet the following criteria to sit for the examination:

1. Graduates of CAAHEP or CoARC programs.

2. Accredited Sleep Technology Education programs and modules with on-the-job training. Minimum experience in an AASM-accredited center includes:
A. Independent performance of 50 overnight sleep studies.
B. Of the overnight sleep studies, a minimum of 20 have to be continuous positive airway pressure (CPAP) titrations.
C. Performance of one multiple sleep latency study.

3. Candidates who currently hold one of the following health professional credentials and exceed a minimum experience in an AASM-accredited sleep center are eligible to take the examination. These include: medical degree (MD or DO) valid in the United States, doctoral level degree (PhD or PsyD) in a health-related discipline, physician assistants (PAs), nursing degree (RN or LPN), allied health credential including respiratory care (RRT or CRT), and electroneurodiagnostics (R.EEG.T). Additional requirements are:
A. Independent performance of 25 sleep studies.
B. Of the overnight sleep studies, 10 have to be CPAP titrations.
C. Performance of one multiple sleep latency test.
D. Participation in one-quarter (three months) of the center's inter-scorer reliability, meeting the center's minimum standards for concordance with the gold standard scorer.[6]

National Board for Respiratory Care

The NBRC developed the Sleep Disorders Specialist (SDS) examination for Certified Respiratory Therapists

(CRTs) and Registered Respiratory Therapists (RRTs) to assess the knowledge-based competency for those therapists practicing in the field of sleep disorders medicine.[7]

The SDS examination program is designed specifically for a respiratory therapist who has an NBRC respiratory care credential and experience or education in the field of sleep-disorders medicine. Depending upon the baseline credential attained by the candidate, successful completion of this examination will enable the candidate to declare certifications as either a CRT-SDS or RRT-SDS.

Candidates for the examination have already demonstrated their minimal competence (through attainment of the CRT or RRT credential) in some of the areas used when diagnosing and treating patients with sleep disorders and are thus not retested on those particular areas of content. The SDS examination focuses on competencies that are unique to the diagnosis and treatment of patients with sleep disorders and does not include content about general respiratory care. Candidates may gain entry to the examination through a variety of means based upon their previous NBRC certification status, clinical experience, and education. These pathways include:

1. Be a CRT or RRT having completed a CoARC- or CAAHEP-accredited respiratory therapist program including a sleep add-on track.

OR

2. Be a CRT with six months of full-time clinical experience following certification in a sleep diagnostics and treatment setting under medical supervision (MD, DO, or PhD).

OR

3. Be an RRT with three months of full-time clinical experience following certification in a sleep diagnostics and treatment setting under medical supervision (MD, DO, or PhD).[7]

RTs have unique and necessary skills

In an article entitled "What Every Clinician Should Know About Polysomnography," Dr. S. Patil shared: "Sleep clinicians, whether physicians, respiratory therapists, or sleep technologists, must therefore have an understanding of a broad array of principles underlying the collection of the various signals. In addition, an understanding of basic technical rules in the evaluation of polysomnography studies is necessary for both the scoring and interpretation of such studies."[8]

With society becoming increasingly aware of obstructive sleep apnea and other sleep disorders, qualified sleep technicians are in high demand for the growing number of sleep laboratories. Consequently, many sleep schools are expanding their programs into different locations — as well as onto the Internet. At the same time, the AASM, BRPT, and other sleep associations have been creating new educational programs and standards that attempt to ensure the quality of the training for current and future RPSGTs.[9]

The U.S. health care system is on the verge of dramatic change, driven largely by pressure to decrease costs and improve quality. These same forces also drive respiratory care, but the role of the RT in 2015 will also be driven by biomedical innovation and evidence-based medicine. RTs are in a unique position in the health care system to assume the responsibilities emerging as the health care system changes.[10]

The respiratory therapist offers a unique and necessary set of skills. They possess the knowledge and attributes to take full advantage of not only the changing health care environment but also the opportunities available in the field of sleep medicine. ■

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Clinical Practice Guidelines 2014

by Shawna Strickland, PhD, RRT-NPS, FAARC

Clinical practice guidelines (CPGs) have been helping health care practitioners make clinical decisions for decades.[1] The AARC published its first CPG in 1991 and has developed countless consensus statements, expert panel reviews, and evidence-based CPGs in the last 23 years. The process to develop evidence-based CPGs can be long and arduous.[2] But why would we spend the time, talent, and funding on this type of project? What's the big deal about CPGs?

What are CPGs?

CPGs are "statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options."[3] These recommendations are developed by consensus statement, reviewed by an expert panel, or based entirely on the available evidence. Consensus statement and expert panel review CPGs use the literature as a reference to reinforce or support the personal biases of the committees that prepared the recommendation. Evidence-based CPGs focus on the evidence for the development of recommendations in an attempt to remove personal biases. Ultimately, evidence-based medicine seeks to integrate the evidence with clinician expertise and patient values. This helps the clinician and patient select the best treatment option for the patient's unique clinical situation.[2] CPGs, regardless of type, have been instrumental in the development of respiratory care policies and protocols.

A quality CPG is vital for patient care, and respiratory therapists should be prepared to critically evaluate all CPGs. A good CPG will include recommendations based on the systematic review of the literature, recommendations that include all appropriate patient groups, and a rigorous examination of the literature. CPGs that lack transparency in study methodology, lack the involvement of relevant stakeholders, include unmanaged conflicts of interest, and use a questionable development process should be suspect.

Why use CPGs?

Quality CPGs provide recommendations intended to optimize patient care based on an extensive review of the literature.[3] Following recommendations outlined in quality CPGs can result in improved quality of care, improved health outcomes, improved consistency of care, and improved quality of clinical decision-making. Additionally, an effective CPG can reduce health care costs by eliminating unnecessary treatment.[4] In addition, CPGs allow for standardization of care and assist with utilization review efforts.

While there are some great benefits to using CPGs, there are some potential hazards. The major issue facing evidence-based CPGs is the lack of evidence.[4] The systematic review upon which recommendations are made is based on published literature. Unfortunately, there are significant gaps in high-quality evidence for many respiratory care therapies. When the evidence is lacking, specific recommendations are difficult to make. It is important that RTs understand how to interpret clinical practice guidelines in order to provide the best patient care possible.

Interestingly, a 1998 study by Grol et al found that the recommendations from CPGs are followed, on average, in 61% of clinical situations. These researchers discov-

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CPGs have been an integral part of delivering respiratory care for over 20 years and can assist clinicians in clinical decision-making.

ered that recommendations are most likely to be followed when they are based on scientific evidence, when the recommendation helps to solve a clinical practice problem, and when they are described concretely and precisely. Conversely, the recommendations from CPGs are least likely to be followed when they are vague and non-specific, complex, and incompatible with current health care practitioner values.[5] While this is an older study, others have found similar results.[6–8]

Where can I find CPGs?

One of the most frequently asked questions about CPGs is regarding location. It does not help the RT in a clinical situation if the information is not readily accessible. Since the advent of the Internet, resources are much easier to locate. Most acute care and subacute care facilities have computer stations near patient care areas that can access the Internet; and many facilities allow the use of personal electronic devices that can access the Internet, such as smart phones and tablets. However, the Internet is a vast collection of information and can be difficult to navigate.

The main resource for CPGs for respiratory therapists is the AARC. The AARC CPGs can be found online for easy access (www.rcjournal.com/cpgs/index.cfm). The AARC's original CPGs, such as the 2013 "Effectiveness of Nonpharmacologic Airway Clearance Therapies in Hospitalized Patients" and the 2010 "Inhaled Nitric Oxide for Neonates with Acute Hypoxic Respiratory Failure," are easily viewed on the website or may be printed for frequent reference. Though the AARC has a great number of CPGs for the practice of respiratory care, not all relevant CPGs come from the AARC. Many other health care organizations have developed detailed evidence-based CPGs that can assist in clinical decision-making. The AARC's website provides access to these guidelines as well, including CPGs such as the 2013 American Society of Anesthesiologists' "Practice Guidelines for Management of the Difficult Airway" and the 2012 Agency for Healthcare Research and Quality's (AHRQ) Comparative Effectiveness Report for "Noninvasive Positive-Pressure Ventilation (NPPV) for Acute Respiratory Failure."

In addition to the AARC's repository of CPGs, clinicians may be interested in the National Guideline Clearinghouse (www.guideline.gov/). A division of the AHRQ, the clearinghouse is a public resource for evidence-based CPGs. Clinicians can search the site for CPGs relevant to their clinical problem. The website will allow the clinician to also compare CPGs to further evaluate quality. For CPGs on the go, there are many apps that provide quick access to CPGs through mobile devices such as smart phones and tablets. Some apps are free, some at a cost; some are developed by medical organizations, some by private contractors. Searching the mobile device's app store with keywords "evidence based guidelines" or "clinical practice guidelines" will return relevant apps.

CPGs and the RT

The respiratory therapist of today needs quick and relevant information for the delivery of safe and effective respiratory care. CPGs have been an integral part of delivering respiratory care for over 20 years and can assist clinicians in clinical decision-making. Understanding how to utilize CPGs and where to find the resource is a necessary skill for all RTs. ■

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Respiratory Therapists Are Giving Life to COPD Management

by Zach Gantt, RRT

The statistics surrounding the problem of chronic obstructive pulmonary disease (COPD) in the United States are alarming and have been well documented for decades. COPD is the only major fatal illness in which the age-adjusted mortality rate is increasing, growing by 283% between 1979 and 2007.[1] In 2008, COPD became the third-leading cause of death in the United States 12 years earlier than it was initially predicted, as reported by the Centers for Disease Control and Prevention.

Invariably, COPD patients will reach a stage of the disease marked by frequent exacerbations, a state in which individuals seek more and more care in the hospital and/or post-acute setting. When patients experience an exacerbation, the most common reaction is to make their way to the emergency room or doctor's office. They are often treated with steroids, medications, noninvasive ventilation and, in cases of respiratory failure, invasive mechanical ventilation. Shortly thereafter they begin to feel better and are discharged home. However, many times little or nothing is done to address the cause of the exacerbation or to prepare patients to better manage their exacerbations. The result has been a revolving door whereby the COPD patient population suffers greatly and accounts for a disproportionately large share of health care spending.

Health care utilization is approximately two to three times higher for patients with COPD than for those without the illness, largely resulting from frequent hospitalizations and 30-day readmissions. In 2010, the total annual cost of COPD was an estimated $49.9 billion, exceeding those associated with heart failure.[2] Though COPD patients are living with a chronic condition, over time the trend in patient care has become treating with acute, reactive, expensive and, at times, potentially dangerous interventions.

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COPD and comprehensive respiratory outcome management

Today, those living with COPD have cause for optimism. Respiratory population health management (PHM) programs are emerging in response to the challenges surrounding COPD and are documenting measurable improvements in patient quality of life — as seen in various target metrics including, but not limited to, reduced hospitalizations, 30-day readmissions, and total time spent in the hospital.

The most effective respiratory PHM programs are grounded in peer-reviewed studies illustrating the measurable value of utilizing pulmonary rehabilitation, education, and action plans for the COPD patient population. These programs are often staffed by respiratory therapists, creating a pathway for COPD patients who, after discharge from the hospital, are partnered with a dedicated RT to engage in therapy, pulmonary rehabilitation, and education. Though each program must rely on the resources and network of providers within a given community in order to address the challenges facing unique COPD patient populations, hospitals, skilled nursing facilities, and home care providers are all partnering with RT-led programs to demonstrate their value across the COPD continuum of care. Respiratory therapists are performing thorough clinical assessments and measuring each patient's level of readiness for engagement in the self-management of their COPD. They are also customizing and

implementing patient care plans that address each patient's unique therapy, education, social and rehabilitation needs, as well as their tobacco status. Though it is unclear how many patients have engaged in respiratory PHM programs around the country, some programs are actively managing COPD patient populations measured in the thousands.

The right time at the right place

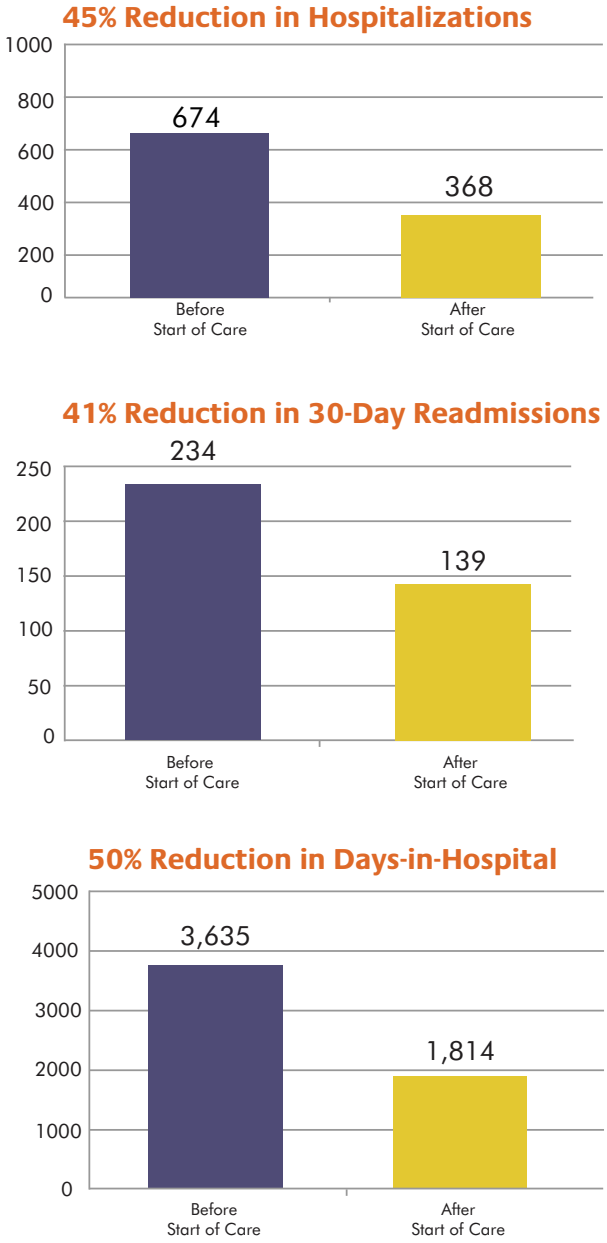
Following decades of reactive COPD patient care, passage of the Patient Protection and Affordable Care Act (PPACA) in 2010 stimulated substantive interest in approaching the management of COPD differently. Until recently, approximately 25% of COPD patients discharged from a hospital would return to the hospital within 30 days of discharge. Among all disease states, COPD patients experience one of the highest readmission rates in the nation. Additionally, for the most severe COPD patients, readmission length of stay is twice as long (eight days); mortality rates are substantially higher; and health care costs are among the highest in the nation. Thirty-day readmissions for COPD as a primary diagnosis are 18% higher in cost than the original index admission and 50% higher for readmissions with COPD as a primary or secondary diagnosis.[3–5]

One of the first changes resulting from the PPACA was establishment of a readmission reduction program. The program was designed to reduce the number of costly and unnecessary hospital readmissions by providing incentives for hospitals to discharge patients when they are fully prepared and safe for continued care at home or at a lower acuity setting. Beginning in October of 2014, hospitals will be financially penalized as much as 3% of all Medicare payments for failing to better prepare and transition their Medicare COPD patients.

COPD health management works

Chronic obstructive pulmonary disease is impacting populations differently around the country. The southeastern United States is home to the highest COPD incidence rates in the nation. Kentucky and Alabama occupy the first and second highest COPD incidence rates, each above 9%, with Medicare populations of 18% in each state. In Tennessee, where the COPD incidence rate is the third highest — 8.7% — with a Medicare population of 17%, a program known as Comprehensive Respiratory Outcome Management (CROM™) is working in direct response to the PPACA's call to action: provide better quality patient care at a lower cost and prove your outcomes.[6,7] Documenting various outcomes for numerous stakeholders in each patient's continuum of care, the program conducted

Figure 1. Results of Comprehensive Chart Review on Ability of CROM Program to Keep Patients Out of the Hospital.



a comprehensive chart review on 368 patients entering CROM between Jan. 1, 2012, and April 16, 2013, documenting the program's ability to keep patients out of the hospital. Patients were grouped into two cohort categories. Patients in category A were enrolled for more than 12 months. Patients in category B were enrolled between 6–12 months. All patients had a diagnosis of stage III or IV COPD, with an average FEV_1 (forced expiratory volume in

first second) of 32.48%. The majority of patients were female (61%), and the average age was 65. All patients were treated utilizing medication therapy, noninvasive positive pressure ventilation, and the respiratory PHM program.

The chart review revealed that patients enrolled in the program experienced significant reductions in hospitalization, 30-day readmissions, and total days spent in the hospital as shown in Figure 1. The program reduced hospitalizations by 45%, reduced 30-day readmissions by 41%, and reduced the total days spent in the hospital by 50%. Utilizing 2011 hospital pricing data provided by the Tennessee Department of Health, the program reduced overall health care spending for these patients by more than $17 million.

The present and future is respiratory management

The AARC's "Respiratory Care Scope of Practice" states that RTs are health care professionals whose responsibilities include the diagnostic evaluation, management, education, rehabilitation, and care of patients. For decades, the intended role, training, skill sets, and reason for becoming a respiratory care provider — to help people live healthier lives — were completely out of sync with our health care regulations and reimbursement. As discussed in Thomas Kallstrom's article in the December 2013 issue of *AARC Times*, "the respiratory care community is positioned to make a significant contribution" in today's health care climate.[8]

In 2000, the Institute of Medicine (IOM) deemed COPD a priority disease for quality improvement efforts, noting that COPD contributes substantially to our national health care burden. The IOM strongly recommended immediate collaboration among health care organizations, practitioners, purchasers, and consumers to develop strategies, goals, and action plans to achieve significant improvements in COPD care. One year later, the IOM released a separate report, concluding that the time frame from the point of research to the widespread diffusion and adoption of the results is at least 17 years, a timeframe deemed by many to be unacceptable.[9]

COPD management is challenging common assumptions about what can be done for patients living with chronic disease and who is best qualified to make the biggest impact on quality and cost in health care. As respiratory PHM programs are demonstrating, an innovation realized can transform people's lives. It just requires the right people to put compelling ideas into action. ■

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Dov Z. Hirsch, MA, vice president of engagement at Alana HealthCare in Nashville, TN, contributed to this article.

