AARC Times
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COMMUNITY HEALTH AWARENESS:
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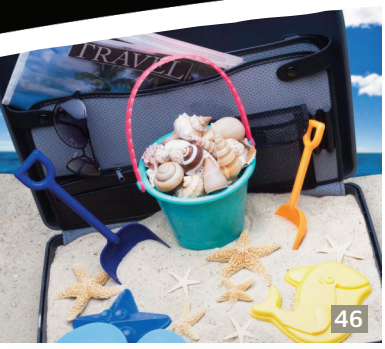

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AARC Strategic Plan

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

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

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

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

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

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

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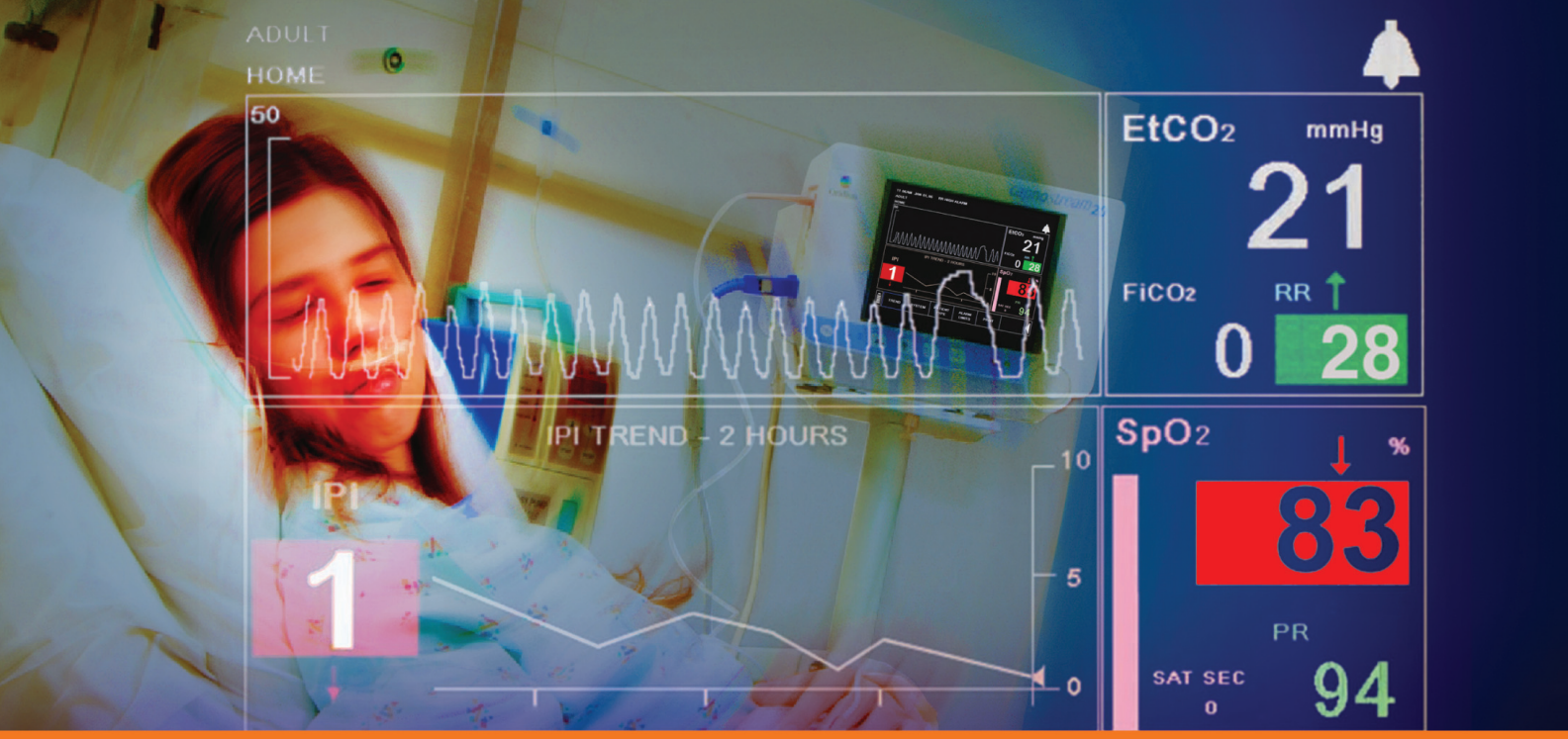

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Since 1947, the AARC has been leading the effort to advance the respiratory care profession and promote quality respiratory health care. Working with our 50 state organizations, we have successfully advocated for the profession at the federal, state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

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Chronic Disease Manager

Asthma Disease Management

by Thomas J. Kallstrom, MBA, RRT, FAARC

For many years I was part of an inner city pediatric asthma disease management program in Cleveland, OH, and had an opportunity to treat and educate patients from various cultural and ethnic backgrounds. While working with such a diverse population of patients, it became clear to me that beliefs many families held to be true were really anything but that. In fact, some were dangerous. Many of these beliefs and practices were cultural or family-based and, thus, were passed on from person to person and generation to generation. I recall a grandmother of a child with asthma who insisted her home remedy of placing the bark of a tree under her grandchild's pillowcase would rid him of his symptoms. Of course we know bark has mold and other organic materials that could aggravate the asthma condition. Another mother once told me that in Puerto Rico they would pan fry a snake and drink the oils in an attempt to remedy the asthma that was prominent in their family. She remained unswayed in her opinion that it worked.