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Online Support Groups and Clinical Resources for the Cardiopulmonary Patient

by Karen Lane, RRT, AE-C

Imagine an existence devoid of human interaction. Loneliness and isolation are depressing for healthy people, and patients with chronic illnesses like COPD are even more likely to experience these feelings. Some chronic obstructive pulmonary disease (COPD) patients are reluctant to leave their homes for a variety of reasons: fear of fatigue, breathlessness, increased risk of infection, and oxygen supply exhaustion. However, these patients may find social media a valuable resource for interacting with friends, family, and others in similar circumstances. Internet connections can become a social contact option for those with chronic diseases. The following information summarizes my personal experience with the intention of stimulating curiosity to explore social media as a resource for respiratory therapists and our patients.

Assess websites before recommending them

The amount of information available online is staggering for any disease — some of which is inaccurate. Before referring a patient to a website, it would be wise to review the content for accuracy. You will find that professional websites have accurate, up-to-date information. The AARC provides patients and professionals an easy means to contact their senators and representatives regarding legislative issues affecting pulmonary care by logging on to www.AARC.org/advocacy. Plus, they offer a patient-specific website at www.yourlunghealth.org. Other professional websites include:

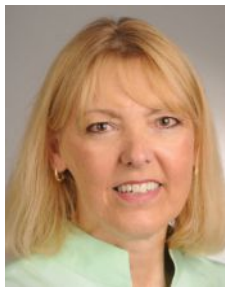
- American Academy of Family Physicians — www.aafp.org
- American Association of Cardiovascular and Pulmonary Rehabilitation — https://www.aacvpr.org
- American Lung Association — www.lung.org
- American Sleep Apnea Association — www.sleepapnea.org
- American Thoracic Society — www.thoracic.org/
- Mayo Clinic — www.mayoclinic.org
- National Jewish Center — www.nationaljewish.org

Online support groups

Name a disease and there are support groups and chat rooms for it. These social venues are used by young and old as well as by those who are mobile and those who are homebound. Lung transplant patients find comfort, advice, and support through Second Wind Lung Transplant Association (www.2ndwind.org). Patients sitting at home waiting for that important phone call are able to blog or chat with others who are waiting and the transplant recipients who have already been through the process.

The COPD Foundation (www.copdfoundation.org) is an excellent website for patients. It is written in laymen's terms with comprehensive detail. The free membership provides access to *COPD Digest*, Ask the Doctor, and a member chat room. Their Pulmonary Enrichment Program (PEP) is an educational and interactive program wherein volunteer COPD patients call members twice a month to check on treatment compliance, access to medications, exercise regimen, and physician follow-up. Members can also phone the PEP volunteers anytime for help and advice. Therapists will find the COPD Foundation booklet, "COPD in the Hospital and the Transition Back Home," a useful tool for patient education to reduce re-admission rates. The *COPD Digest for Professionals* bimonthly magazine contains useful patient care information not found in other publications. The magazines and booklets are

about the author...



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complimentary with a free professional membership.

The Pulmonary Paper (www.pulmonarypaper.org) has grown from a four-page bi-monthly support group newsletter to a non-profit organization with a website and 16-page newsletter. Membership is $25 for individuals and $50 per year for professionals. Notable features include:

- The latest news on medications and treatments
- Tips on coping from others with similar problems
- A fibrosis file connection for those with pulmonary fibrosis
- Travel tips and opportunities
- Discounts on respiratory products from participating suppliers.

The National Home Oxygen Patients Association or NHOPA (www.homeoxygen.org) was very active in getting portable oxygen concentrators approved for use on airplanes. Their $15 individual or $25 professional membership benefits include:

- A one-year subscription to the NHOPA monthly newsletter
- A copy of "Understanding Oxygen Therapy," an educational booklet written by physicians expressly for oxygen users
- An opportunity to have your voice heard on the policies that affect patients who require supplementary oxygen
- A member-to-member listing providing you a chance to communicate directly with other oxygen users if you wish to do so.

Emphysema Foundation For Our Right To Survive or EFFORTS (www.emphysema.net) is a patient organization with an online support group. Mark W. Mangus Sr., a member of the medical board of EFFORTS, has a question-and-answer column in their monthly newsletter. He provides honest answers to complicated questions in an easily understood and reassuring manner. A free membership allows access to the discussion list. Many of the comments and stories on the discussion list contain information overheard during support group meetings. The wealth of information on this website is well organized and intuitive — an important feature for seniors with limited computer

(continued on page 87)

Pulmonary rehabilitation support groups enjoy mingling with RTs and others at educational sessions.

The Slippery Slope

by Anthony L. DeWitt, JD, RRT, FAARC

It is happening again. The same kind of thinking that led to millions of dollars in punitive damages awarded against Ford Motor Company for the defects in their "Pinto" brand of cars is at work in health care. The decisions, purported to be mathematical, are reasoned like this. It costs $X to pay respiratory therapists. It costs $Y to pay nurses. Since nurses can do most of what therapists do, and since there are more of them, it makes sense to move away from using therapists and employ nurses. It's a "dollars and cents" decision predicated on the wrong kind of thinking: Therapists and nurses are the same, and so we can safely squeeze a little more out of our nurses.

The lawyers who sued Ford are happy to see this kind of thinking in health care because they know that when the patient injuries come — and they will — the defense will be "it was just a business decision," and they remember what happened to Ford when juries saw corporate executives putting dollars ahead of people's lives.

The hospital — penny-wise and pound-foolish

Before the advent of the MBA and MHA in health care, hospitals were run by actual health care practitioners who had actually touched and talked with patients. It is an unfortunate side effect of the complexity of health care that now specialized managers with specialized training dominate the policy-making branches of hospital administration. Most have never touched or examined a patient. Few have seen a patient bleed out from disseminated intravascular coagulation (DIC) or seen one seize from low blood sugar. For these managers, it's a simple equation: sick patients with money in; not-so-sick patients a few thousand dollars poorer out. In short, health care has become about the money. KentuckyOne Health was the result of multiple mergers of not-for-profit hospitals in Kentucky. The merger created the need to show savings, and respiratory therapists were put on the chopping block.

The decision to remove therapists from the emergency room (ER) may — from the viewpoint of someone without medical training — seem to make some sense. Therapists intubate, give breathing treatments, and perform CPR. Nurses can do everything a therapist can do, and therapists cannot do anything a nurse can't do as far as licensure issues go. So it makes economic sense to remove these people from the hospital ER.

To the micro-managing health care executive schooled in fiscal analysis, therapists and nurses are like Lego™ blocks. Therapists have four circles, nurses have six; thus, we'll use them interchangeably. Note that no thought is given to whether this will actually work in practice. Employees do as they are told. No one will complain because jobs are hard to come by.

When the public and media react to cutbacks in emergency departments with the predictable outrage that comes from decisions that clearly will increase wait times and dramatically increase risks for patients, the system does what systems always do:

about the author...

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Every time someone permits what KentuckyOne is doing to become "standard of care" in their community, the patients are the ultimate losers.

In a statement to WDRB, Barbara Mackovic (KentuckyOne's spokeswoman) said safety is KentuckyOne's No. 1 priority and "any changes within our health care facilities will not place our patients at risk."

It is likely, and perhaps ironic, that Mackovic may truly believe this. How anyone who has ever waited two hours to see a health care provider on a weekend day could conclude that cutting the staff in the ER would not place patients at risk defies explanation. How anyone could suggest that safety is a No. 1 priority when you're removing vital staff from the ER also calls into question the truthfulness of the company's statement. Suffice it to say, however, that a hospital executive believes it; and that belief — in their mind at least — makes it so.

Of course, therapists are trained to spot patients with serious medical conditions. Many of those are peculiar to the upper airway, like epiglottitis. These are conditions where taking the wrong approach ("Hand me that tongue depressor… Say Ahhh please") can be fatal. They ratchet up malpractice risk tenfold.

Therapists have experience with those scenarios. This is not to say that ER nurses do not have that level of skill or expertise, because many do. But thanks to a different kind of law — the law of physics — even the best nurse can only be in one place at one time. Therapists are specialists attuned to the special instruments and trained by experience to use that equipment. They free nurses to do nursing tasks. They are an extra level of safety. Even the best of nurses who must go to a hastily run training session to come up to speed on respiratory technology will not be able to replace a therapist. And most nurses don't want to. They rely on their therapists and consider them irreplaceable. Leaving nurses to monitor ventilated patients in the ER is a recipe for malpractice disaster that places those nurses at risk — it is not fair to the nurses. If I were the malpractice insurer for KentuckyOne, I would be pulling coverage on the effective date and directing them to Lloyds of London.

The slippery slope

Whenever there is a proposed change in the law, lawyers argue the "slippery slope." They say, "This is just a small change, but it will lead to erosion of fundamental freedoms." It is the embodiment of the principle Yoda provides to Luke Skywalker in "Star Wars": "If once you start down the dark path, forever will it dominate your destiny, consume you it will." If nurses are taking over therapists' duties in the ER, can the intensive care unit and the critical care unit be far behind?

There are no small losses in the area of scope of practice, and therapists must advocate forcefully against it. The key is to make a paper trail that a revenue-driven executive who ultimately makes the final decision will look at and think, "Do the risks outweigh the benefits?" The executive doesn't have the skill and expertise to adjudge the risk the way the RC manager does. The executive isn't thinking about the $50 million malpractice lawsuit from the brain-damaged epiglottitis patient or the 12-year-old who suffers anoxic brain injury because the ventilator alarms were not responded to properly. The manager understands the risks and must communicate them. Therapists and nurses are not interchangeable. Nurses are a therapist's best allies in this discussion.

In the profession, you can be a leader or a manager. A manager does things right. A leader does the right thing right. Teaching the administrator to understand the differences and appreciate the risk is every therapist's moral duty. Every time someone permits what KentuckyOne is doing to become "standard of care" in their community, the patients are the ultimate losers. ■

AARC Member Receives TOP HONOR *for* Saving Lives

Jon Carlson was in good company when he came up on stage to accept one of four prestigious awards at the second annual Patient Safety, Science & Technology Summit in January.

Earlier this year, leaders of the American Association for Respiratory Care attended a Patient Safety, Science & Technology Summit in Laguna Niguel, CA, which was designed to serve as a national "call to arms" on improving patient safety in the American health care system. The session drew leaders in patient safety from all around the world who presented on topics to deliver take-home information for attendees they could put to use reducing unnecessary patient deaths in their own facilities.

Humanitarian Award recognizes those who go above and beyond for patient safety

As part of the ceremonies, four prestigious Humanitarian Awards were presented. One went to U.S. Sen. Tom Harkin for his work in advocating for patient safety in Congress, another to an assistant vice president of quality and patient safety for a large health system in Utah and Idaho, and another to the chair of the anesthesiology department at Baylor University Medical Center.

Rounding out this list of prestigious award winners was none other than Jon Carlson, BS, RRT-NPS, director of respiratory care at Mercy Hospital of Buffalo in Buffalo, NY. The AARC member was honored for his work in implementing a continuous patient monitoring system that was credited with saving 10 lives during a pilot project last year.

(continued on page 35)

by Debbie Bunch

Patient Safety Movement Foundation founder Joe Kiani (second from the right) joined AARC member Jon Carlson (far right), former President Bill Clinton, and other dignitaries at the summit.

ZERO Preventable Deaths by 2020

The Patient Safety, Science & Technology Summit held in January was sponsored by the Patient Safety Movement Foundation, an organization spearheaded by Masimo CEO Joe Kiani to address the estimated 200,000 preventable deaths that occur in the nation's hospitals every year due to patient safety issues.

"I got involved in health care more than 25 years ago to help improve patient safety," says Kiani. "Our medical technologies have saved, and continue to save, countless lives; and I'm very proud of that. Yet when you read stories about Rory Staunton, a 12-year-old boy who got a scratch in a school gym and died needlessly of sepsis that went undetected until it was too late, or Leah Cofal, an 11-year-old girl who died in bed of opioid-related respiratory depression because the hospital failed to continuously monitor her after surgery, you realize we can and should be doing much more."

At its inaugural summit in 2013, the Foundation gained a pledge from nine medical device companies to make their devices interoperable so the patient data collected and displayed on their products will be accessible for patients and clinicians. The group announced its Clinton Global Initiative (CGI) Commitment to Action to reduce preventable patient deaths in U.S. hospitals to zero by 2020 at the 2013 CGI Annual Meeting last September.

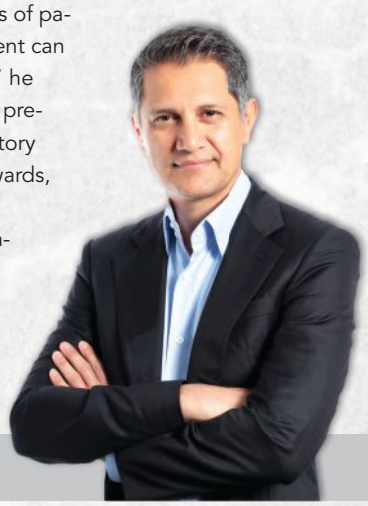
At the second summit in January — which was co-convened with the Joint Commission Center for Transforming Healthcare — more than 100 hospitals and medical technology companies made public commitments and pledges to help reduce preventable patient deaths to zero by 2020. An additional 20 companies signed on to the pledge to make their devices interoperable.

"We know that with these efforts, by the beginning of our last summit, 601 lives had been saved by the hospitals that earlier in the year had made a commitment to zero preventable deaths; and we will continue to add more companies and hospitals and will reach our goal of zero preventable deaths in U.S. hospitals by 2020," says Kiani.

The Foundation has identified nine challenges that it believes can be addressed with Actionable Patient Safety Solutions:

1. **Failure to Rescue: Post-operative Respiratory Depression**
2. **Medication Errors**
3. **Sub-optimal Red Blood Cell Transfusion**
4. **Central Line-associated Blood Stream Infections**
5. **Sub-optimal Neonatal Oxygen Targeting**
6. **Failure to Detect Critical Congenital Heart Disease**
7. **Healthcare-associated Infections**
8. **Hand-off Communication**
9. **Culture of Safety**

Joe Kiani believes respiratory therapists can not only help address these issues but lead the way for others as well. "RTs are often in the best position to identify strategies, processes, and technologies that can help identify the early signs of patient instability before the patient can progress to respiratory failure," he says. "Given the prevalence of preventable deaths due to respiratory cessation in the post-surgical wards, we all look to our respiratory therapy partners to improve patient safety." For more on the work of the Patient Safety Movement, visit www.patientsafetymovement.org. ■



Patient Safety Movement Foundation founder Joe Kiani

Carlson explained how he championed a new patient safety monitoring system in his facility.

Failure to rescue

"Too often hospitals experience a tragic mortality event that brings them to focus on the processes and practices surrounding patient safety and options for preventing similar events in the future," Carlson explains. "Mercy Hospital was no different." He and his colleagues decided that to better understand patient mortality in their facility and to clearly define opportunities for improvement they would need to review all non-hospice and non-comfort care patient deaths in the hospital.

"During the baseline review of code team documentation for our mortality events, we identified 'patient found unresponsive' in 91% of the cases," says the manager. "While this came as a surprise, it reinforced the drive that we needed to take action to improve outcomes and establish safe care."

The group decided to zero in on patient monitoring and began evaluating the pros and cons of end-tidal carbon dioxide, telemetry, and pulse oximetry with direct clinician notification as possible solutions to the problem. Ultimately, they decided that pulse oximetry with the capability to capture respiratory rate that directly linked the bedside monitor to the caregiver and a central monitor at the nurse's station was optimal for their needs. After their baseline data revealed that monitoring patients for just the first 24 or 48 hours would miss 55% and 45% of patient deaths, respectively, they also opted for continuous monitoring throughout the patient's stay.

With that decision in place, they began to focus on the establishment of "actionable alarms," which Carlson defines as "the setting of clinical alarms at a level that provides safety and typically requires action of the caregiver when responding to an alarm." Noting that hospitals often set alarms at a level that does not require action on the part of caregivers — such as "nuisance alarms" — his team established lower end clinical alarms at 50 for pulse rate, 83% for oxygen saturation, and 7 for respiratory rate. Clinicians also have the ability to modify the alarms to fit specific patient needs. Adhesive sensors are also used since they have been shown to greatly reduce disconnect nuisance alarms when compared to clip-on reusable sensors.

Outcomes tell the story

Under the hospital's new system, all patients are monitored for pulse rate and oxygen saturation, and about 28% also wear a sensor on the neck near the trachea to

Jon Carlson greeted conference keynote speaker, former President Bill Clinton.

Like Jon Carlson, AARC member Patrick Dunne, MEd, RRT, FAARC, also got the chance to meet keynote speaker and former President Bill Clinton at the Patient Safety, Science & Technology Summit in January; and he took advantage of the occasion to talk with him about the AARC's Medicare Respiratory Therapist Access Act.

"We didn't get to spend much one-on-one time," says Dunne. "However, I did thank him for his willingness to become a vocal advocate for improving patient safety, especially for patients with chronic respiratory conditions." From there, he transitioned into the respiratory care legislation, noting to President Clinton that the AARC is working hard to educate members of Congress about the proposed law to improve access to respiratory therapists. Dunne says he was pleased to hear the president reply, "Now that is the kind of activism that gets things done in Washington. Keep up the good work."