Looking more globally beyond our local collection of patients, it is apparent that many strongly held beliefs sometimes are simply unbelievable. One notion is that onions should be eaten for a cough and that dairy products should be avoided if you have asthma.[1] Another takes its roots in India where every June thousands of people gather in Hyderabad to consume a live sardine that is stuffed with a yellow paste of herbs, supposedly to cure asthma. Both are examples of beliefs that have neither scientific explanation of how they would actually work nor any outcome measurements that prove it does.

about the author...

Thomas J. Kallstrom, MBA, RRT, FAARC, is associate executive director and chief operating officer of the AARC.

Common myths

As chronic disease managers we know that none of these examples are ones that we should be recommending to our patients, but we need to be aware of them and then work with our patients to design a care plan that will be effective and not dangerous. Below are some of the more common myths.

Myth 1: My child will outgrow asthma. Asthma is a chronic lung disease for which there is no cure or strong evidence indicating that it can be outgrown. As children grow, so do their airways; and though the symptoms may not be as apparent, the underlying aggravating factor of lung inflammation may not disappear. Actually, more than 50% of children suffer with it well into adulthood.[2] Not all have symptoms later, but this does not mean that the disease has left them entirely.

Modern medicine has provided us a way to treat asthma with powerful medication and thus lessen its impact, but so far there is no evidence that it can be cured. The best outcomes will be in the hands of the patients themselves. As caregivers we must teach our patients how to best self-manage their disease. This includes getting properly diagnosed, understanding the cause and course of the disease, and implementing appropriate treatment measures. Trigger avoidance and proper administration of medications are critical measures, and patient compliance and competence must be assured.

Myth 2: Certain animals will rid my child of asthma. Some refer to this as pet keeping. This is a belief that by exposing a young child to dogs or cats they will not develop a later sensitization of aeroallergens that come from the animal. Unfortunately the scientific evidence is not very strong and is in some cases contradictory.[3] This was shown in a systematic review of the literature in 2010 that concluded that the decision to have a dog or cat in the household should be based on other considerations

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that are not related to a concern of developing asthma or allergies. We will have to wait for more conclusive research to support this particular intervention.

Myth 3: My dog does not have long hair so is not a risk. It is not the length or type of the hair or even the size or sex of the dog that impacts symptoms of asthma. Rather, it is the dander that comes from the animal that can exacerbate asthma. I have met some families that believed having a short-haired Chihuahua in the home would actually remove the asthma from the patient. Unfortunately, there is no scientific evidence that this actually happens. However, washing the cat or dog frequently may decrease dander levels[4] and is a viable alternative for situations in which ridding the household of a pet is not an option.

Myth 4: Any physical activity should be avoided for a person with asthma. Nothing could be further from the truth. In fact, according to the National Asthma Education and Prevention Program's "Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma," physical activity is encouraged.[5] If patients become symptomatic as a result of exercise, they may need to pre-medicate with a short-acting beta-2 agonist.

> As chronic disease managers we need to be aware of common myths and then work with our patients to design a care plan that will be effective and not dangerous.

Provide the best care possible

There are many beliefs that have been perpetuated that even some in the medical field may believe as fact. It is important as someone whom our patients look up to as asthma experts, that we provide them with the best evidence in the care and management of their disease. One of the best resources is the Expert Panel Report 3, which is available online at www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf. While it is four years old, it remains the gold standard and the definitive resource of scientific evidence and best practices for the care and management of asthma. Reviewing this scientific evidence and employing the recommendations provided in this document will better prepare us as disease managers, patient educators, and patient advocates. ■

REFERENCES

1. Martinez-Gimeno A. Onions, myths, beliefs, fashion and reality in asthma. Allergol Immunopathol (Madr) 2009; 37(6):309-313.
2. Gerritsen J. Follow-up studies of asthma from childhood to adulthood. Paediatr Respir Rev 2002; 3(3):184-192.
3. Chen CM, Tischer C, Schnappinger M, Heinrich J. The roles of cats and dogs in asthma and allergy — a systematic review. Int J Hyg Environ Health 2010; 213(1):1-31.
4. Erwin EA, Woodfolk JA, Custis N, Platts-Mills TA. Animal danders. Immunol Allergy Clin North Am 2003; 23(3):469-481.
5. National Heart, Lung, and Blood Institute, National Institutes of Health website. National Asthma Education and Prevention Program: expert panel report 3: guidelines for the diagnosis and management of asthma — full report 2007. Available at: www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf *Accessed Feb. 9, 2011*

How a State Society Can Make a Difference: A Tale of Inhaled Medication Administration Delivery Times

by Terrence Smith, MHS, RRT

I'm a respiratory therapist and proud of it. That's why I think it is important to write about an initiative that involved a cooperative and collaborative effort on the part of the North Carolina Society for Respiratory Care (NCSRC), the AARC's Board of Directors and government affairs staff, the AARC's Board of Medical Advisors, the Centers for Medicare and Medicaid Services (CMS), and many others to address a problem that had the potential to impact respiratory therapists across the country.

What I hope to show you is that you can make a difference if you just use your membership and the resources at hand. Hopefully, you will come away with an appreciation of how our professional organizations working together can make a difference and how each of us can benefit by being a team member.

A big problem in North Carolina

The story begins in North Carolina in early 2008. At that time, the NCSRC was facing considerable problems with federal surveyors in the state who wanted to hold RTs to the same medication administration delivery schedule as nurses. The interpretive guidelines for Medicare's Hospital Conditions of Participation require medications to be delivered within 30 minutes before or after the scheduled due time. This is often referred to as the "30-minute rule."

The issue involved CMS surveyors citing a facility in North Carolina for failing to administer inhaled medications within the standard administration-scheduled timeframe even though the hospital had a written policy that permitted an extension beyond the 30-minute rule. North Carolina's RTs were told that they had to comply with the guidelines regardless of a hospital's written policy.

AARC jumps in to help

Realizing this could be a big problem not just for RTs in North Carolina but for other hospitals and RTs across the country, the NCSRC management group contacted the AARC's government affairs staff in an effort to see if there was anything that could be done from an organizational and professional standpoint to address the problem.

The AARC quickly did an informal survey of RTs across the country with respect to their hospitals' policies and learned that the majority of those who responded had a written policy that permitted the delivery of inhaled medications up to 60 minutes before or after the scheduled due time. Subsequently, the AARC laid out the issues in a formal written paper to CMS, emphasizing that the 60-minute schedule was a generally accepted standard for the profession. CMS staff suggested that AARC develop a formal position statement in order for the agency to consider the problem and take action.

That's when our efforts to find a solution became a reality, because now we had the AARC Board of Directors involved in developing a formal position statement that reflected a professional standard of practice. I'm told there were a number of drafts and long discussions on the wording of the position statement because AARC wanted to ensure they got it right. First and foremost, the AARC Board and its Board of Medical Advisors (which is comprised of physicians from nationally recognized pulmonary organizations and

about the author...

Terrence Smith, MHS, RRT, is the respiratory care manager at Mission Health System in Asheville, NC. He is also a former president of the North Carolina State Society for Respiratory Care.

other medical societies) wanted to ensure that the statement could not be used to justify practices that were not in line with patient safety.

By now, I'm sure a lot of RTs are familiar with the outcome. Recognizing that it can take longer to administer inhaled medications due to their unique methodology, the key to the AARC position statement is that the hospital policy *"must be implemented so that medications are administered as prescribed — i.e., Q 1 hour, QID, BID, etc."* but should *"not exceed 60 minutes before or after the scheduled medication delivery due time for medications prescribed at an interval greater than or equal to four hours"* (see www.aarc.org/resources/position_statements/inhaled_medication_administration.html).

CMS gets the word out

After AARC posted its position statement on inhaled medication administration schedules on its website, CMS notified its regional offices that oversee local issues within their jurisdictions that the agency accepted the statement as an acceptable standard of practice for the respiratory therapy profession, emphasizing that the position was endorsed by AARC's Board of Medical Advisors. In turn, the regional offices were to communicate this to their state surveyors. Since CMS uses the terms "accepted standards of practice" and "standards and recommendations promoted by nationally recognized professional organizations" in its guidelines to surveyors, we thought the issue was finally resolved. But that was not the case.

Hospitals demand a written statement from CMS

Once NCSRC communicated the adoption of these standards throughout the state, we believed our work was done. However, that didn't deter hospitals from demanding to see something in writing from CMS. So it was back to AARC with a request for help in getting CMS to write something our hospitals could use to show state surveyors it was alright to have written policies that went beyond the 30-minute rule.

The AARC was told by CMS staff that it would be administratively impossible for them to put something in writing every time a national organization came up with a clinical practice guideline or position statement as to a standard of practice. I guess you can imagine with all the professional organizations out there that are constantly coming up with new guidelines that it makes perfectly good sense for CMS not to acknowledge each one. The NCSRC issued a statement as to why there would be no written notice from CMS, but unfortunately that didn't satisfy the hospitals.

However, with additional persuading from the AARC, the technical director of CMS' Hospital Survey and Certification group developed a statement that AARC posted on its website for hospitals to use in support of their policies when approached by state surveyors. Keep in mind that not all hospitals have adopted the policies outlined in the AARC position statement nor are they required to do so. Remember, it is up to each individual hospital and its medical staff to make the decision to adopt the AARC's position as it deems appropriate for that facility. But for those that have, the CMS statement, *"…We have advised AARC that we agree that the timeframes established in their National Standard of Practice for the Administration of Inhaled Medications by RT(s) would be acceptable for determining that a medication has been administered in accordance with the physician's order, as related to the timeframe component…."* is a major victory.