Dunne, who represented the AARC at the event, sat on the panel discussing hand-off communications and was able to describe the AARC's Patient Safety Checklists, two of which are to protect patients who require ongoing oxygenation monitoring and supplemental oxygen therapy during transport. The third checklist developed by the Association helps the clinician determine the risk factors for recidivism among patients being transferred out of the ICU to a general floor.

As part of his presentation, Dunne informed the audience that research has shown a mortality rate of 42% for patients readmitted back to the ICU and that 54% of those re-admits were for respiratory failure. "The response to my talk about our checklists was overwhelmingly positive and generated much post-panel discussion," he says.

You can find the AARC Patient Safety Checklists at www.aarc.org/resources/safety_checklist/. ■

Presidential Photo Op Presents Opportunity to Advocate for RT Legislation

Patrick Dunne put H.R. 2619 on former President Clinton's radar screen.

(continued from previous page)

capture their respiratory rate acoustically. Caregivers explain to patients the need for the monitoring, noting that the technology is aimed at keeping them safe from harm. Frontline nurses are notified by pager when the patient has a clinical alarm, and the event is also displayed on the central monitor in the nurses' stations. "This direct notification is key to the success of the monitoring program," says Carlson.

Once the system was in place, Carlson and his team initiated a study on their trial floors (again, comfort care and hospice patients were excluded) to see what impact continuous pulse oximetry monitoring with direct clinical notification was having on mortality and failure to rescue. The investigators compared outcomes during a 15-month baseline period with those from the first 15 months after the technology was put into place, with results showing an 89% reduction in all-cause mortality for the monitored floors and a complete elimination of preventable deaths. "We had demonstrated that failure to rescue could be resolved," says the manager.

Anyone can do it

Jon Carlson does not know who nominated him for the Humanitarian Award he received at the summit but says he was proud to accept it on behalf of the entire team at Mercy who played an integral role in improving outcomes for their patients, particularly his chief operating officer, John Herman; vice president of medical affairs, Timothy Gabryel, MD; and chief nursing officer, Kathleen Guarino, RN, because of their support for the project.

As for the technology he and his colleagues implemented, Carlson says anyone could do the same and many already have. "The success we have demonstrated at Mercy Hospital is already being implemented and realized at several other facilities."

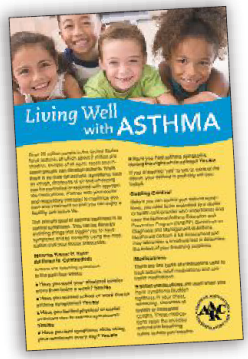
Now he'd like to see his fellow respiratory therapists follow his example and lead the way for the implementation of these systems in their hospitals so even more lives can be saved. "The feedback from other hospitals on patients who have been saved using this same approach is astounding," he says. "The results are reproducible." ■

Promote Respiratory Health and EDUCATE PATIENTS

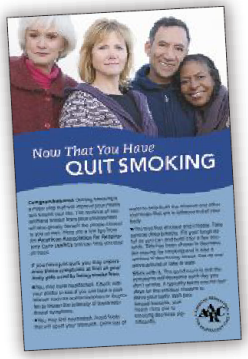
New respiratory handouts to share with patients, at health fairs or presentations

AARC's new series of Educational Health Tip Sheets and Test Your IQ Bookmarks, are perfect for distributing to patients, at health fairs or presentations. Designed with the respiratory therapist in mind, and for patients who want to learn more about their lung health.

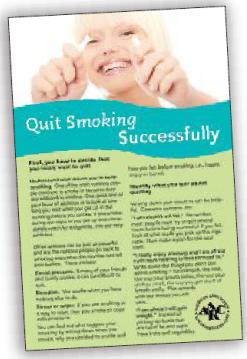
ALLERGIES
Tip sheet: BR0007N



ASTHMA
Tip sheet: BR0005N
Bookmark IQ Card: PE0007



SMOKING AVOIDANCE
Tip sheet: BR0014N



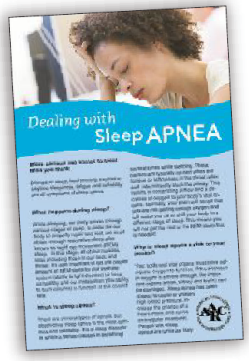
QUIT SMOKING SUCCESSFULLY
Tip sheet: BR0009N
Bookmark IQ Card: PE0009

Package Deals!

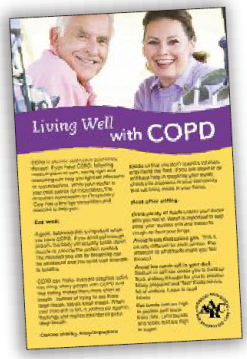
Purchase Tip Sheets and Bookmarks together as a package for a discounted price! Available for:

Asthma: BRKT00313
COPD: BRKT00113
Secondhand Smoke: BRKT00413
Sleep Apnea: BRKT00213
Quit Smoking Successfully: BRKT00513

MEMBER PRICE: $14.50
Nonmember Price: $21.50



SLEEP APNEA
Tip sheet: BR0010N
Bookmark IQ Card: PE0008



COPD
Tip sheet: BR0004N
Bookmark IQ Card: PE0006

SECONDHAND SMOKE
Tip sheet: BR0008N
Bookmark IQ Card: PE0010

Order Today!

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

PEDIATRIC LUNG HEALTH
Tip sheet: BR0006N

Visit http://tinyurl.com/rceducate

Or shop for other respiratory related products at: https://store.aarc.org/

MANAGERS & EDUCATORS:

Bundle This Course with Summer Forum @ Marco Island July 15-17

VISIT: http://tinyurl.com/summer-forum-bundle

RTs, Strengthen *Your Skills* in Adult Critical Care

Attend the Adult Critical Care Specialist Course

The AARC is excited to host a **2-day, live prep course** in Marco Island, FL, July 13–14, 2014. The course is eligible for **13.5 CRCE.**

The **RRT-ACCS** credential, is unique to the daily tasks of an adult critical care specialist. It goes above and beyond general respiratory care activities and demonstrates an **enhanced skill level** in a **fast-growing specialty** within the field.

This Comprehensive 2-day live prep course will:

- Increase your understanding of the intensive care environment and the critically ill patient
- Enhance your knowledge of the critical care environment key factors, practices, and procedures that impact patient outcomes
- Prepare you to successfully pass the Adult Critical Care Specialty (ACCS) examination
- Build upon your existing skillset in critical care or serve as an orientation to the critical care environment

Course Location:

Marco Island, Florida is rated by TripAdvisor as the No. 1 U.S. island and the 4th best island in the world. It offers easy access to the subtropical wilderness of the world-famous Everglades, along with a wealth of pristine beaches.

Stay at the Marriott Resort Marco Island at an exclusive AARC rate of $165 per night.

Differentiate yourself from your peers.

Supported through an unrestricted educational grant from Drager

To Register for This Course Visit:
http://tinyurl.com/accs-course

2014 AARC Summer Forum Programs

Marco Island, FL

AARC Summer forum

Where Challenges Become Opportunities

2014 AARC Pre-Summer

Monday, July 14 | Marco Island, FL

NATIONAL BOARD FOR RESPIRATORY CARE (NBRC)

7:00 am – 12:00 noon

NBRC- Sponsored Item Writing Workshop

Robert C Shaw Jr PhD RRT FAARC, NBRC Assistant Executive Director

Educators and staff development coordinators are invited to this NBRC-sponsored item writer's workshop, which is designed to prepare attendees in the development and assessment of high-quality multiple-choice examination items. Time will be provided for participants to interact and receive immediate feedback from the facilitator. Motivation for this course is tied to the need to supplement traditional item production to fulfill demands of NBRC examination programs. Additionally, participants will benefit from the instruction as well as find the session a valuable addition to their experience at the Summer Forum. Indirect benefits can be anticipated should participants become more skilled in assessing learning by writing high-quality multiple-choice items in the future. Those who participate will receive 5 CRCE credits.

AARC Summer forum
Where Challenges Become Opportunities

COMMISSION ON ACCREDITATION FOR RESPIRATORY CARE (CoARC)

11:00 am – 12:30 pm

Meet the Commission

CoARC Board members and Executive Office Staff will address the following accreditation issues:

- Recent changes to CoARC policies, procedures, and documentation involving the referee process
- Accreditation requirements and recommended improvements of the program
- Communicating appropriately and effectively with the program referee and Executive Office Staff
- Update on the Accreditation Standards revision process.

Prior registration for this session is strongly encouraged. To register, please contact Shelley Christensen at shelley@coarc.com by July 1. Specific programmatic questions (e.g., reaccreditation timeline, program action letters, status of recent actions or requests, etc.) should be directed to the CoARC Executive Office. CoARC strongly encourages attendees to submit questions, which will be addressed at the session by one of the commissioners. There will also be an opportunity to ask questions at the event. Please pre-submit any question that you would like to be addressed to Shelley Christensen at shelley@coarc.com.

Forum Programs

AMERICAN ASSOCIATION FOR RESPIRATORY CARE (AARC) Pre-Course

1:30 pm – 4:30 pm

Course capacity is limited. Pre-registration is required. Deadline: Monday, June 23, 2014, or when course is full. Approved for 2.50 hours of continuing education credits (CRCE). You must attend the entire course to receive CRCE credit, no partial credit will be awarded.

How Viable Is Your Respiratory Care Program?: Assessing Quality and Sustainability of RC Education

Respiratory care key program personnel focus largely on curriculum, accreditation, and credentialing issues. Their world is that of teaching and learning. While key program personnel are highly knowledgeable and quite adept at program outcomes and accreditation thresholds, absent from their skill set are the seemingly complicated and troubling issues of program finance and economics. This workshop will address the issues of program quality but more importantly quantitative measures, such as finance and economics, as they apply to academia and particularly respiratory care education.

Qualitative measures (such as program applicant pool, demographics and enrollments, academic performance, and graduation rates) coupled with financial indicators (such as enrollment figures, capital budgeting, faculty salaries, and overall program costs) will be addressed. Internal and external academic audits, budgets, and business plans will also be addressed by the presenters.

Key RC program personnel – new and seasoned – must know what is in the minds of academic administrators and decision makers and what these changing times present to the academic world and to your RC program. Don't miss this opportunity to hear a candid discussion and dialogue on the economics of respiratory care education from a team/panel of professional colleagues and academic administrators as well as views from seasoned colleagues on an issue of significant concern and importance. Join us for a session on RC Education economics and finance.

Continued next page

2014 AARC Pre-Summer

Monday, July 14 | Marco Island, FL

1:30 pm – 2:00 pm

State of Higher Education: Issues and Challenges Facing Universities and Community Colleges

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

This opening session will begin by framing the challenges – the salient issues impacting the current climate in higher education. It will include the goals of higher education in the US, political and community perceptions of higher education, costs associated with higher education, student debt, and the proliferation of alternative educational delivery models, to name but a few. This first session will set the tone for the presentations that follow and open the conversation to the critical importance of RC program faculty increasing their awareness and competency related to internal and external program effectiveness and program financial viability.

2:05 pm – 2:35 pm

Qualitative Measures Impacting Academic Programs

David L Collins PhD RRT, Dayton OH

Pat Munzer DHSc RRT FAARC, Topeka KS

This second presentation will address the variables that are reviewed and monitored by academic administrators to assure the quality and effectiveness of the academic program. Internal and external peer reviews and academic audits will be discussed, and the presenters will share templates from a variety of different academic settings. Particular emphasis will, of course, be placed on the respiratory care program.

2:35 pm – 2:50 pm

BREAK

2:50 pm – 3:20 pm

Staying in the Black - Business Plans and Budgets: Central to Financial Planning and Program Sustainability

Richard E Oliver PhD, Columbia MO

Accreditation, credentialing, and curricular issues are addressed (quite well) by most program directors and directors of clinical education. Program faculty are comfortable addressing and performing these functions. However, what may be lacking is an understanding and appreciation of the overall budgetary process and the development of business plans. Both are essential for economic survival and institutional effectiveness. The presenter will provide attendees with an overview of the budgetary process and examples of budgets and business plans that can be used to gain a better understanding of how higher education operates financially and fiscally.

Galvin, Bill

Collins, David

Munzer, Pat

Oliver, Richard

Forum Programs

3:25 pm – 3:55 pm

Quantitative Measures of Effective RC Programs: Financial Indicators

Richard E Oliver PhD

While all institutions and all respiratory care programs are different with regard to their financial health and well-being, there are certain key variables that should be monitored and achieved in order to ascertain value and financial viability. The presenter will provide key financial indicators and variables viewed by academic administrators that have implications to overall sustainability and viability of the respiratory care program. Learn what is in the heads of institutional administrators regarding which programs are viewed as valuable to the mission of the institution.

4:00 pm – 4:30 pm

Panel Discussion

Bill Galvin MSEd RRT CPFT AE-C FAARC

David L Collins PhD RRT

Pat Munzer DHSc RRT FAARC

Richard E Oliver PhD

The final phase of the Pre-Summer Forum Program will entail an open microphone where both questions and comments can be provided by the attendees. New and more experienced RC program faculties are encouraged to ask questions and share their experiences with the attendees. The intention is a candid discussion and dialogue related to program viability. We welcome your input and participation.

AMERICAN ASSOCIATION FOR RESPIRATORY CARE (AARC)

5:30 pm – 7:00 pm

Welcome Reception

Stressed from a long day of travel? Apprehensive that it's your first Summer Forum and you aren't sure what to expect? Or perhaps you're just anxious to reconnect with old friends? Regardless, you'll want to be sure not to miss the AARC Summer Forum Welcome Reception. Enjoy beverages and light snacks as you network with colleagues from around the country and mingle with AARC Corporate Partners and other exhibitors. Interact with executives from the AARC, CoARC, and the NBRC. There's no better way to kick off 3 days of learning than by attending this opening event. Attendance is limited to registered attendees only.

Trustees from the American Respiratory Care Foundation will be in attendance to answer your questions and raise awareness about the mission and vision of the ARCF. Raffle tickets will be sold for a chance to win some great prizes!

2014 AARC Summer

Tuesday-Thursday, July 15-17, 2014

See pages 57-59 for registration form and fees, hotel reservation information, and travel discounts. Approved for up to 15.14 hours of continuing education credit (CRCE).

AARC Summer forum
Where Challenges Become Opportunities

Tuesday, July 15 | Marco Island, FL

GENERAL SESSION

7:30 am – 8:25 am

Douglas S Laher MBA RRT FAARC
AARC Associate Executive Director/ ***Presiding***

AFFORDABLE CARE ACT: PUTTING THE PROFESSION ON TRIAL

Anthony L DeWitt JD RRT FAARC, Jefferson City MO

An indictment of sorts has been handed down. Arty Sloth (R.T. Sloth – see definition below), a part-time supervisor, manager, and educator, has been accused of negligence, dereliction of duty, failure to supervise, incompetence, and malfeasance. After 25 years in the profession, Arty feels he should be sitting back, flying under the radar, and resting on his laurels. After all, he stopped all those IPPBs, replaced them with the "Gold Standard" in hyperinflation therapy (the I.S.), and he has one protocol in place, with more to come "as soon as the docs get on board." Arty also boasts that his department is one of the most productive departments in the city... after all, his therapists can do 45 treatments in an 8-hour shift! Come to Arty's trial and hear the experts give testimony about the science, the profession, the opportunities, and the challenges. Mr. DeWitt's closing argument will be one for the ages. "Has Arty done enough over the years to move the profession forward?" "Will evidence-based medical practices and protocol-driven care be enough to get Arty's department where it needs to be?" "Are his actions enough to sustain and grow his department in the midst of a paradigm shift called the Affordable Care Act?" You'll have to attend this theatrical, entertaining, and educational keynote session to find out!


DeWitt, Anthony

EDUCATOR TRACK

8:35 am – 2:45 pm

Joseph Sorbello MSEd RT RRT
Chair, AARC Education Section/ ***Presiding***

8:35 am – 9:05 am

EDUCATION SECTION MEMBERSHIP MEETING

Joseph Sorbello MSEd RT RRT– Chair, AARC Education Section/ ***Presiding***

Updates on issues important to the section will be discussed, with interactive dialogue on how the section chair and the AARC can better serve the Education Section and its members. This is your opportunity to influence the profession and network with your peers. All Summer Forum attendees are invited to attend.

Forum

CoARC SYMPOSIUM

9:10 am – 9:50 am

Common Triggers for Progress Reports and Their Solutions

Robert DeLorme EdS RRT-NPS, Lawrenceville GA

The presentation will list deficiencies in program outcomes that commonly require a progress report. It will describe CoARC standardized progress reports and define successful strategies for submitting an acceptable progress report.

9:55 am – 10:35 am

Evaluating Student Competencies

Allen N Gustin Jr MD FCCP, Chicago IL

The presentation will describe methodology for identifying essential student competencies. It will describe methods for evaluating student achievement of these competencies and identify the key components for training clinical preceptors to evaluate student achievement of these competencies.

10:35 am – 10:50 am

BREAK

10:50 am – 11:30 am

Update on Post-Professional Education: Degree Advancement and Advanced Practice Respiratory Therapist (APRT)

Kathy J Rye EdD RRT FAARC, Little Rock AR

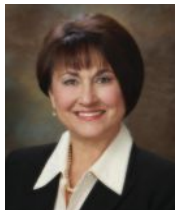
The presentation will describe CoARC activities regarding development of standards for Degree Advancement Programs and Advanced Practice for Respiratory Therapists. It will describe advantages for seeking voluntary accreditation for Degree Advancement Programs and discuss the implications of advanced practice on national credentialing and state licensure.