The story doesn't end here

To ensure that this victory received the widest distribution possible, an NCSRC member contacted Michael Cohen, president of the Institute for Safe Medication Practices (ISMP), who agreed to run a June 17, 2010, ISMP Medication Safety Alert in their Acute Care newsletter informing readers about the change for RC medications. The ISMP is a nonprofit health care agency comprised of pharmacists, nurses, and physicians (www.ismp.org). Founded in 1994, the organization is dedicated to learning about medication errors, understanding their system-based causes, and disseminating practical recommendations that can help health care providers, consumers, and the pharmaceutical industry prevent errors.

The real kicker to this story was a September 2010 follow-on article by ISMP that zeroed in on suggesting the overall CMS 30-minute rule for other medications may result in unintended consequences that could affect medication safety. The article pointed out that nurses also have difficulty in administering medications to their assigned patients within the CMS-defined timeframe, which can cause unsafe work habits and may delay drug administration. Several examples were cited. The end result is ISMP initiated conversations with CMS staff who were apparently receptive to taking the ISMP findings under advisement. Since then, the ISMP has published a new set of draft guidelines based on input from an advisory group consisting of more than 20 diverse clinicians and academics. Public comment closed Feb. 15, 2011.

So, in addition to addressing RTs' concerns with inhaled medication administration times, it looks like we have also started the ball rolling for the nursing profession. The impact may go farther than that by engaging

the CMS to reconsider the 30-minute rule, which could result in a new overhaul of the surveyor guidelines.

Teamwork made it happen

None of this could have been possible without the willingness of many to listen, take action, and work diligently to see the issue through to a reasonable conclusion. It was especially gratifying to know that CMS was very cooperative in working with our professional organizations when presented with the facts. Most of all, I'm proud of the way the NCSRC membership came together in support of a potential crisis that could have affected many RTs nationwide. Bill Kiger, BS, RRT, past president of the NCSRC, even flew to Dallas to talk personally with AARC staff; and Jill Saye, BS, RRT, current NCSRC president, banded together the largest meeting ever of the managers group. It took a lot of time and effort on the part of everyone involved, but in the end it was definitely worth all that went into resolving the issue.

We in North Carolina hope that this sets an example for other state societies to use the resources available to them when an issue arises that could impact the respiratory care profession as a whole. Yes, a lot of what we state societies deal with are local issues, but every now and then a problem crops up that could have a ripple effect all over the country. The medication delivery issue is a perfect example. So be diligent in your efforts to enhance the profession, and use your membership and the AARC's resources to help out when needed. It can pay big dividends in the end. ■

Joint Commission's LAB PTAC Addresses Proposed Revisions in Laboratory Standards

by Frank Sandusky, MBA, RRT

In its mission to improve the safety and quality of health care, The Joint Commission (TJC) relies on a number of advisory groups to provide feedback in specific areas. The Laboratory Professional and Technical Advisory Committee (LAB PTAC) was established by TJC to advise the laboratory accreditation program on proposed standards changes.

The committee is made up of representatives from national associations whose members work in the laboratory setting, along with advocates for the general public. Current members range from the American Society for Clinical Laboratory Science and American Society for Clinical Pathology to the American Society for Microbiology and the Clinical and Laboratory Standards Institute. The Centers for Disease Control and Prevention and the Centers for Medicare and Medicare Services send representatives as well.

As the AARC representative on this TJC group, I join my fellow representatives in attending about four meetings a year, usually held every three months. Our primary responsibility is to review and comment on Joint Commission proposed revisions of the laboratory standards.

about the author...

Frank Sandusky, MBA, RRT, is the AARC's representative on The Joint Commission's Laboratory Professional and Technical Advisory Committee. He serves as manager of respiratory care services at Fairview Hospital in Cleveland, OH.

National Patient Safety Goal and the ISO

Last year our group engaged in several discussions useful to the laboratory accreditation process and of interest to respiratory therapists. The first centered on TJC modification of National Patient Safety Goal 01.01.01, which calls for the use of two patient identifiers to improve the accuracy of patient identification. A revision to omit active patient identification resulted from issues raised about the lack of clarity as to when alternate procedures should be employed and the fact that the need to obtain a third-party identification could result in inconsistent enforcement.

Another discussion we had in 2010 focused on the incorporation of International Standardization Organization (ISO) standards into TJC standards. ISO is a network of the national standards institutes of 163 nations, and as such is the world's largest developer and publisher of international standards. With headquarters in Geneva, Switzerland, the organization develops standards for equipment and products used in a wide variety of industries, including health care. The United States, however, is not currently a member of the ISO. The general consensus of our group was that ISO standards should be incorporated into future standards. We will continue to follow this issue as it develops.

Blood gas lab changes

Remaining discussions in 2010 revolved around revisions in several Elements of Performance for 2011 included in the Laboratory Accreditation Program–General Standards and the Laboratory Accreditation Program–Blood Transfusion Service and Donor Center. The revisions were based on current laboratory practices of PTAC member organizations and are considered more objective. The revised general laboratory sections impacting blood gas labs are as follows:

- DC.01.01.01: The laboratory establishes procedures for collecting specimens.
- DC.01.02.01: The laboratory performs testing based on written laboratory test orders.