11:35 am – 12:15 pm

Update on 2015 Standards for Entry into Respiratory Care Professional Practice

Allen N Gustin Jr MD FCCP

The presentation will describe the process for revision of the CoARC Standards and present proposed changes to the Standards. Time will be allotted for questions and comments from members of the audience.



Rye, Kathy

Haan, Lutana

12:15 pm – 12:35 pm

BREAK (Boxed lunch optional)

CLASSROOM TECHNOLOGY, TECHNIQUES, AND STRATEGIES

12:35 pm – 1:15 pm (Working Lunch)

Teaching Mobile Technology

Lutana Haan MHS RRT RPSGT, Boise ID

How can we enhance our classrooms with the power we now carry in our pockets? The presentation will provide practical methods to harness the power of mobile technology for teachers and students. Additionally, it will provide strategies for using specific applications in lectures to engage 21st century students.

Tuesday, July 15 | Marco Island, FL

1:20 pm – 2:00 pm

CATS: The What, How, and Where of Classroom Assessment Techniques

Jody Lester MA RRT, Boise ID

Classroom Assessment Techniques (CATs) are relatively short, in-class exercises that allow students and instructors an opportunity to self-assess and self-adjust between tests. CATs can provide faculty with valuable data that can help them assess the effectiveness of learning activities. CATs can also help students become more responsible learners. CATs will be integrated into this presentation so that the attendee learns firsthand how to effectively use and where to locate these valuable assessment tools.

2:05 pm – 2:45 pm

Activating Our Lectures to Awaken the Learner

Lutana Haan MHS RRT RPSGT

Our classroom time plays a huge role in students' engagement and performance. How can we move our presentations to encourage new information to land and take hold? How can we move our students who seem uninterested in learning, to a place that guides them to the important aspects of our teaching? Learn techniques you can use in your classroom to wake up your students.

MANAGER TRACK

8:35 am – 2:35 pm

Bill Cohagen BA RRT FAARC
Chair, AARC Management Section/ *Presiding*

8:35 am – 9:05 am

MANAGEMENT SECTION MEMBERSHIP MEETING

Bill Cohagen BA RRT FAARC – Chair, AARC Management Section/ *Presiding*

Updates on issues important to the section will be discussed, with interactive dialogue on how the section chair and the AARC can better serve the Management Section and its members. This is your opportunity to influence the profession and network with your peers. All Summer Forum attendees are invited to attend.

9:10 am – 9:50 am

You've Given All You Got and They Want More: Dealing with Stress and Time Management – Seek First to Understand

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

Feel like you don't have enough time to take care of your staff, patients, physicians, nurses, and other customers? You're working 12-hour days, doing more than ever, getting less (if any) recognition for your extra efforts, and the boss wants even more? The answer isn't doing more of the same. Learn some effective tips and techniques for lowering your stress, effectively using your time, and feeling more confident in your abilities and value to your staff, your boss, and your organization. In


Lester, Jody


Haan, Lutana


Kauffman, Garry

Forum

this first part of two sessions, we'll start the process of improving our management of time and stress by reviewing the different types of stress. What will be revealed is how the use and prioritization of time and stress are interrelated.

9:55 am – 10:35 am

You've Given All You Got and They Want More: Dealing with Stress and Time Management – Committing to Change

Garry W Kauffman MPA FACHE

RRT FAARC

Building on our understanding of time management and stress, this session will add the dimension of burnout. We'll review the signs and symptoms of burnout, which mental health professionals indicate is the ultimate destructive consequence of an individual's inability to manage time and stress at suitable levels. Participants will be provided with a validated burnout tool that will reveal their degree of burnout. Based on the information gleaned in this confidential survey tool, I will conclude the session by providing a template for each person to develop an action plan to steer them off the path to burnout and take the path that will provide each person with a time management plan, stress management plan, and burnout avoidance plan. Individuals who have participated in this two-part program have overwhelmingly indicated that they have a better understanding of time, stress, and burnout and have been able to make a demonstrable and positive change in their personal and professional lives.

10:35 am – 10:50 am

BREAK

10:50 am – 11:30 am

AARC's Online Tools for Managers

Steve Nelson MS RRT FAARC, Irving TX

The AARC provides a number of tools for managers, many of them free. What have you missed in online resources?

11:35 am – 12:15 pm

Where to Go and How to Get There

Jenny Killian Leadership Consultant, HealthLinx®, Columbus OH

"Where to Go and How to Get There" is pertinent to those who are satisfied in their present position and looking to excel, looking for growth within their current organization, or interested in a job change to a new organization. It will begin by providing ideas on how to truly determine what career path an individual wants to pursue, then will move into discussing ways to position oneself to achieve these career goals. The final section will be dedicated to "real world" tips and ideas on how to navigate the job search, resume, and interviewing processes most effectively

12:15 pm – 12:35 pm

BREAK (Boxed lunch optional)

Nelson, Steve

Killian, Jenny

2014 AARC Summer

Tuesday, July 15 and Wednesday, July 16 | Marco Island, FL

TUESDAY, JULY 15

12:35 pm – 2:35 pm
(Working Lunch)

Where to Go and How to Get There - Workshop

Jenny Killian Leadership Consultant

Colleen Deep Senior Account Executive, Healthlinx®

Garry W Kauffman MPA FACHE RRT FAARC

This highly interactive workshop is designed to apply the principles and tactics communicated at the associated lecture. During the workshop, you will learn what you can do to maximize your value as an RT leader, what you need to do to advance to the C-Suite in your health care organization, and if interested, what critical elements of your experience and accomplishments are considered mandatory by executive recruiters working with senior leadership in another organization.

WEDNESDAY, JULY 16

GENERAL SESSION

7:30 am – 8:30 am

Garry W Kauffman MPA FACHE RRT FAARC/*Presiding*

THE AFFORDABLE CARE ACT: THEN AND NOW

Douglas S Laher MBA RRT FAARC, Irving TX

The Affordable Care Act (ACA) represents one of the most sweeping and dramatic changes in the history of health care since the adoption of Medicare, Medicaid, and DRGs. While we have all heard extensively of the merits and shortcomings of ACA, it is in fact the law of the land and garners the attention of virtually all RTs, managers and educators alike. Knowledge and understanding of its content and intent is essential. This plenary session will provide a brief history and evolution of the key, salient points associated with ACA. More importantly it will identify its impact and implications for managers and educators as well as the practice of respiratory care. What does the future hold for RC? What do we as managers and educators need to know to position our departments and programs for the future? Come join us as we discuss the future of respiratory care under the evolving Affordable Care Act.

8:30 am – 8:45 am

BREAK

EDUCATOR TRACK

8:45 am – 2:25 pm

Joseph Sorbello MSEd RT RRT Chair, AARC Education Section/ Presiding

SIMULATION POTPOURRI

8:45 am – 9:25 am

Using Clinical Simulations to Help Students Identify and Troubleshoot Airway Emergencies

Theresa Gramlich MS RRT, Little Rock AR

Teaching airway emergencies poses a challenge to RC faculty. Simulation training offers the student a risk-free opportunity to


Killian, Jenny


Deep, Colleen


Kauffman, Garry


Laher, Douglas


Gramlich, Theresa

learn how to identify and manage total or partial airway obstruction. This presentation will describe the development of clinical scenarios and evaluation instruments for training students to recognize airway obstructions and render appropriate treatment. Learn to develop simple short case scenarios, to give effective feedback to students during simulation de-briefing, and the value of simulation learning in the development of critical thinking skills for the respiratory care student.

9:30 am – 10:10 am

Simulation Modeling and MacGyverisms: Getting the Point Across

Doug Pursley MEd RRT,

Springfield MO

Back by popular demand is this presentation on simulation modeling that addresses the process of creating a physical model that can be used to more easily explain and clarify complex concepts in respiratory care. Attend this lecture to find out how to design and construct various gadgets, mechanisms, and doodads that will promote active learning and help get the point across. The presenter will demonstrate how to create and implement five basic simulation models.

10:10 am – 10:25 am

BREAK

10:25 am – 11:05 am

Mock Trauma: An Interprofessional Simulation Experience

Debra Kasel EdD RRT-ACCS AE-C, Cincinnati OH

Deborah Patten MA RRT,

Highland Heights KY

The presenters will share their experiences in conducting a mock trauma drill for respiratory care and radiologic technology students. The presentation will describe the developmental process, student roles, and reactions to the experience. In addition, the attendees will learn how to create, prepare, and implement a mock trauma drill that attendees can take back and implement in their programs.

11:10 am – 11:50 am

Professional Behavior and Students – It's Academic

Robert L Joyner Jr PhD RRT FAARC, Salisbury MD

Professionalism is a cornerstone of a successful academic program. There are a multitude of attributes and practices that represent professional behavior. This presentation will describe how ethical and behavioral standards published by national health care organizations can be utilized as academic requirements in the classroom and clinical setting. It will also discuss a process of dealing with student behavioral issues as teaching opportunities that allow for corrective action and how a multidisciplinary professional program review panel can be used to support punitive actions of repeat or egregious offenders. The presenter will share policy adopted by his institution as a model.

Pursley, Doug

Kasel, Debra

Patten, Deborah

Joyner, Robert

Wednesday, July 16 | Marco Island, FL

11:50 am – 12:15 pm

BREAK (Boxed lunch optional)

12:15 pm – 12:55 pm
(Working Lunch)

Risk Management as Core Curriculum

Anthony L DeWitt JD RRT FAARC, Jefferson City MO

Just as documentation strategies are integrated into the core respiratory care curriculum, so too should risk management skills. This lecture presents ways in which educators can build risk management and risk minimization into their core curriculum.

The presenter will specifically identify the top five mistakes made by new graduates and provide interventions to avoid or minimize potential litigation and optimize patient care.

1:00 pm – 1:40 pm

Taking the On-line Plunge… Choosing the Right Course and the Right Learning Management System

Monica Schibig MA RRT-NPS CPFT, Columbia MO

Moving a course to an online format can be intimidating. This presentation will outline strategies for choosing the right courses for online delivery as well as choosing the appropriate Learning Management System (LMS) platform.

1:45 pm – 2:25 pm

If I Knew What I Know Now… Tips and Tricks for Setting Up Successful Online Courses

Monica Schibig MA RRT-NPS CPFT

Setting up an online course can seem daunting to the novice. This presentation will highlight key elements for the successful design and delivery of an online course. Additionally, the attendees will recognize pitfalls in online course setup, how to establish logical and efficient course room design, as well as how to generate organized and practical test banks.

MANAGER TRACK

8:45 am – 2:15 pm

Bill Cohagen BA RRT FAARC Chair, AARC Management Section/ *Presiding*

8:45 am – 9:25 am

Developing an Effective Educational Plan for Respiratory Care Departments

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

Developing and implementing quality educational activities in respiratory care departments can be a challenging process for the departments' leadership team. This presentation will discuss the development process, including the needs assessment, topic development, and implementation strategies as well as identify existing educational opportunities available to departments. Additionally, the presenter will provide examples of successful respiratory care department education strategies.


DeWitt, Anthony


Schibig, Monica


Strickland, Shawna

9:30 am – 10:10 am

Making the Case and Developing a Model for an RT Case Manager

John S Sabo MS RRT FAARC, Houston TX

There is much talk and effort on having respiratory therapists as case managers for COPD patients. But, how is it done effectively, efficiently, and appropriately? This symposium will describe one hospital's journey that instituted a successful COPD case management program that has been in existence since 2008.

10:10 am – 10:25 am

BREAK

10:25 am – 11:05 am

Managing Human Capital

John S Sabo MS RRT FAARC

This presentation provides an overview of the essential knowledge and skills required of today's health care leaders to lead, manage, and motivate people. Concepts will be introduced explaining the basic principles for leading a diverse workforce, the role of state and federal government labor laws, the role of organized labor in the health care workforce, the practices for hiring employees, employee evaluation systems, the steps in progressive disciplinary action process, and various forms of employee compensation.

11:10 am – 11:50 am

Health Care Consultants: How to Prepare, How to Work Collaboratively, and How to Demonstrate the Value of You and Your Department

Hannah Shipton MEd MHA, Chicago IL

Ginger Martin RN BSN MSN CNOR ANP, Chicago IL

Even prior to the dire economic conditions of today's health care environment, external consultants have been employed by hospital boards and executive leadership to help them understand current operations and make improvements. Improvement efforts tend to focus on cost reduction, utilization of human capital, quality improvement, and customer satisfaction. The Huron consultants will lead us through the process, by which they are engaged, explain key focus areas, reveal how they interact with executives, and help you as the RT leader prepare for a successful consulting engagement. The lecture will be followed by an interactive workshop designed to provide the RT leader with the knowledge, tools, and competencies to not only survive a consulting engagement, but to increase your visibility and value in the eyes of your executive team.

Sabo, John

Shipton, Hannah

Martin, Ginger

2014 AARC Summer

Wednesday, July 16 | Marco Island, FL

11:50 am – 12:15 pm
BREAK (Boxed lunch optional)

12:15 pm – 2:15 pm
(Working Lunch)
Health Care Consultants: Workshop*

Hannah Shipton MEd MHA

Ginger Martin RN BSN MSN CNOR ANP

Garry W Kauffman MPA FACHE RRT FAARC

Based upon the information communicated in the associated lecture, the interactive workshop is designed to provide the RT leader with the knowledge, tools, and competencies to not only preserve your position and your department, but to increase your value to your organization.

* Please note that due to the highly focused and interactive nature of the workshop, the workshop will be limited to the first 100 registrants, based upon registration date/time.

GENERAL SESSION

2:30 pm – 3:45 pm

Bill Galvin MSEd RRT CPFT AE-C FAARC/Presiding

AGENCY UPDATES

George W Gaebler MSEd RRT FAARC - AARC President

Michael T Amato MBA, ARCF Chair

Kathy J Rye EdD RRT FAARC, CoARC President

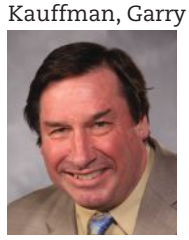
Carl F Haas MLS RRT CPFT FAARC, NBRC President

The leadership of the AARC, ARCF, CoARC, and NBRC will join attendees to discuss the latest professional, research, accreditation, and credentialing issues facing respiratory care.

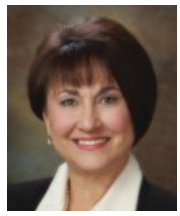

Shipton, Hannah


Martin, Ginger


Kauffman, Garry


Gaebler, George


Amato, Michael


Rye, Kathy


Haas, Carl

Forum

Thursday, July 17 | Marco Island, FL

EDUCATOR TRACK

7:00 am – 11:10 am

Joseph Sorbello MSEd RT RRT Chair, AARC Education Section/*Presiding*

7:00 am – 8:30 am

JIMMY A YOUNG MEMORIAL LECTURE

Presented by the National Board for Respiratory Care

The Clinical Simulation Examination – Then and Now

Robert C Shaw Jr PhD RRT FAARC, NBRC Assistant Executive Director and Psychometrician

The program will describe in detail the value of the Clinical Simulation Examination to the RRT Credential and a more detailed description of the new 20-problem Clinical Simulation Examination to be implemented in January 2015.

8:30 am – 8:40 am

BREAK

8:40 am – 9:20 am

Let's Raise the Bar: Developing the Master Teacher

Joseph G Sorbello MSEd RT RRT, Syracuse NY

Educators of all types continually ask the same question: How can I get my students or colleagues to become better learners? Let's ask two more advanced questions and raise the bar: Can I help my students or colleagues to become master learners? What needs to be done to make this happen? This presentation offers a look at select master learner theories and translates these theories into practical strategies for the learner, the teacher, and the learning environment.

9:25 am – 10:05 am

Engaging Students in the Community

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

Fostering volunteerism and engaging students in community events is an integral part of the respiratory therapy curriculum. However, engaging students in a meaningful way can be challenging. This presentation will discuss the benefits and challenges of engaging students in the community and provide practical strategies for providing meaningful community experiences for students.

Shaw, Robert

Sorbello, Joseph

Strickland, Shawna

2014 AARC Summer

Thursday, July 17 | Marco Island, FL

10:10 am – 11:10 am

DR. FRED HELMHOLZ EDUCATION LECTURE SERIES

Presented by the Commission on Accreditation for Respiratory Care

Tom Hill PhD RRT FAARC/*Presiding*

Enhancing the Science and Practice of Respiratory Care Through Academic Progression and Life-long Learning

Toni L Rodriguez EdD RRT FAARC, Phoenix AZ

CoARC is a strong supporter of academic progression through formal, degree-granting programs and lifelong-learning experiences to enhance the science and practice of respiratory care as evidenced by its recent development of degree advancement and advanced practice standards. The CoARC further recognizes that respiratory therapists with advanced education are needed in large numbers to serve as educators, researchers, managers, clinical specialists, and leaders throughout the health care delivery system. A resource to help address this growing need is the recent creation of the AARC Leadership Institute designed to provide real-world education for RTs who wish to expand their breadth and depth of knowledge beyond the clinical realm. This year's presenter will provide an overview of this new resource as well as discuss the importance of advancing your professional skills beyond that required for entry into the profession.

Rodriguez, Toni

Cohagen, Bill

MANAGER TRACK

7:00 am – 10:50 am

Bill Cohagen BA RRT FAARC Chair, AARC Management Section/ *Presiding*

7:00 am – 7:40 am

Making Your Own Destiny

Bill Cohagen BA RRT FAARC, Phoenix AZ

Have you been laid off? Are you still employed but not feeling that you are valued? Do you wonder if your boss and your organization still see you as a valued leader? If any of these seem real to you or if you've even just thought about any of these stressors, this session is for you! This highly engaging presentation will provide the RT leader with the tips to help you reignite the fires, maximize your talents to reach new professional heights, and secure the position you desire, whether it's within your current organization or another health care organization.

Forum

7:45 am – 8:25 am

Engaging Staff in the Community

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

Fostering volunteerism and engaging respiratory therapists in community events is an excellent way to promote the profession, establish a community presence for your department, promote wellness, potentially reduce readmission rates, and increase your visibility and value within your organization. However, engaging staff in a meaningful way can be challenging. This presentation will discuss the benefits and challenges of engaging staff respiratory therapists in the community. In addition, this presentation will provide practical strategies for providing meaningful community experiences for both your staff and your community.

8:25 am – 8:40 am

BREAK

8:40 am – 9:20 am

How to Create, Implement, and Add Value with a Clinical Preceptor Program

Judy Schloss RRT-NPS AE-C, Minneapolis MN

This program will discuss the importance of focused training for staff and the resulting hospital wide benefits. The presenter will take attendees through a step-by-step process of the development, implementation, and management of a preceptor program within an RT department. The session will provide examples of methods of communication and evaluation tools and will also discuss ways to provide leadership opportunities for preceptors. Whether you're the RT leader of a 100-bed hospital, a 600-bed medical center, or any facility in the middle, this presentation will provide you with another tool to increase the value of your staff and your value as a leader.

Strickland, Shawna

Schloss, Judy

2014 AARC Summer

Thursday, July 17 | Marco Island, FL

9:25 am – 10:05 am

The Seven Deadly Sins of Management

Anthony L DeWitt JD RRT FAARC, Jefferson City MO

So, you've been promoted. You've learned how to manage by watching others. Have you learned behaviors that might get you sued, or worse, fired? What are the seven deadly sins that every manager must avoid to be successful? Whether you're new to management, have a few years under your belt, or are a seasoned leader, this presentation will reinforce your knowledge or gain you additional insight into this key competency expected of successful leaders.

10:10 am – 10:50 am

Workforce Under Construction! Intergenerational Health Care: Foundations, Breaking Down Barriers, and Building Bridges

Judy Schloss RRT-NPS AE-C

This presentation will challenge the RT leader as to the importance of increasing professionalism in the conduct of all activities. Increasing professionalism begins with a personal commitment to align one's behavior with the competencies expected of a defined professional. This session will provide ideas and examples of how to become a valued member of the professional interdisciplinary team and how you as a leader can increase your value by educating, using social media, and community outreach programs.

CLOSING CEREMONY

11:15 am – 11:45 am

Douglas S Laher MBA RRT FAARC, AARC Executive Director/*Presiding*

BRINGING IT FULL CIRCLE

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

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

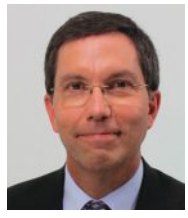
The "can't miss" session of the entire meeting. Presenters Bill Galvin and Garry Kauffman will review salient take-home points from both the Education Section and Management Section. Stepped out of the room to take a 10-minute call from the office? Missed the first 10 minutes of a lecture because you were busy networking? No need to worry, the presenters cover all of the most important takeaways from each presentation and "bring it all together".

The "show recap" will send attendees from Marco Island with a collage of photos choreographed to your favorite music.


DeWitt, Anthony


Schloss, Judy


Galvin, Bill


Kauffman, Garry

The lectures at 12:35 pm on Tuesday and 12:15 pm on Wednesday will be "working lunches". Box lunches are available for a fee. Visit www.aarc.org/education/meetings/summer_forum_14/registration.cfm to see the lunch contents and prices.

Forum | Registration Form 2014

AARC Summer Forum • Marco Island

Tuesday-Thursday, July 15-17, 2014

First/Last Name for Badge _____

Credential (check up to three to be printed after your name): ☐ RRT ☐ CRT ☐ PhD ☐ MA ☐ MD ☐ Other_____

AARC Member # _____ **E-mail Address** _____@_____

Employer _____

Preferred Mailing Address ☐ **Home or** ☐ **Business** **Daytime Phone ( )** _____

_____

City _____ **State** _____ **Zip** _____

Pre-Course

How Viable Is Your Respiratory Care Program?

Monday July 14, 1:30 pm - 4:30 pm

Course capacity is limited. Pre-registration is required.
Deadline: June 23, 2014 or when course is full.

Member	Non-Member	Student Member ***
☐ $40	☐ $70	☐ $15

*** Must be registered for the Summer Forum

Summer Forum

Tuesday, July 15, 7:30 am - Thursday, July 17, 11:45 am

	Member	Non-Member *	Student Member
By May 16	☐ $295	☐ $429	☐ $95
After May 16	☐ $335	☐ $439	☐ $95

Box Lunch ** ☐ $30 Tuesday ☐ $30 Wednesday

Spouses may register on-site for $40.

ACCS Prep Course and Summer Forum

Sunday, July 13, 8:00 am - Thursday, July 17, 11:45 am

ACCS Prep Course capacity is limited. Pre-registration is required.
Deadline: June 20, 2014 or when course is full.

	Member	Non-Member *
By May 16	☐ ~~$520~~ $500	☐ ~~$704~~ $675
May 17–June 20	☐ ~~$575~~ $560	☐ ~~$729~~ $700

ACCS: Lunches included

Summer Forum: Purchase Box Lunches**

☐ **$30 Tuesday** ☐ **$30 Wednesday**

If you wish to register for only the ACCS Prep Course, go to:
www.aarc.org/education/meetings/accs_14/

* **Join the AARC and save! If you opt to pay the non-member fee you are entitled to free, automatic 1 year AARC membership.**

Check here ☐ if you **DO NOT** wish to receive this complimentary membership.

** Summer Forum lectures at 12:35 pm Tuesday and 12:15 pm Wednesday will be "working lunches." The fee covers one box lunch. Go to www.aarc.org/education/meetings/summer_forum_14/registration.cfm for details.

Method of Payment

Check or Money Order enclosed ☐

Charge my ☐ Visa ☐ MasterCard ☐ American Express

Name of Card Holder (print) _____

Credit Card # _____

Expiration Date _____

Signature _____

If paying by credit card, you may FAX your registration form to (972) 484-2720.

Mail registration form and check or money order, payable to AARC, to:

AARC Summer Forum
9425 N MacArthur Blvd, Suite 100
Irving, TX 75063-4706
Phone (972) 243-2272

You may register online at AARC.org.

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 June 23, 2014. No refunds will be made thereafter.

2014 AARC Summer

Site and Travel Information

Save with Discounted Transportation and Lodging

Site

All AARC Summer Forum meetings will be held at the Marco Island Marriott Beach Resort, 400 S. Collier Blvd., Marco Island, Florida, 34145; phone 239-394-2511.

Hotel Reservations

- **Cut-Off Date** for the AARC's special sleeping room rate is Monday, June 23.
- **Online** at https://resweb.passkey.com/Resweb.do?mode=welcome_ei_new&eventID=11164217&utm_source=10865&utm_medium=email&utm_campaign=30015505
- **Call** 1-800-438-4373. Refer to **"AARC Meeting."** Discounted rates are available through this phone number only.
- **Room Rate:** $165 plus 10% tax single–quad occupancy. Deposit required.
- **Discounted Self-parking:** $6 + 6% tax per day, per car for AARC hotel guests.
- **Complimentary Internet** in guest rooms.

Airline Discounts

The discounts shown below are valid for the Fort Myers Southwest Florida International Airport (RSW), approximately 50 miles from the hotel, the Miami International Airport (MIA), approximately 100 miles from the hotel, and Fort Lauderdale–Hollywood International Airport (FLL), approximately 115 miles from the hotel. Discounts also apply to family and friends.

American Airlines

- **Online** at **www.aa.com** (no booking fee). Enter 1874DN in the Promotion Code box.
- **Call** AA Meeting Services at 800-433-1790 (booking fee added) and refer to Authorization Code A1874DN.

DELTA

- **Online** at **www.delta.com/** (no booking fee). Click "More Search Options" and enter Meeting Event Code NMHMV in the box provided on the Book A Flight page.
- **Call**, or have your travel agent call, Delta Meeting Network at 800-328-1111 (booking fee added). Refer to meeting code NMHMV.

UNITED

- **Online** at **www.united.com** (receive an additional 3% off and no booking fee). Enter ZRTX581982 in the Offer Code box.
- **Call** United Reservations Meetings Desk at 800-426-1122 (booking fee added). Refer to Z code ZRTX and Agreement Code 581982.

Ground Transportation

Airport Shuttle/Sedan/Van Services

Naples Transportation & Tours offers service between the Fort Myers Airport (RSW) and the hotel. An AARC attendee discounted per person fare of $50 plus 20% service charge/gratuity one way is available on the following dates: RSW to the Marriott on July 12, 14 and 17; Marriott to RSW on July 15, 17 and 20. Transportation on other days will be at a total rate of $95 + 20% for 1-3 persons in a sedan and $175 + 20% for up to 8 people in a van. Advance reservations required a minimum of 72 hours prior to arrival. Make reservations online at http://nttdmc.com/registration/index.php?pid=26&theid=4730. Call 800-592-0848 with questions.

Classic Taxi offers service between the Fort Myers Airport (RSW) and the hotel. The town car total fare for 1-3 people is $68 plus 20% gratuity each way. The total van service fare for up to 10 people is $129 plus 20% gratuity each way. Onsite payment should be made with cash or one credit card per reservation. Advance reservations require a minimum of 24 hours ahead. Call 800-553-8294 or 239-394-1888 to make your reservation and mention the AARC group rate.

Rental Cars

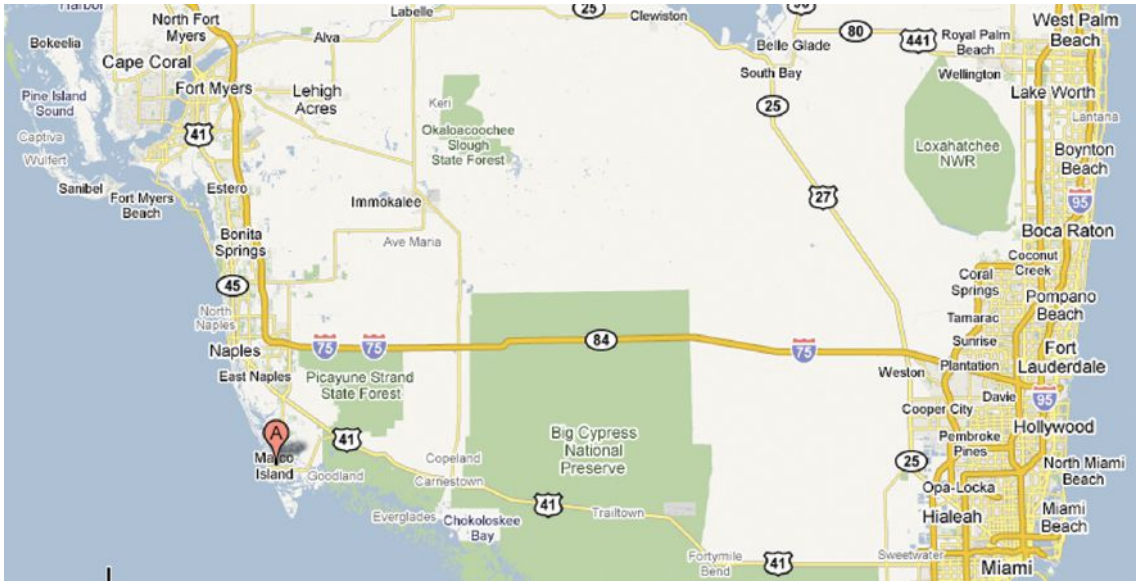
- **Online** at **www.budget.com.** Enter U064639 in the Offer Code (BCD) box.
- Call 800-842-5628. Refer to Discount Offer Code U064639.

- **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 also has a counter at the Marco Island Marriott.
- **Online** at **www.hertz.com**. Enter 049T0010 in the Convention Number (CV) discount box.
- **Call** 800-654-2240 or 405-749-4434. Refer to Convention Discount Code 049T0010.

What To See and Do

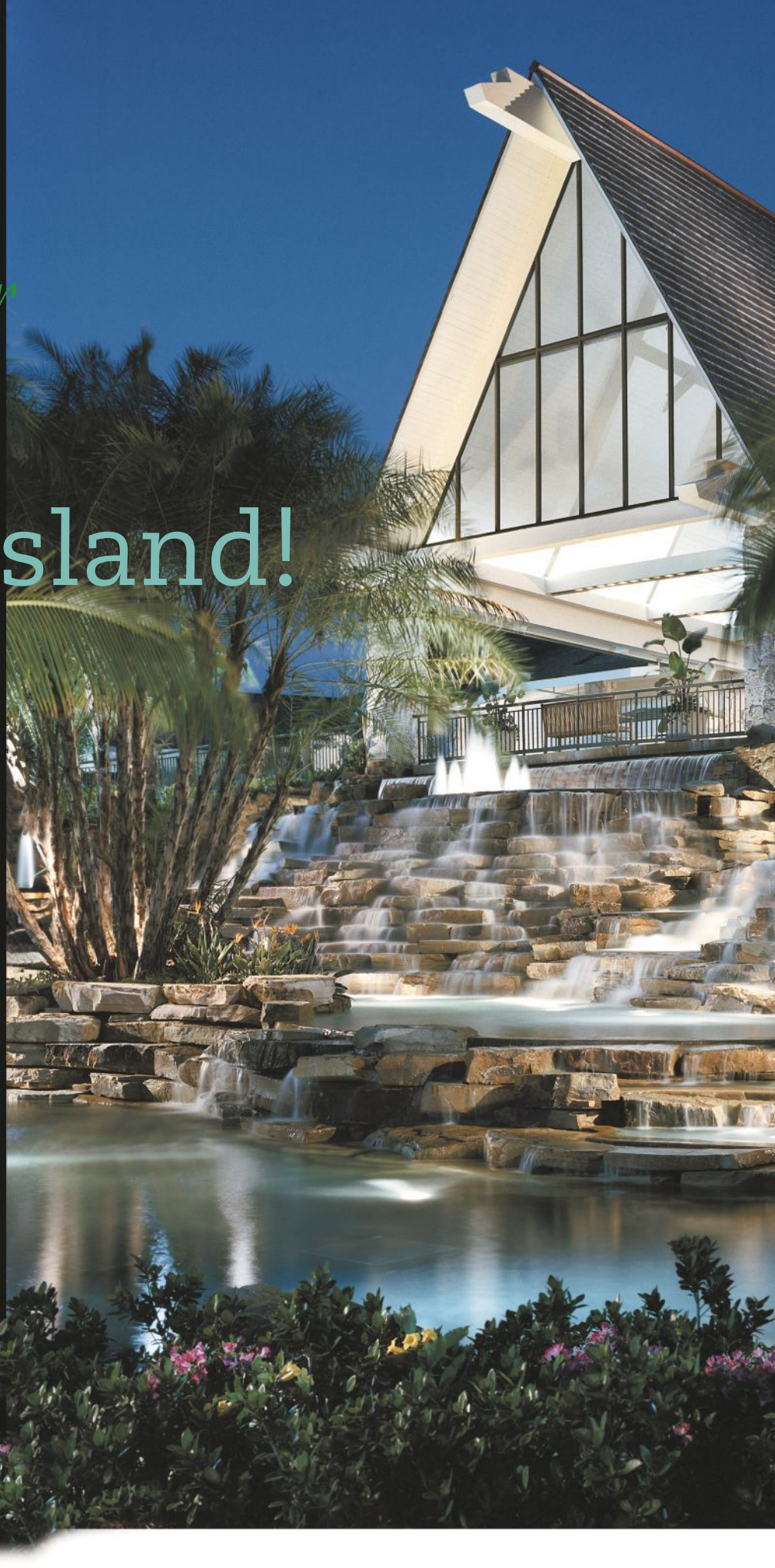
Check out www.paradisecoast.com/articles/marco_background, www.visitflorida.com/en-us/cities/marco-island.html and www.marco-island-florida.com.



Summer forum

Meet Us on Marco Island!

This year's Summer Forum venue is a family-friendly Gulf Coast retreat



White sand beaches and deep blue waters beckon vacationers to this tropical paradise, which this year is rated the No. 1 U.S. island — and the 4th best island in the world — by TripAdvisor. July 15–17 is the perfect time for you and your family to take advantage of it.

Come to learn, then stay to play.

The AARC's mid-year meeting for respiratory care managers and educators is certain to provide the take-home information these leaders in our profession need to effectively run their departments and prepare the next generation of RTs to succeed in our quickly evolving health care system. Opportunities to enjoy some well-deserved down time with family and friends will be in ready supply as well, as we once again convene the Association's Summer Forum in Marco Island, Fl.

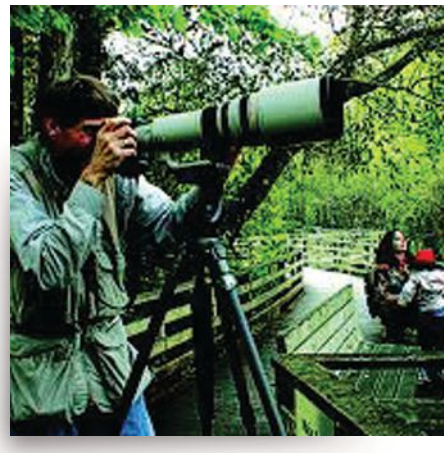
Pristine beaches and more

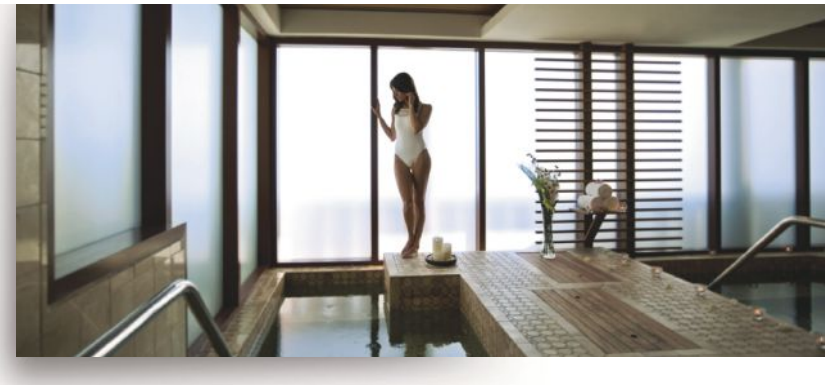
Described as the closest you'll get to a Caribbean Island experience in the United States, Marco Island is the northernmost and largest island in Florida's Ten Thousand Islands chain and the only one that's been developed. Visitors will find easy access to the unspoiled subtropical wilderness of the western waterways of the world-famous Everglades, along with a wealth of pristine beaches where you're not only allowed, but encouraged, to pick up some seashells to take home as souvenirs.