- DC.02.01.01: The laboratory has procedures for each laboratory test.
- DC.02.01.03: The laboratory proactively plans for interruptions in services.
- DC.02.03.01: The laboratory report is complete and is in the patient's clinical record.
- DC.02.04.01: The laboratory retains records as required by law and regulation.
- EC.02.06.01: The laboratory establishes and maintains a safe, functional environment.
- IM.02.02.05: The laboratory informatics system provides reliable patient information.
- IM.05.01.01: A written record of laboratory informatics system history is maintained.
- LD.01.01.01: The laboratory has a leadership structure.
- LD.04.05.01: Laboratory leadership is effective.
- QSA.01.01.01: The laboratory participates in Centers for Medicare and Medicaid Services-approved proficiency testing programs for all regulated analytes.
- QSA.02.08.01: The laboratory performs correlations to evaluate the results of the same test performed with different methodologies or instruments or at different locations.
- QSA.02.12.01: The laboratory investigates and takes corrective action for deficiencies identified through quality control surveillance.

After the PTAC members made suggestions, the standards were released for field test comments. At our final meeting in December, we conducted a review of the field test comments and made our recommendations on the revised standards. The Joint Commission has approved the revisions, and the new Prepublication Laboratory Standards for 2011 can be viewed at www.jointcommission.org/standards_information/prepublication_standards.aspx.

The AARC will continue to send a representative to this important Joint Commission committee to have input into current and future laboratory standards. ■

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▶ Management of the COPD Patient with Comorbidities

Robert A. Sandhaus, MD PhD FCCP
Tom Kallstrom, MBA RRT FAARC
Item PR20111

This presentation will review best practices in managing COPD patients with an emphasis on management of co-morbid conditions that frequently afflict these patients. Treatment strategies to maximize their care will be discussed.

▶ Sleep and Sleep-Disordered Breathing in the Hospitalized Patient

Peter C. Gay, MD
Suzanne Bollig, BHS RRT RPSG R. EEG T
Item PR20112

This presentation will review a variety of sleep disordered breathing topics including the consequences of sleep deprivation and disruption in the hospital, the role of sleep and its impact on liberation from the ventilator, and post-operative management of the OSA patient. Sleep intervention protocols and other sleep-related topics of the hospitalized patient will be reviewed.

▶ Minimizing VAP in 2011– How Respiratory Therapists Can Contribute

Marcos I. Restrepo, MD
Tom Kallstrom, MBA RRT FAARC
Item PR20113

This presentation will describe the best practices for reducing ventilator associated pneumonia and describe key roles respiratory therapists can play in institutional efforts to reduce VAP.

▶ The Role of Safety Checklists in Healthcare: Bother or Necessity?

Timothy McDonald, MD JD
Sam Giordano, MBA RRT FAARC
Item PR20114

This presentation will review the history of the use of checklists and other standardized procedures to improve outcomes in various industries and discuss how they are being adopted for use in healthcare to reduce errors and improve patient safety.

▶ Noninvasive Ventilation of Neonatal-Pediatric Patients: Do We Really Want to Intubate?

Rob DiBlasi, RRT-NPS FAARC
Ira Cheifetz, MD FAARC
Tom Kallstrom, MBA RRT FAARC
Item PR20115

This presentation will identify clinical circumstances that favor the use of NIV to support ventilation and explore the evidence supporting the use of non-invasive ventilation in neonatal and pediatric patients.

▶ Tracheostomy: Current Practice

Alexander White, MD
Dean Hess, PhD RRT FAARC
Item PR20116

This presentation will review the literature addressing the indications and proper technique for tracheal cannulation, tracheal airway devices, stoma care, as well as changing and decannulation practices. A review of current tracheostomy controversies will be included.

▶ Four Evidence-Based Practices That Should Be Mechanical Ventilation Standards

Dean Hess, PhD RRT FAARC
Rich Branson, MS RRT FAARC FCCM
Item PR20117

This presentation will review the evidence supporting noninvasive ventilation, lung-protective ventilation, ventilator liberation protocols, and ventilator-associated pneumonia prevention.

▶ The Many Faces of PEEP

Rich Branson, MS RRT FAARC FCCM
Dean Hess, PhD RRT FAARC
Item PR20118

This discussion will focus on the application of PEEP not only in the context of ALI/ARDS but also in other applications such as of PEEP for alveolar recruitment (ARDS), counterbalancing auto-PEEP, prevention of micro-aspiration, and facilitating speech.

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Ventilation for Life

Strategies for Weaning the COPD Patient

by Maureen Keane BS, RRT, RPFT

When a patient with COPD experiences respiratory failure, mechanical ventilation is often life saving, but it also has risks. If weaning is started too early or too late, this can lead to respiratory failure. Developing effective strategies in choosing when and how to wean a COPD patient from the ventilator will help reduce and/or eliminate those risks.[1]

Weaning procedures should start once the need for mechanical ventilation has been resolved or significantly improved.[2,3] It is important to continuously assess COPD patients for readiness to wean. Determining whether the patient has adequate gas exchange, is able to initiate an inspiratory effort, and is hemodynamically stable is important,[2,3] as are weaning parameters. Also important is to ensure that the patient-ventilator interaction is not compromised by insufficient ventilator settings imposing a significant load on the respiratory system due to the pathophysiology of the COPD patient.