See www.aarc.org/education/meetings/summer_forum_14/ for details.

AARC Summer Meetings – Marco Island

A Working Vacation To Remember





Outdoorsmen will love Collier-Seminole State Park, too. Located just a few miles from Marco Island, it offers primitive camping, canoeing, fishing, boating, picnic grounds, and a mile-long nature walk, along with narrated boat tours of the park that run on a daily basis. Briggs Nature Center features a half-mile boardwalk where visitors can observe wildlife in its natural habitat, and world-class fishing and golf abound throughout the area as well.

Head into the town of Marco Island and you'll find a wealth of shops and restaurants guaranteed to please every budget and palate. You can take in the local history as well with a stroll through Olde Marco, where specialty boutiques and restaurants mix with historic buildings. With over 50,000 square feet of retail space and waterfront dining overlooking the central promenade, The Esplanade Shoppes is another destination you won't want to miss.

Marco Island Resort and Spa by Marriott

One of the biggest attractions for Summer Forum attendees, however, will be the meeting site itself. The award-winning Marco Island Resort and Spa by Marriott is located on three miles of beachfront property. It features a lavish spa with Balinese-influenced treatments and an exclusive spa pool and mineral soaking waters; golfers will be amazed at not one but two resort-private 18-hole championship courses.

The Rookery Course is nestled in shallow wetlands that attract many species of birds and was recently redesigned by acclaimed golf course designer Robert Cupp, Jr. to blend in with the native surroundings. At more than 7,100 yards in length, you'll find generous fairways, oversized greens, the option to play from one of five teeing locations, and immaculate turf conditions.

The Hammock Course was designed by Peter Jacobsen and Jim Hardy and was named one of the Top 50 Ranges for 2013 by *Golf Range Magazine*. Multiple tees offer opportunities for juniors, seniors, and beginners, while still issuing a challenge to low handicappers and professionals. The greens were designed with the approach shot in mind, and bunkers are strategically positioned to challenge the risk taker — all adding to the course's visual appeal.

Other amenities at The Resort fulfill just about every need. When hunger strikes, you'll have eight unique restaurants to choose from; and two large swimming pools give everyone plenty of opportunity to sit and relax after a long day of respiratory care sessions. Also, daily activities are planned for young and old alike, including a day camp for kids, which could come in very handy if you're planning to bring young children with you when you come to Summer Forum. The Tiki Tribe Discovery Day Camp will give them a chance to have some fun in the sun while participating in nature lessons, crafts, games, sports, and swimming. (For another great reason to bring your kids, see "A Little Island History" sidebar story).

The resort has plenty of offsite recreational opportunities for your family to enjoy while you're at the meeting, too. Take a look on the following pages.

A Little Island History

■ While Marco Island's transformation into the vacation destination you see today didn't begin until the early 1960s, this four-mile wide, six-mile long island in Florida's Ten Thousand Islands chain actually saw its first inhabitants in 4000 BC when the Calusa Indians called the place home. Thought to possibly be descendants of the Mayans, the Calusas put the abundance of shells along the island's beaches to good use, piling them up into mounds to protect the tribe during hurricanes.

The Calusas thrived until Spanish explorers arrived centuries later, bringing disease with them that wiped out the tribe by the mid-1700s. The Seminole Indians eventually took their place, followed in 1870 by W.T. Collier and his wife and nine children.

■ In 1896, one of those children, William D. "Captain Bill" Collier, opened a 20-room hotel that still stands on the island today as the Olde Marco Inn. By 1922, most of the island was purchased by Barron G. Collier (no relation to W.T. and his family).

Unfortunately, the Great Depression stalled efforts to develop tourism on the island; and the land languished until 1962 when three brothers, Elliott, Robert, and Frank Mackell, purchased the island from the Collier estate for a mere $7 million and developed a master plan for the idyllic setting. Things took off from there, with the population of the island growing from 550 to its 15,000 permanent residents today. ■

To See the AARC Summer Forum Program...Turn to Page 39

National Geographic-Recommended

If you're still wondering if Marco Island would be a good place to take your kids this summer, consider this: Marco Island is the only destination in Florida to be included in National Geographic's 2013 book, "100 Places That Can Change Your Child's Life: From Your Backyard to the Ends of the Earth."

In the book, author Keith Bellows showcases the 10,000 Islands Dolphin Project as the premier excursion that best highlights the island, its culture, and its people, while also providing an experience that will enrich the life of a child. "It is a distinct honor to be featured as one of the top travel experiences for children, not just in Florida but around the world," Capt. Chris Desmond, founder and director of the 10,000 Islands Dolphin Project, was quoted as saying. "Our goal is to provide an eco-tour that is both fun and educational for kids and adults alike, and this recognition is a testament to the hard work and dedication of the entire Dolphin Project team."

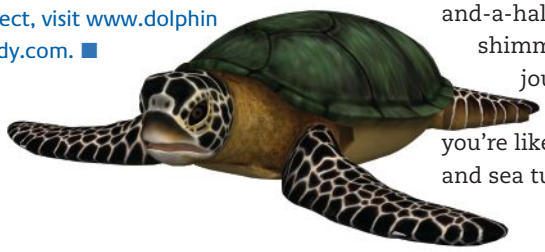
The 10,000 Islands Dolphin Project is the only ongoing study of wild dolphins in southwest Florida and the only one in the United States that engages and is supported by the general public. Guests who buy tickets to cruise with dolphin researchers become citizen scientists through onboard involvement in dolphin survey activities and support the project financially with their ticket purchase. Children participate alongside researchers to complete the "Dolphin Challenge" and assist with photo identification, behavior evaluation, and more.

For more information about the 10,000 Islands Dolphin Project, visit www.dolphin-study.com. ■

■ **Marco Island Water Sports:** These one-and-a-half-hour guided waverunner excursions take you through the backwaters of the Ten Thousand Islands, where you can experience native wildlife in the mangrove forests and learn about the nature and geography of the region from the guide. The stable and safe waverunners ensure even a novice can navigate the territory with ease.

■ **Sailing and Shelling:** Two spacious six-passenger catamarans piloted by U.S. Coast Guard-certified captains stand ready to take resort guests age five and up on an unforgettable two-and-a-half-hour excursion along the shimmering Gulf of Mexico. As you journey to the site of some of the finest shelling in the state, you're likely to see dolphins, manatees, and sea turtles.

■ **Everglades Excursions:** Everglades National Park is arguably the No. 1 nature-related destination in Florida, and you can send your family out to enjoy it — or go along with them before or after the meeting — right from The Resort lobby. Half-day and full-day tours leave from the hotel on a daily basis and include transportation to and from the hotel, tour guides, airboat tour, tour of the natural mangroves and hammocks, a cruise through the Ten Thousand Islands, and more (luncheon included).



First class, all the way

Marco Island is a first-class vacation destination where you and your family can experience the great outdoors while enjoying cutting-edge restaurants and unique shopping experiences. Whether you're planning an extended stay before or after the Summer Forum, or are just looking forward to a few laid-back days at the Marco Island Resort and Spa, you won't be disappointed by the venue awaiting you this July 15–17 in beautiful, sunny Florida. ■

At the AARC Summer Meetings, Here's What You Get:

- *Pre-Course – How Viable Is Your Respiratory Care Program*
- *Summer Forum*

An Adventure of a Lifetime at the Daytona 500!

by Sherry Compton, MBA, RRT, AE-C

When I was 19 years old I decided to become a respiratory therapist. Who knew that 22 years later it would lead me to the adventure of a lifetime? Last November, during AARC Congress 2013 in Anaheim, my name was randomly drawn in a DRIVE4COPD contest for DRIVE volunteers all across the country. I was going to experience the biggest weekend in NASCAR® — a trip to the Daytona 500.

During my whirlwind weekend, I was given the VIP treatment. Friday began with an event at the Velocitorium. There I was surrounded by photos and memorabilia marking some of the greatest race accomplishments in Daytona Speedway history. Saturday morning started by getting the necessary credentials for full access to the pit areas, the exclusive 500 Club, and Victory Lane. I observed the pre-race drivers' meeting, where I saw drivers like Dale Earnhardt,

About the Author

Sherry Compton, MBA, RRT, AE-C, is a professor in the RT program at Reynolds Community College in Richmond, VA.

Sherry Compton (right) and her traveling companion, Cindy Nunnally, RN, enjoyed meeting country singer Jake Owen at the race.

Compton (left) and Nunnally (right) are joined by Stacey Matula, who won another DRIVE4COPD contest that was conducted among people who filled out the online COPD screener.

Jr., and Danica Patrick. Regan Smith won the DRIVE4COPD race with a margin of victory of just 0.013 seconds!

Sunday morning began with an invitation-only breakfast where I met Juan Pablo Galavis (aka, "The Bachelor") and country singer Jake Owen. We then endured a five-hour, 22-minute rain delay and a tornado warning to watch Dale Earnhardt, Jr., capture his second Daytona 500 victory.

DRIVE4COPD

Take action today. Breathe better tomorrow.

Respiratory 101

Where I began my career in respiratory care as a student — Reynolds Community College in Richmond, VA — I now have the opportunity to teach future respiratory therapists. Even though I enjoy teaching, I still miss the patients. My weekend in Daytona reminded me of the patients living with lung disease.

I now have a new face and name that has personalized COPD for me — Fred Walsh, the twin brother of John Walsh, president of the COPD Foundation and Alpha-1 Foundation. John and Fred were diagnosed with alpha-1-related COPD in 1989. While switching out his oxygen tank during the breakfast, Fred became visibly anxious and short of breath. A missing gas lock seal briefly complicated the switch. Within moments I was able to use my "Respiratory 101" basic skill that students learn during the first few weeks of respiratory therapy school. Fred told me that even minutes with-

Compton and Nunnally wore orange scarves in honor of the DRIVE4COPD campaign.

Sherry Compton enjoyed watching the race with friends and officials.

Victory Lane was buzzing with activity after the DRIVE4COPD race.

out oxygen will cause his saturation levels to drop into the 70s.

Get involved!

As a member of the Virginia Society for Respiratory Care, my involvement with DRIVE4COPD began in 2010 and continues today to help identify those who are at risk of developing the condition. Whether you have been in the field for years or are just beginning your career as a respiratory therapist, I encourage everyone to get involved with the DRIVE4COPD campaign. I am forever grateful to the COPD Foundation and all of the people involved who made my trip to the Daytona 500 an adventure of a lifetime! ■

Everyone enjoyed seeing the DRIVE name up in lights.

— 2014 —

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.

AARC

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SUNOVION Healthy bodies, healthy lives

The Consultants Are Coming!

The Consultants Are Coming!

Two representatives from Huron Healthcare, who will be at the Summer Forum this July, explain what to expect from a visit by a consultant

Respiratory therapy managers faced with outside consultants often feel as if they're being invaded. Ginger Martin, MSN, RN, and Hannah Shipton, MEd, MHA, tell AARC Program Committee member Garry Kauffman, MPA, RRT, FAARC, why the "assault" is necessary and how managers can not only survive it but, more importantly, embrace it.

Respiratory care managers have been dealing with health care consultants in one form or another for many years now, and you would think practice would make perfect. However, as most if not all managers will tell you, nothing could be farther from the truth. Every time a hospital brings in outsiders to improve operations, worry sets in. How will the department fare in the analysis? What kinds of cutbacks will we be expected to make? And most importantly, how will it all affect the care we are able to deliver to our patients?

At this year's Summer Forum in Marco Island, FL, July 15–17, respiratory therapy managers will have the opportunity to learn the "ins and outs" of the consultant process from health care consultants themselves. In the following interview, two consultants from Huron Healthcare who will be on hand for the sessions give Program Committee member Garry Kauffman, MPA, RRT, FAARC, a sneak peek at the kind of information they'll be sharing with attendees.

Garry Kauffman: What are the industry drivers that compel hospital and health system leaders to engage with Huron Healthcare for assistance?

Ginger Martin: The primary reason that hospital executives engage with Huron Healthcare is the enormous cost pressure and the financial changes that are happening today in health care. Nearly every health care system will have to take out 20–40% of cost going forward.

Hannah Shipton: The industry has shifted from volume payment to value-based purchasing; and if hospitals do not operate more efficiently, they will continue to lose margin and risk going out of business.

Martin: Hospital executives engage with Huron Healthcare because they do not typically have the time or internal expertise to implement the required changes to achieve the desired cost reductions while maintaining or improving quality of care.

Kauffman: During a consulting engagement, how do hospital executives establish areas and targets for improvement? Is this typically done in collaboration with the consultant?

Shipton: Yes. Huron Healthcare leaders sit down with a small executive leadership team from the hospital and provide recommendations for targets based on an initial assessment. These recommendations are typically driven by the client's financial gap for a period of time, which helps drive the discussion for what should be implemented and the timing.

Kauffman: How are performance targets established — benchmarking, internal comparison?

Martin: Performance targets are established based on multiple inputs. The initial assessment findings by Huron Healthcare validate whether there's an opportunity to improve performance and provide a starting point for an improvement target range.

Shipton: Huron Healthcare utilizes benchmarks directionally to help clarify the general magnitude of opportunity; but targets are established based on a bottom-up view of the organization, including data, interviews, and observations. These recommendations are shared with the client; and subsequently, the Huron Healthcare consultants collaborate with the hospital executive team to finalize targets based on their feedback to the proposed target range.

Martin: It's critically important that the RT director provide recommendations both for how productivity is or can be measured and for achievable targets for productivity. The RT director should be prepared to speak to the roadblocks and challenges preventing respiratory from performing more efficiently and effectively.

Kauffman: Most hospital managers want to feel valued by their supervisor and executive team. What can the manager do to assist you in making your engagement successful while at the same time allowing the manager to demonstrate the value of his/her department or service?

Shipton: The engagement between Huron Healthcare and the client hospital can be a great learning opportunity for respiratory care directors. Huron consultants approach the engagement as an opportunity to collaborate with the hospital leaders. Respiratory care leaders can optimize this opportunity for greater visibility with the executive leadership team as well as benefit from the chance to work with and learn from the consultant.

Martin: Huron Healthcare consultants bring experience from across various hospitals and health systems, many of which are recognized as best-practice leaders. This knowledge and expertise affords respiratory care leaders an opportunity to learn from these leaders and leverage that knowledge to improve their own departments.

Kauffman: How does Huron Healthcare address labor and non-labor opportunities for improvement?

Shipton: Huron Healthcare evaluates improvement opportunity from multiple perspectives, including clinical operations, labor, and non-labor. For example, improvements related to clinical operations might be related to implementation of evidenced-based ventilator weaning protocols to provide more standardized and more efficient care.

Martin: Non-labor approaches assess the opportunity to standardize the process for supply purchasing, renegotiate contract pricing, and standardize products and vendors. The labor perspective will evaluate staffing to volume, use of productivity tools, value compared to non-value added work, and service consolidation.

Kauffman: For labor, what metrics do you use? For example, labor cost/relative value unit (RVU); labor hours/statistic?

Shipton: Huron Healthcare uses the unit of service that is delivered by the department. For example, laboratory would be evaluated upon billed tests. The radiology unit of service is the number of procedures. For respiratory therapy, it will be important for the RT director to collaborate with the Huron Healthcare consultant to establish the appropriate unit of measure.

Kauffman: Do you have span-of-control models that you employ? If so, should the RT manager be prepared to "defend" his current span of control, and/or should the RT manager be prepared to offer to extend his role to oversee other clinical services?

Martin: Huron Healthcare utilizes a span-of-control model that delineates how many full-time equivalents (FTEs) a manager should be responsible for. The respiratory care director needs to be able to speak to his or her span of control and articulate how many employees he or she is responsible for. Likewise, the director should consider whether or not he or she could assume additional responsibilities or clinical services within his or her span of control.

Kauffman: What information should the RT manager be prepared to demonstrate or share? Do you have a template or format for information that would be most useful to you?

Shipton: Huron does have a template/format that delineates what information we like the client to provide. The respiratory care manager should be prepared to share information on position control with budgeted FTEs, productivity tools, payroll detail, challenges to running an efficient clinical department, departmental policies, and job descriptions.

Kauffman: What are the three most important things RT leaders can do to prepare for an external consulting engagement so that they emerge on the other side as more valuable leaders in charge of value-added services?

Martin: For that, you'll want to attend the Management Section sessions at the AARC Summer Forum in Marco Island this July. We'll provide you with valuable information, along with action plans to increase your visibility and value as a health care leader. ■

Industry Update

Featuring information on products and equipment from manufacturers

Press releases and photos on new products are welcome. Send to Marsha Cathcart, *AARC Times* editor, at cathcart @aarc.org.

Respiratory Vest

Weighing approximately 10 pounds, AffloVest from Biophysics Corporation is the lightest and quietest device of its kind. AffloVest provides adjustable levels of treatment intensity and multiple treatment modes. Doctors and patients can tailor treatments to their needs with settings that provide chest wall oscillation treatment on both the front and back of the vest.
www.AffloVest.com

Disposable CPAP System

Mercury Medical's Flow-Safe II is the only disposable CPAP system that provides more than 50% less oxygen consumption while delivering high FiO2 and using standard flowmeters. Flow-Safe II also has a color-coded manometer for verifying and documenting delivered airway pressure to patients and has easy set-up and a comfortable mask with head harness. Clinicians can also add an in-line nebulizer, capnography, and filter.
www.mercurymed.com

Rehab Telemetry System

ScottCare Corporation's VersaCare version 2.1 features direct integration with AACVPR's Outpatient Cardiac Rehabilitation Registry, enabling users to more easily and precisely benchmark and manage patient outcomes against national data, helping to improve their overall program results. The industry's only Windows® 7-based rehab telemetry system, VersaCare 2.1 includes multiple usability enhancements and a more user-friendly layout for VersaCare's mobile companion, VersaCare GO.
www.scottcare.com

Stationary Oxygen Concentrator

The SimplyFlo from Philips Respironics is a small, lightweight, stationary oxygen concentrator for patients who may refuse therapy due to lifestyle disruptions associated with the size and weight of traditional stationary concentrators. The 8.5 pound device integrates key insights and feedback from home care providers and patients and is expected to be especially useful for patients new to therapy who require only nocturnal treatment.
www.philips.com

New Capnograph

The EMMA™ Capnograph with waveform display from Masimo offers clinicians greater assessment of $EtCO_2$ and respiration rate, as well as assists in recognition of return to spontaneous circulation. Rugged and water-resistant, EMMA Capnograph displays and monitors respiratory rate and $EtCO_2$ continuously with full accuracy within 15 seconds when connected to a patient's breathing circuit. Powered by two standard AAA batteries, EMMA's portability allows for easy use during cardiopulmonary resuscitation and intubation in multiple points of care.
www.masimo.com

Source Control for Waste Anesthetic Gas

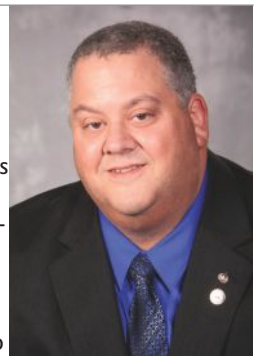
The ISO-Gard® Mask with ClearAir™ Technology from Teleflex is the only solution available for "source control" of Waste Anesthetic Gas, which may pose a risk to clinicians working within the post-op patient's breathing zone. The specialized ClearAir Technology of the ISO-Gard Mask simultaneously delivers oxygen to patients and scavenges their exhalation to help limit exposure faced by clinicians. The device was developed in partnership with clinicians who identified the issue and wanted to address the unmet need.
www.teleflex.com

RC Currents

IN THE NEWS

The AARC Needs You To Volunteer for Your Profession

by Frank Salvatore, MBA, RRT, FAARC
AARC President-Elect



As president-elect of the AARC, I realize it's important to receive vital assistance from my colleagues — Association members — in order to achieve everything the Association, its membership, and the patients we care for need. I am now asking you to volunteer your time and expertise to our professional organization.

Having RT volunteers not only facilitates our growth as a profession and Association but also presents all volunteers with the opportunity to develop and advance their leadership skills, increase their professional contacts, and give back to the profession and to the patients we serve.

There are many people like you who need and use the professional tools the AARC provides. Why not get in on the ground floor and collaborate with your colleagues to develop new tools to help RTs continually improve and grow as respiratory care professionals?

We need you to volunteer your expertise and skills to work on various committees and do the important work of the Association. There is enormous momentum and potential for our profession right now. No one individual can accomplish everything we need to do, but I know that dedicated RTs supporting the AARC's efforts can make vast strides for assuring quality patient care in the continuum of care and securing the respiratory therapist's rightful place in the changing health care system.

AARC members always help keep a constant flow of creativity and energy for what we can do together. We need everyone's input. With the ever-increasing responsibilities RTs have, we need you to help identify your educational and informational needs so we can meet them.

This is your Association, and now is the time to volunteer. We look for a balance of experienced and new members on all our committees. It is this special mixture that enables the AARC to continue being the vital professional organization it always has been by mentoring in new talent. It also ensures the future of the RT in the health care environment as we witness some of the most sweeping changes in history.

Please consider this a friendly challenge — and think about how you can help your Association, the profession, and the patients we serve. Take time now to network with your fellow AARC members — perhaps someone active in your state society — whom you believe could contribute special talents or services to the AARC. Encourage them to volunteer so that we can capitalize on the vast amount of expertise available in our Association membership.

You can write to me at the AARC Executive Office: 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063; kuykendall@aarc.org. Tell me how you would like to serve and provide a copy of your résumé so I can consider how to best use your talents.

I am confident we can keep reaching milestones in the respiratory care profession if we all work together. Thank you for supporting your professional organization, the AARC! ■

NIOSH Publishes Initial Survey Results

Back in 2011, the National Institute for Occupational Safety and Health (NIOSH) selected a random sample of AARC members to participate in a national survey on health and safety practices of health care workers.

AARC members were among the first to learn about results on exposure-control practices associated with the administration of aerosolized medications during an AARC webcast delivered by NIOSH representative Jim Boiano, MS, CIH, last August; and now the first paper has been published in this month's *American Journal of Industrial Medicine*.

The initial paper describes methods used to develop and implement the survey, along with results on training received by health care workers in the safe use of the chemicals and whether the employer had procedures in place for minimizing exposure. Key findings are available in this press release on the NIOSH website at www.cdc.gov/niosh/updates/upd-02-19-14.html.

Other papers expected to be published this year include those on administration of antineoplastic drugs, compounding of antineoplastic drugs, high-level disinfectants, and aerosolized medications. Papers on surgical smoke, anesthetic gases, and chemical sterilants are due out in 2015. ■

ARCF Now Accepting Applications for the 2014 International Fellowship Program

If you provide respiratory care outside of the United States and would like to share and expand your knowledge, please consider applying for our International Fellowship Program.

The International Fellowship Program is a sponsored activity of the American Respiratory Care Foundation. Since 1990, health professionals from more than 50 countries have shared experiences, knowledge, and lasting friendships through this exceptional program.

The three-week program takes each participant to two host cities in the United States and concludes with attendance and acknowledgement at AARC Congress 2014 to be held Dec. 9–12 in Las Vegas, NV.

Learn more and apply by June 1 at www.irccouncil.org/fellowship/. For more information, contact April Lynch at lynch@aarc.org. ■

"NEW MEMBERS" COLUMN NOW ONLINE

The "New Members" column can now be accessed at www.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. ■

Facebook Page Launched for AARC Congress

If you're a fan of the AARC Congress, you can show how you like it on a new page just launched for AARC Congress news and stories.

If you've ever attended the AARC Congress in the past, want to in the future, or just want to hear more about what to expect this year, the AARC Congress Facebook page will keep you in the loop. We'll be sharing news there first about speakers, the program, and activities. Check it out at www.facebook.com/aarc.congress and "like" the page. ■

AARC Leaders Attend Meetings

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

George Gaebler, AARC President

- Speaking at the Canadian Society of Respiratory Therapists' educational conference on The RT Profession in the United States on May 22.

Thomas J. Kallstrom, AARC Executive Director/CEO

- Speaking at the Canadian Society of Respiratory Therapists' educational conference on The RT Profession in the United States on May 22.
- Keynote speaker at the Illinois Society for Respiratory Care on May 28 in Oakbrook Terrace, IL.

Read the Rest of the Story at www.AARC.org

- **AARC supports Kentucky respiratory therapists** — www.aarc.org/headlines/14/03/kentucky/
- **Student member pulls drivers to safety** — www.aarc.org/headlines/14/03/carhart/
- **Leadership Institute scholarships announced** — www.aarc.org/headlines/14/02/leadership.cfm

Call for Open Forum Abstracts for AARC Congress 2014

The AARC invites you to submit abstracts for the Open Forum at AARC Congress 2014. Considered by many to be the premier event at the AARC Congress, the Open Forum is your opportunity to gain recognition for your research in cardiorespiratory care by submitting an abstract for presentation at the Congress and having it published in Respiratory Care. New in 2014: three different ways you can present your poster at AARC. See http://rc.rcjournal.com/site/open_forum/2014_call_for_abstracts.xhtml for more details. The deadline to submit abstracts for the Open Forum is June 1. ■

INTERNATIONAL FELLOWSHIP PROGRAM LOOKING FOR CITY HOSTS

Every year the ARCF sponsors an International Fellowship Program that brings physicians, therapists, and nurses from other countries to our shores to learn more about American-style respiratory care in two cities. It can't happen without city hosts in each of the localities, and now is the time to step up and volunteer.

Learn more about the program and apply by the June 1 deadline at www.irccouncil.org/fellowship/. The fellowships take place in the fall just prior to AARC Congress 2014, scheduled this year for Dec. 9–12 in Las Vegas, NV.

For more information, contact April Lynch at lynch@aarc.org. ■

Frausini-Moran says working with patients like these has given her great joy in her RT career.

A picnic in Vicki Frausini-Moran's backyard proved to be a great way for PR patients and graduates to reconnect.

AARC Member Hosts Reunion of the "Great Gaspers"

For years, patients and graduates from the Christiane M. Gottman Pulmonary Rehabilitation Program at Lawrence + Memorial Hospital in New London, CT, took part in the Spring Stride 5K held in their community. "Although we would only walk a half mile down and a half mile back to the finish line, it was our yearly inspirational walk and reunion with past and current participants of the program," says pulmonary rehabilitation program staff member, Vicki Frausini-Moran, BS, RRT-NPS, AE-C.

The group, which affectionately calls itself "The Great Gaspers," always passed an ice cream shop that was never open on race day, and they invariably lamented the fact that they couldn't stop for a cone. When the hospital decided not to sponsor the event in 2013, Frausini-Moran decided she would not only host a reunion walk and get-together of her own at her home, she'd be sure ice cream was on the menu.

"I ordered t-shirts with the logo, 'The Great Gaspers Society,' and we all enjoyed lunch with the help of my husband, Ron, 'the chef,' and my son, Justin, who played the role of 'the ice cream man' and filled everyone's order."

Frausini-Moran says the annual reunion is a chance for pulmonary rehab participants past and present to renew friendships. They also use the occasion to make donations to the Christiane Gottman Pulmonary Rehabilitation Fund, with the proceeds going to support the program and the patients it serves.

"They say it is great to see each other every year and because of this exercise and support program have learned to live and enjoy their lives instead of taking a back seat to their disability," says the AARC member. "They can be 'part of the parade' rather than watching it go by!"

Vicki Frausini-Moran's photo of herself and her two patients was a finalist in our 2013 Photo Contest. To enter the 2014 Photo Contest, go to www.aarc.org/members_area/aarc_times/photo_contest/index.asp. ■

Enter the 2014 AARC Photo Contest

AARC Times is looking for creative AARC members to enter our annual AARC Photo Contest. Finalists will receive a free one-year membership renewal and have their photo entered into our Photo-of-the-Year Contest with the chance of it being chosen and featured on the cover of *AARC Times*. For information on how to enter, select the *AARC Times* icon on www.AARC.org and click on the "Photo-of-the-Year Contest" link. Deadline to submit photos is **Nov. 14, 2014.** ■

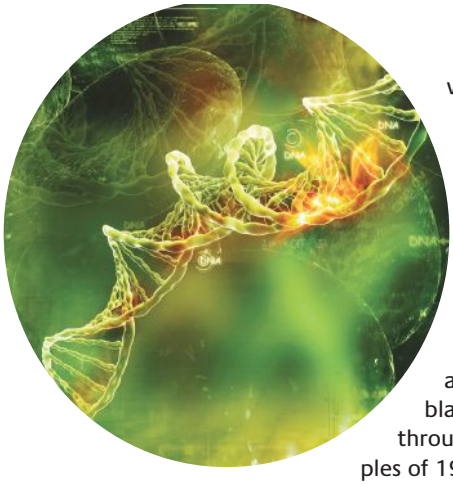
Educators: Help Recognize Outstanding Students

The ARCF is accepting applications for its undergraduate and postgraduate Education Recognition Awards now through June 15 and is asking RC educators to help spread the word to their students. So check out the list of available awards and then encourage your best and brightest students to apply.

The ARCF offers awards to students who are currently enrolled in accredited respiratory care educational programs and to RTs who are pursuing an advanced degree. Awards include registration and airfare to attend AARC Congress 2014, to be held Dec. 9–12 in Las Vegas, NV.

To see all of the awards bestowed by the ARCF every year, go to the Foundation's Grants, Awards and Fellowships page at www.arcfoundation.org/awards/. For more information, contact April Lynch at lynch@aarc.org. ■

Rare Genetic Variations May Account for LABA Reactions



Long-acting beta agonists (LABAs) work well for most patients with asthma, but studies showing a small subgroup is at risk for severe, life-threatening side effects led the U.S. Food & Drug Administration to require a boxed safety warning on these drugs.

In a study funded by the National Institutes of Health, researchers at Wake Forest Baptist identified and evaluated six rare gene variants within the beta2-adrenergic receptor gene that may be to blame. These rare variants were found through the sequencing of DNA from blood samples of 191 non-Hispanic white, 197 African-American, and 73 Puerto Rican asthma patients. On average, African-American patients had five rare variants versus one each for non-Hispanic white and Puerto Rican patients.

From there, the investigators evaluated 1,209 asthma patients to determine the impact of these variants on the risk of hospital admission for a severe asthma episode in the past year. These rare variants significantly increased the risk in asthma patients treated with a LABA. No increased risk was seen in patients not treated with the drugs. Further analysis conducted on two variants found they significantly increased urgent outpatient visits and treatment with oral or injectable steroids in patients treated with LABAs as well.

Lastly, the team looked at data on asthma symptoms and found non-Hispanic whites who had a rare variant were more than twice as likely to have uncontrolled symptoms during LABA therapy as those without the variant. The finding was replicated in a separate group of 516 non-Hispanic whites who were treated with LABAs at 12- and 24-month follow-up visits.

The research team concluded that further research is needed before recommending widespread screening for these rare variants. However, genetic testing may be helpful for severe asthmatics who are being treated with multiple therapies, including high-dose inhaled steroids and LABAs, but are still uncontrolled.

The study appeared in the Jan. 27 edition of *Lancet Respiratory Medicine*. ■

National Health Observances

National Asthma and Allergy Awareness Month; May; Asthma and Allergy Foundation of America; (800) 727-8462; info@aafa.org

Air Quality Awareness Week; April 28–May 2; National Oceanic and Atmospheric Administration; (301) 713-1867; www.airquality.noaa.gov

World No Tobacco Day; May 31; WHO Tobacco Free Initiative; www.who.int/tobacco/wntd/en

Asthma Readmissions Tied to Financial, Social Hardships

A new study out of Cincinnati Children's Hospital Medical Center finds financial and social hardships play a big role in the increased number of hospital readmissions seen among black children with asthma. The researchers looked at 774 patients ages 1–16 who were admitted to their hospital between August 2010 and October 2011. Fifty-seven percent were black. Twenty-three percent of the black children were readmitted within a year, compared to 11% of the other children, most of whom were white. Overall, nearly 19% of children had to go back into the hospital for their asthma within one year.

Caregivers of black children were significantly more likely than those of white children to report financial and social hardships such as lack of employment and not owning a car. Together with traditional measures of low socioeconomic status, these factors explained about half of the disparity in readmissions. The investigators believe residual disparities may be attributed to pollution, tobacco exposure, and housing quality, among other issues. The study was published online by *Pediatrics* earlier this year. ■

NANOPARTICLES MAY POSE NEW THREAT TO THE LUNG

Nanoparticles are now in everything from medications to electronics to cosmetics. According to researchers from the Missouri University of Science and Technology, that may spell trouble for the lungs.

In a study on the effects of transition metal oxide nanoparticles on human lung cells, they found about 80% of the cells died in the presence of nanoparticles of copper oxide and zinc oxide.

"These nanoparticles penetrated the cells and destroyed their membranes," lead author Yue-Wern Huang was quoted as saying. "The toxic effects are related to the nanoparticles' surface electrical charge and available docking sites." Metal ions released by some of the nanoparticles also played a significant role in cell death.

Huang and his colleagues are now working on new research that may help reduce nanoparticles' toxicity as well as shed light on how nanoparticles interact with cells. The current study was published in a recent issue of *Chemico-Biological Interactions*. ■

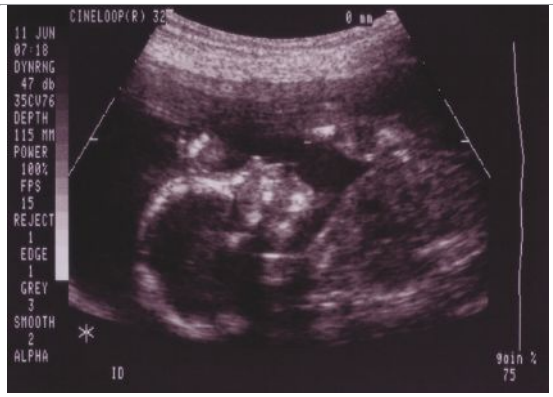
STRANGE BUT TRUE…

Laser diagnosis? University of Adelaide investigators have developed a significantly more powerful type of laser that will enable new advances in breath analysis for disease diagnosis. The laser can pick up minute amounts of gasses associated with various conditions.

Who, me? A new survey conducted in California suggests many smokers are kidding themselves about their habit. The poll (see February issue of *Tobacco Control*) found that nearly 396,000 people, or 12.3% of the state's smokers, reported smoking on a measurable basis but still didn't consider themselves to be "smokers." That included 22% who said they smoked every day.