Why weaning fails

If the weaning process fails, there may be several reasons. Determining the cause and correcting the problem will help increase the success of the weaning trials. Respiratory muscle fatigue and muscle weakness/deconditioning from inactivity will cause an unsuccessful weaning trial.[2] Reducing respiratory muscle fatigue can be achieved by using any ventilator mode appropriate for the status of the COPD patient. Using high inspiratory flow rates and reducing the inspiratory-expiratory ratio allows more time for expiration; decreasing air trapping, hyperinflation, and intrinsic positive end expiratory pressure (auto-PEEP) will help reduce the work of breathing (WOB).

In addition, failure to manage secretions and airway sensitivity can hinder your attempts to wean successfully because of narrowing of the airway due to bronchospasm, mucosal edema, and mucus, causing airway collapse during exhalation. Providing bronchodilators, corticosteroids, antibiotics, suctioning, and chest physiotherapy will maintain secretion management and reduce airway sensitivity, thereby reducing WOB.

Other ventilator settings to consider are the respiratory rate and tidal volume. Using increased respiratory rates and/or tidal volumes will reduce expiratory time, increase air trapping, and increase the WOB, causing the COPD patient to now work harder to trigger the ventilator. This can cause patient-ventilator dyssynchrony.

Consider inadequate nutritional support as well if your patient fails their weaning trials. Malnutrition may result in decreased respiratory muscle function and cause a reduced ventilatory drive,[3] decreased exercise performance,[4] reduced capacity, and decreased respiratory muscle strength.[3,5] The WOB increases with COPD, along with the metabolic rate and energy needs. It will be important to ensure the patient takes in enough calories to meet those demands and not lose weight or muscle mass. Protein deficiency is common among COPD patients. This deficiency can put them at risk for respiratory infections. So a diet with adequate protein, calories, vitamins, and minerals will help the body build immune factors needed to fight infection and help build muscle. Coordinating with a dietician can help a patient with COPD achieve adequate nutrition.[6]

Another reason for the failure or difficulty in weaning is pain and/or anxiety. Sedatives and analgesics are used to alleviate patient discomfort, decrease oxygen consumption, facilitate nursing care, and ensure patient safety. But the use of these medications can result in oversedation, delirium,

about the author...

Maureen Keane BS, RRT, RPFT, is the clinical services manager at Respiratory Health Services/Genesis Healthcare in Mount Laurel, NJ.

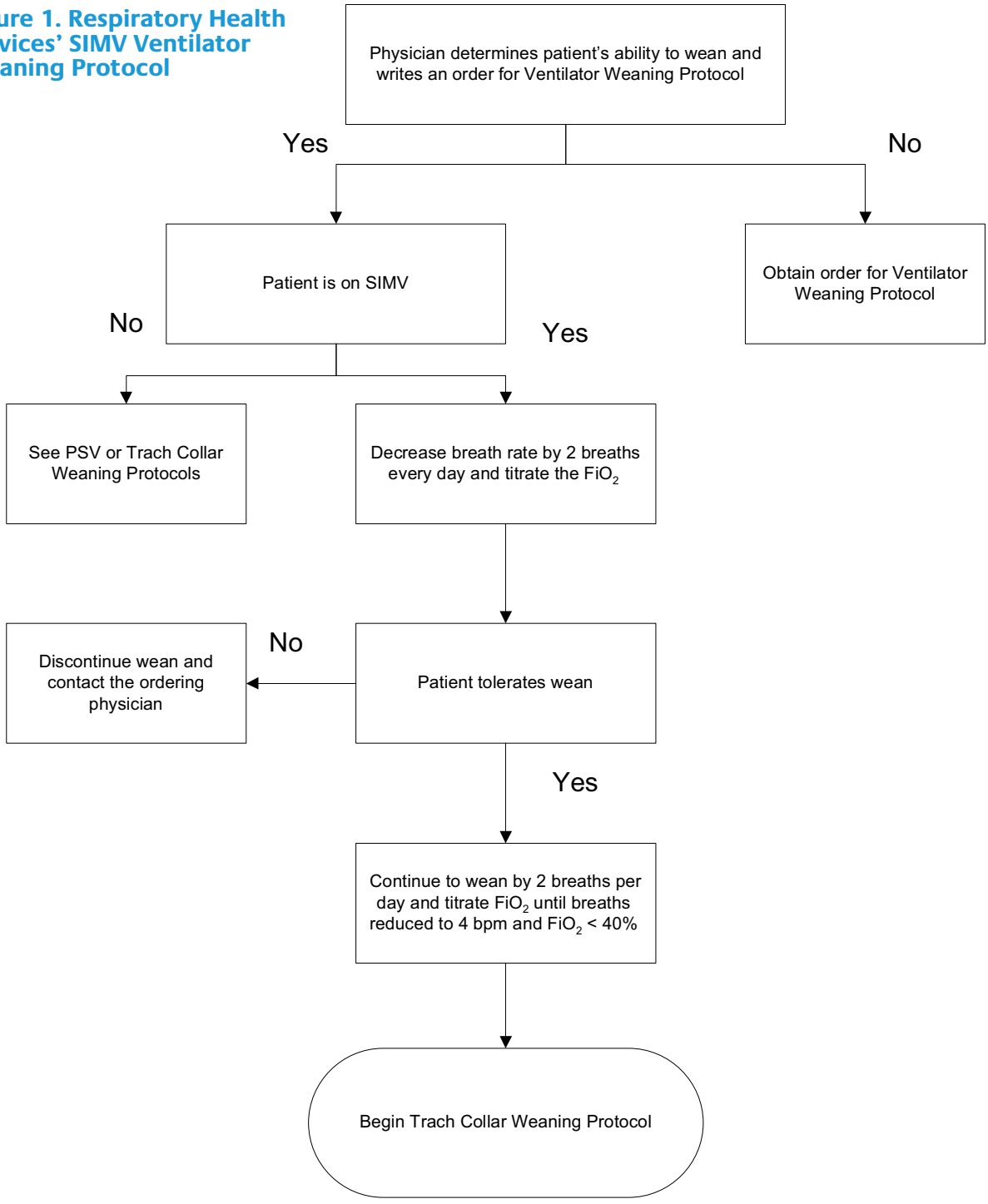
and prolonged mechanical ventilation.[7] When initiating weaning trials, taking sedation "vacations" and using analgesics that depress the respiratory drive less will help determine when weaning is appropriate. Ongoing treatment of pain and anxiety should be done at a level to help with weaning from the ventilator, not hinder it.