Human engineering: Using lungs from two children who had died from trauma, researchers from the University of Texas Medical Branch have produced the first set of manmade lungs. They predict it will be another 12 years or so, though, before their lab-made creations will be ready for use in humans. ■

Asthma Prevention May Begin in Utero



Two new studies link factors in the prenatal environment to later development of asthma.

Researchers from Columbia University Medical Center reported the first direct evidence that prenatal vitamin A deficiency can lead to postnatal airway hyperresponsiveness in the February edition of the *Journal of Clinical Investigation*. Working in a mouse model, they controlled when and in what amount vitamin A would reach the developing fetus through the maternal diet. Fetuses that were deprived of vitamin A were found to have excess smooth muscle in the airways. Other experiments identified the specific roles played by vitamin A in the developing lung and also showed these structural and functional changes occurred in the absence of inflammation.

Investigators publishing in the February issue of the *Annals of Allergy, Asthma and Immunology* noted a higher risk of asthma in children born to mothers who had more common colds and viral infections while pregnant. The study was conducted among 513 pregnant women in Germany and their 526 offspring. The researchers concluded that a mother's infections and bacterial exposure during pregnancy affect the in utero environment, thus increasing a baby's risk of developing allergy and asthma in childhood. ■

TRANSITIONS


1

Peter J. Papadakos, MD, FCCM, FAARC, chair of the AARC Board of Medical Advisors, has been appointed to serve as a board member in the New York Office of the Professions, the state entity charged with governing licensed health professionals in New York. Dr. Papadakos, a professor of anesthesiology, surgery, neurosurgery, and neurology at the University of Rochester, will specifically serve as the physician representative on the State Board of Respiratory Therapy, one of 29 State Boards for the Professions included in the Office of the Professions. His term runs through December of 2018. (Photo 1)


2

Mary Parry, MBA, RRT, has been named vice president for operations at Oneida Healthcare in Oneida, NY. Parry will oversee a range of hospital departments in her new position, including housekeeping/laundry, imaging services, Joint Commission readiness, laboratory services, plant operations, occupational/speech therapy, physical therapy, property leasing, security/parking, cardiopulmonary, respiratory therapy, and the sleep lab. (Photo 2)

You can submit news about AARC members by going to www.AARC.org/transitions. ■

Unraveling Flu Severity

Scientists from St. Jude Children's Research Hospital have identified a signature immune response that may help predict which influenza patients will develop the most severe symptoms. The discovery came after investigators tracked flu infections for 28 days in 84 individuals during the 2009–2010 and 2010–2011 flu seasons.

Results showed patients with elevated levels of certain cytokines early in the infection were more likely to develop severe flu symptoms and to be hospitalized than patients with lower levels of the same regulators.

Specifically, elevated nasal levels of the cytokines MCP-3 and interferon alpha 2 (IFNa2), which promote inflammation, and elevated blood levels of interleukin 10 (IL-10), which suppresses inflammation, at diagnosis ended up predicting more severe symptoms later. Increased blood levels of IL-10 and MCP-3, as well as interleukin-6, at diagnosis predicted hospitalization later.

Study participants ranged in age from three weeks to 71 years old and included 41 infants and toddlers aged 23 months or younger. Cytokine levels early in the infection were predictive of flu-related complications regardless of patient age, flu strain, the ability of the virus to replicate, and other factors.

The study was published in a recent issue of the *American Journal of Respiratory and Critical Care Medicine*. ■

Team-based Care Growing

A recent article in the *Wall Street Journal* explains the concept of "team-based care," noting many primary care practices are adopting this model, especially in areas of the country where primary care physicians are in short supply.

What is "team-based care"? According to the article, it's a concept wherein a group of medical professionals working under a physician's direction are allowed to practice to the full extent allowed by their license. Patients are seen by the physician initially, but then much of their ongoing care is turned over to respective members of the team who can spend more time on patient education and other factors important to keeping people as healthy as possible.

The AARC's Medicare Respiratory Therapist Access Act (H.R. 2619) would make it significantly easier for RTs to join team-based practices by amending Medicare Part B to add coverage of pulmonary self-management education and training services when furnished by qualified RTs in the physician practice setting to Medicare patients who have been diagnosed with COPD, asthma, pulmonary hypertension, pulmonary fibrosis, and cystic fibrosis. Read more about H.R. 2619 on www.AARC.org. ■

Package of Interventions Works for Some

Getting through to teens about asthma control has proven to be an uphill battle. Researchers from Cincinnati Children's Hospital Medical Center are making significant inroads.

In the first study to show an improvement in asthma outcomes in this age group, they found a package of chronic care interventions increased optimal asthma control among 322 primary care patients from just 10% to 30%. What's more, the improvements persisted over time.

The package included the use of standardized and evidence-based care, self-management support (self-monitoring via diaries and journals), care coordination and active outreach among health care providers linking teens to community resources, and following up with patients whose chronic asthma was not well controlled. The study was published ahead of print online in *Pediatrics* earlier this year. ■

Industry Watch

Actavis to buy Forest Laboratories

Generic drug maker Actavis Plc plans to purchase Forest Laboratories Inc. Spokesmen note the deal is expected to increase Actavis' focus on higher margin, branded treatments for hypertension, Alzheimer's disease, and other conditions. According to Brent Saunders, CEO and president of Forest, the combination of Forest with Actavis provides more options to drive future growth and sustainable shareholder value due to expanded geographic and therapeutic presence and the ability to drive new product flow through research and development.

StemGenex launches new stem cell therapy

StemGenex® is studying a new stem cell therapy for COPD to deliver adipose-derived mesenchymal cells directly to the inflamed lungs to reduce shortness of breath, coughing, heart problems, and other symptoms and complications of the disease. The targeted therapy is accomplished by nebulizing the stem cells down to a mist so that patients can painlessly breathe the stem cells directly into their lungs. The goal of the new technique is to encourage more stem cells to travel directly to the inflamed tissue of the lungs.

Cedars-Sinai receives funding to study IPF

A Cedars-Sinai research team led by Paul W. Noble, MD, has been awarded $628,816 by the California Institute for Regenerative Medicine to develop a stem cell treatment for idiopathic pulmonary fibrosis. The two-year study will build on preliminary research completed at Cedars-Sinai by Dr. Noble and Dianhua Jiang, MD, PhD. That study uncovered important clues to the precise way normal lung stem cell repair occurs and how a cure might be developed for IPF.

DeVilbiss strikes deal with Sleepnet

DeVilbiss Healthcare is now the exclusive distributor of Sleepnet Corporation's line of sleep apnea masks in Canada. "We are very excited about this exclusive partnership," Wally Haddick, DeVilbiss VP of sales, Canada & Latin America, was quoted as saying. "It is important for patients to have options when considering the best interface for their needs, particularly in the pediatric area; and partnering with an innovative company like Sleepnet Corporation can mean endless opportunity for our providers and their patients."

Brent Shafer named CEO of Philips North America

Royal Philips has appointed Brent Shafer as CEO of Philips North America, the company's single largest market. In his new role, Shafer will be responsible for strengthening Philips' culture of entrepreneurship and growing revenue and market share in the United States and Canada. He will succeed Greg Sebasky, who retired from Philips on February 3, and he will report directly to Royal Philips' CEO, Frans van Houten. Shafer previously served as CEO of Philips' Home Healthcare Solutions business group.

Brent Shafer

Hy-Vee among first to offer onsite flu, strep testing

Hy-Vee Inc., in collaboration with the University of Nebraska Medical Center (UNMC) College of Pharmacy and Ferris State University in Big Rapids, MI, became one of the first U.S. pharmacies to offer customers rapid-diagnostic influenza and Group A Streptococcus tests in February. Hy-Vee stores are among 60 sites throughout three states where pharmacists will be trained to administer these tests and share the results with customers shortly after the test is performed. Pharmacists also will be able to fill prescriptions to treat identified illnesses, if needed, under a strict protocol set by prescribing physicians. The tests are part of a research study underway at UNMC and Ferris State.

Scripps receives grant to study lung cancer treatments

Scientists from the Florida campus of The

Scripps Research Institute (TSRI) have been awarded approximately $1.8 million from the National Cancer Institute to identify the signaling pathways that underlie lung cancer and to use this information to develop new therapeutic approaches. Joseph Kissil, a TSRI associate professor, will serve as principal investigator of the five-year grant, which extends a study that began in 2006. His previous research into non-small cell lung cancer found that a well-known cancer-causing gene implicated in a number of malignancies plays a far more critical role than previously thought.

iBio tackles idiopathic pulmonary fibrosis

iBio Inc. has added a proprietary biotherapeutic product for the treatment of IPF and systemic sclerosis to its product pipeline. The product was added after a 2012 study showed that certain endostatin-derived peptides are useful for both inhibition and reversal of fibrosis in preclinical mouse models of fibrosis as well as in human skin. iBio notes it has initially expressed the active pharmaceutical ingredient for this product using its patented iBioLaunch™ technology, and it plans to make clinical development a key priority in the proprietary application of iBioLaunch. The research is being conducted through a collaboration agreement with the Medical University of South Carolina.

Mike Weatherly joins Electromed

Mike Weatherly has joined Electromed Inc. as vice president of sales. Company CEO Kathleen Skarvan said, "Mike is an accomplished sales leader with years of building and motivating highly effective sales teams, engaging new customer relationships, and delivering strategies for profitable growth. The Electromed sales team will greatly benefit from his experienced insight into effective new product implementation, streamlining operations, and territory development." Weatherly previously served as regional director of sales for Mayo Medical Laboratories in Rochester, MN.

Mike Weatherly

Royal Philips enters into agreement with Aerogen

Royal Philips has signed an agreement with Aerogen Ltd that includes a technology license and the acquisition of select assets solely related to Aerogen's home care business. According to Royal Philips, the agreement is a key enabler in the development and marketing of respiratory drug delivery solutions to manage patients in the home. They believe Aerogen's technology will enable them to further expand on their promise to improve people's lives through meaningful innovation. Aerogen's acute care and home ventilator drug delivery business will be unaffected by the transaction.

Boehringer Ingelheim joins Duke to study IPF

Boehringer Ingelheim Pharmaceuticals Inc. and the Duke Clinical Research Institute have formed a unique collaborative relationship to uncover insights into IPF. The first project will be the development of the IPF Outcomes Registry, a long-term study that will collect and analyze data over time from a large group of patients. The prospective, observational study is being designed to provide a better understanding of the natural progression of IPF and treatment approaches for patients.

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

Classifieds

ADVERTISING SECTION

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AARC Times Classified Advertising Information & Requirements:

Classified Word Advertisements

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

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

We reserve the right to make editorial changes for reasons of clarity and consistency. Every effort is taken to avoid mistakes, but *AARC Times* cannot be responsible for clerical or printing errors. **Deadline for Ad Placement/Cancellation** Deadline for ad placement and written cancellations for the next available issue is May 17. Blind ads available. **For Recruitment Advertising Information, Contact Classified Advertisement** Andrea Conté • Alhambra Plaza • 725 N. Highway A1A, Suite C-106 • Jupiter, FL 33477 • (561) 745-6793 • Fax (561) 745-6795 • AARCAD@aol.com

Recruitment Display Advertisements

For Recruitment Display Ad Rates, go to www.aarc.org/marketplace/media_kit/media_planner_2014.pdf, or contact Tim Goldsbury and Associates, Alhambra Plaza, 725 N. Highway A1A, Suite C-106, Jupiter, FL 33477, (561) 745-6793, Fax (561) 745-6795

Coming of Age

(continued from page 29)

skills. After joining the EFFORTS group and accepting email notices, my inbox received 20–30 messages a day. The messages are filled with patient comments and questions followed by comments and answers from other patients and professionals. Incorrect information given in comments has been quickly disputed and corrected. This is such an active group! Fortunately, there is a help section that provides instructions for setting up a separate email account for EFFORTS.

Additional support venues for ventilator patients

Events attended by pulmonary patients and professionals: The COPD Foundation's 2013 annual meeting, COPD8, was an enormous success. It allowed patients, respiratory therapists, physicians, insurers, and government officials the opportunity to ask questions and express concerns. No one had any initials or titles on their ID badges — just their names. The respiratory therapists and RC students in attendance gained insight from the patients interacting with health care professionals. The subsequent meeting presentations included a wide range of information from objective and subjective standpoints. The goal was to "improve the care of people living with COPD" (see *COPD Digest* online at http://copddigest.org).

The American Thoracic Society (ATS) has had free patient-focused forums at their annual meeting for the past seven years. "Breathing Better with the ATS" provides lung disease patients and their families a chance to interact with pulmonologists from around the globe through a "Meet-the-Expert" reception. It also allows people to meet other individuals who share similar experiences with lung disease. "Meet-the-Expert" sessions include discussions regarding research, clinical trials, and clinical care with experts on many lung diseases including sleep apnea, pulmonary fibrosis, Hermansky-Pudlak syndrome, alpha-1, acute respiratory distress syndrome (ARDS), lymphangioleiomyomatosis (LAM), and COPD. In addition to free parking and lunch, they had an oxygen refill station and concentrators available (see *Everything Respiratory* at http://everythingrespiratory.com).

The Coalition for Pulmonary Fibrosis or CPF (www.coalitionforpf.org) invited the Daughters of Pulmonary Fibrosis group to a reception for an opportunity to interact the evening before their annual meeting. This organization offers support groups and message boards.

Sea Puffer cruises (www.seapuffers.com) provide a fun, relaxing, interactive experience for pulmonary patients. This unique venue has RTs traveling with pulmonary patients. All transportation and oxygen supplies are arranged for the patients so they can relax and enjoy their trip. The cruises include educational activities and abundant time for mingling with other pulmonary passengers. There are currently five different cruise destinations available.

Blogs, chat rooms, message boards, and tweets: Chat rooms provide an opportunity for people to interact with others of similar situations or interests. One nocturnal ventilator patient discovered her current tracheostomy tube was being discontinued and contacted a chat room that offered suggestions to find and purchase existing stock. Recommendations for product replacement from users with similar experiences provided this woman greater peace of mind than all the professional advice she received. During Boehringer Ingelheim's European Respiratory Society annual meeting, they sponsored a Twitter chat using hashtags #COPD and #ERS2013. The following sites have pulmonary disease-specific chat rooms:

- www.alpha1.org/support/support-groups — Alpha-1 Association (AlphaBeaters support groups)
- www.2ndwind.org — Second Wind Lung Transplant Association (peer support group)
- www.coalitionforpf.org — Coalition for Pulmonary Fibrosis
- www.copd-support.com/chat-schedule.html — COPD-Support, Inc. (chat room schedule)
- www.copd-international.com/COPD — COPD International (COPD international support network)
- www.copdforum.org — COPD Forum (global multimedia library)
- www.experienceproject.com/groups/Have-Copd/7817 — Experience Project (personal stories, advice, and support)
- www.emphysema.net/bindex.asp — EFFORTS (Emphysema Foundation For Our Right to Survive) (mutual education and support of patients)
- www.healthline.com/health-slideshow/best-copd-blogs#1 — Healthline Networks, Inc. (COPD blogs)
- www.phassociation.org/ — Pulmonary Hypertension Association (discussion boards, email groups, support groups, patients, and caregivers)
- www.ventusers.org — International Ventilator Users Network (education, advocacy, research, networking)

The Internet and social media should be a readily available tool for respiratory therapists to use in patient education. It can be a source of support, advice, comfort, and comaraderie for patients with any type of pulmonary disease. ■

Calendar of Events

AARC & State Society Programs

May 1–3
Scottsdale, Arizona
AARC's and the American Sleep & Breathing Academy's Sleep & Wellness 2014: A Conference for Professionals
Contact: www.americansleepandbreathingacademy.com

May 5–6
Minot, North Dakota
North Dakota Society for Respiratory Care Annual Spring Convention
Contact: Cherri S. Larson, www.ndsrc.org

May 14–15
Portland, Maine
Maine Society for Respiratory Care's annual conference
Contact: Amanda S. Albee, amandaalbee@gmail.com, www.mesrc.org

May 28–30
Oak Brook Terrace, Illinois
46th Conference & Exposition, Respiratory Care
Contact: www.isrc.org or Audrea Hardwicks-Williams, (773) 827-5855

July 15–17 (Tuesday–Thursday)
Marco Island, Florida
AARC Summer Forum
Contact AARC, (972) 243-2272, www.aarc.org/education/meetings

July 29
Bedford Heights, Ohio
Ohio Society for Respiratory Care's State Meeting
Contact: jgh578@aol.com

December 9–12 (Tuesday–Friday)
Las Vegas, Nevada
AARC Congress 2014
Contact AARC, (972) 243-2272, www.aarc.org/education/meetings

Submissions for the next available issue are due May 19.

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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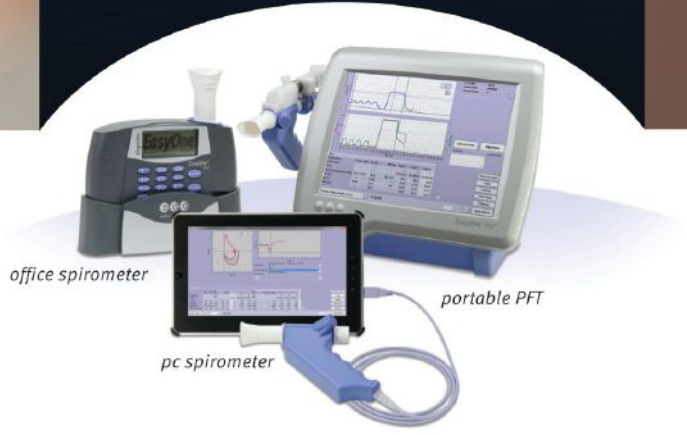

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