Strategies for weaning

So what strategies can we use as respiratory therapists to successfully wean the COPD patient?

Develop and use protocols in your facility. Research has shown that a well-constructed weaning protocol is ef-

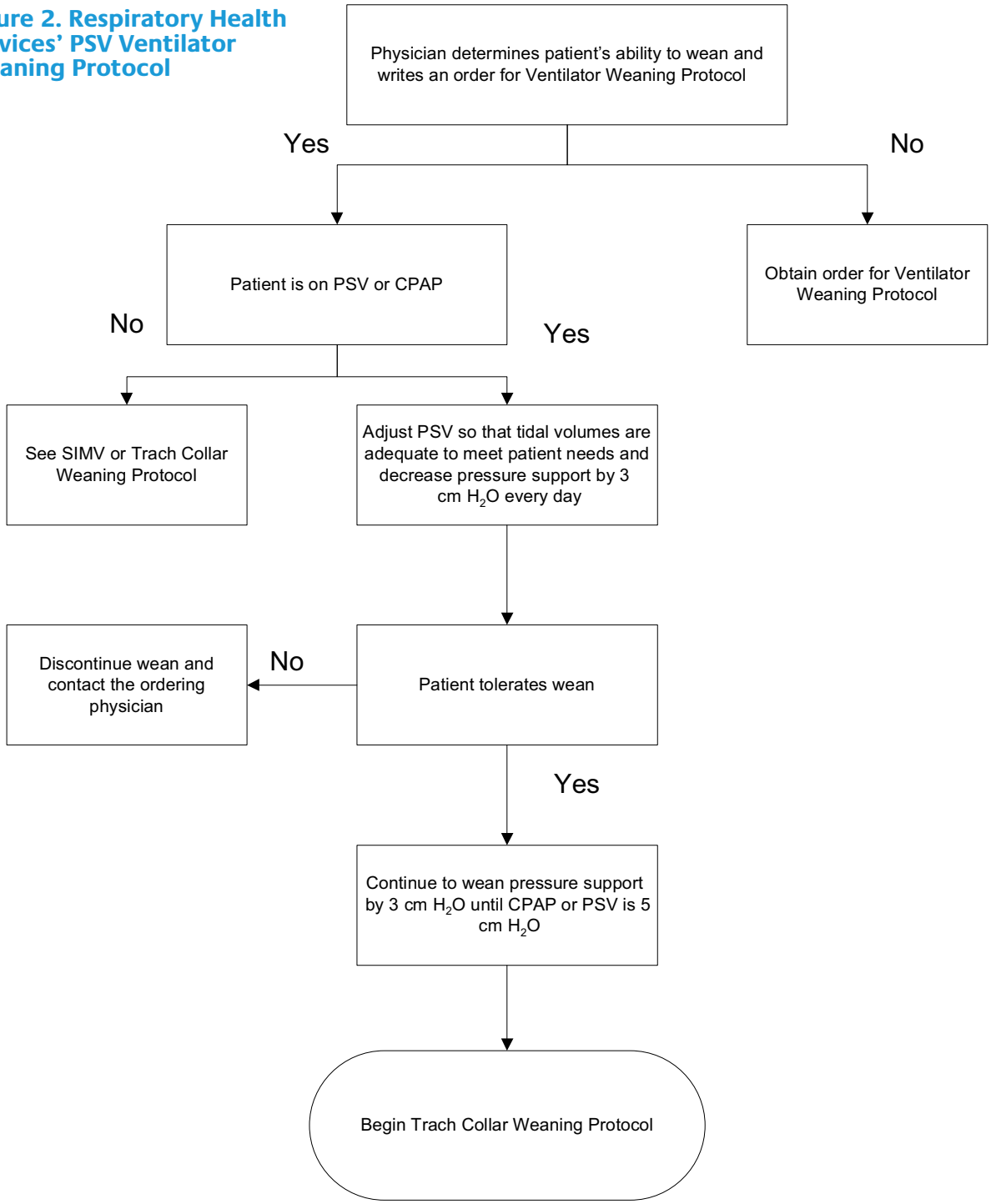
Figure 1. Respiratory Health Services' SIMV Ventilator Weaning Protocol



fective when implemented by clinicians.[8,9] Protocols allow staff to remain focused on the fundamentals of weaning. Samples of Respiratory Health Services protocols are shown in Figures 1–2.

Allow the patient to rest and recover. Due to the deconditioning of the respiratory muscles, resting the patient in between weaning trials on an increased ventilator support such as assist-control or synchronized intermittent mandatory ventilation (SIMV) with pressure support ventilation will allow the muscles to rest and recover.[10] During the early weaning trials, the patient may need to rest for 24 hours between trials to aid in recovery.[2]

Figure 2. Respiratory Health Services' PSV Ventilator Weaning Protocol



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Additional strategies may include:

- Assure adequate humidification to maintain loose, thin secretions.
- Use a nebulizer or metered-dose inhaler when indicated.
- Allow your patient to get a good night's sleep.
- Help alleviate anxiety and depression by motivating the patient to participate in activities. This can include having friends and family visit, listening to music, watching television, looking at pictures, or having access to view the outside world.
- Have your patient sit up in a chair during the day, if able. Also stand and walk your patient with the ventilator or with a resuscitation bag and oxygen, if able.[10]

For the COPD patient receiving mechanical ventilation for a prolonged period of time, weaning should be a slow and gradual approach. Transitioning from assist-control mode to SIMV mode with volume or pressure targets should be used. This will allow for the strengthening and retraining of their respiratory muscles and resolution of the initial reason for mechanical ventilation. The use of higher pressure support ventilation (PSV) levels has shown to help reduce the inspiratory load. Gradually reducing the PSV to the lowest possible level may improve tolerance to the removal of the ventilator.

Consider tracheotomy when the need for prolonged mechanical ventilation is apparent. Performing the tracheotomy when the patient is stable will provide patient comfort and help decrease airway resistance.[2] Once trached, your patient may benefit psychologically by implementation of a speaking valve, which can help improve communication from your patient as well as allowing them to begin eating.

COPD patients with prolonged ventilator dependence, despite attempts to wean from the ventilator while in the hospital, should be considered for transfer to a long-term care facility. These facilities are potentially more cost effective and better suited to meet the needs of the patient.[2]

It is important to remember that many factors must be considered when initiating a plan of care for weaning the COPD patient from the ventilator. Comorbidities, previous length of time on the ventilator, anxiety level, depression, and setting realistic goals are part of the planning process and must be understood and agreed upon by the entire interdisciplinary team as well as the patient and the family/caregiver.[10]

Successful weaning can occur with decreasing the breathing load by lowering airway resistance and intrinsic PEEP and increasing the breathing capacity by improving respiratory muscle strength and endurance. ■

REFERENCES

1. Matic I, Danic D, Majeric-Kogler V, et al. Chronic obstructive pulmonary disease and weaning of difficult-to-wean patients from mechanical ventilation: randomized prospective study. Croat Med J 2007; 48(1):51-58.
2. AARC website. MacIntyre NR. Evidence-based guidelines for weaning and discontinuing ventilatory support. Available at: www.rcjournal.com/cpgs *Accessed Feb. 17, 2011*
3. Pingleton SK. Enteral nutrition in patients with respiratory disease. Eur Respir J 1996; 9(2):364-370.
4. Gray-Donald K, Gibbons L, Shapiro SH, Martin JG. Effect of nutritional status on exercise performance in patients with chronic obstructive pulmonary disease. Am Rev Respir Dis 1989; 140(6):1544-1548.
5. Efthimiou J, Fleming J, Gomes C, Spiro SG. The effect of supplemental oral nutrition in poorly nourished patients with chronic obstructive pulmonary disease. Am Rev Respir Dis 1988; 137(5):1075-1082.
6. O'Neill P. Nutrition for a patient with COPD can be complicated. Nursing 2004.
7. Girard T, Kress JP, Fuchs BD, et al. Efficacy and safety of a paired sedation and ventilator weaning protocol for mechanically ventilated patients in intensive care. The Lancet 2008; 371(9607); 126-134.
8. Koch RL. Therapist driven protocols: a look back and moving into the future. Crit Care Clin 2007; 23(2):149-159.
9. MacIntyre N. Discontinuing mechanical ventilatory support. Chest. 2007; 132(3):1049-1056.
10. Pruitt B. Weaning patients from mechanical ventilation. Nursing 2006; 36(9):36-41.

ADDITIONAL READING

Alia I, Esteban A. Weaning from mechanical ventilation. Crit Care 2000; 4(2):72-80.

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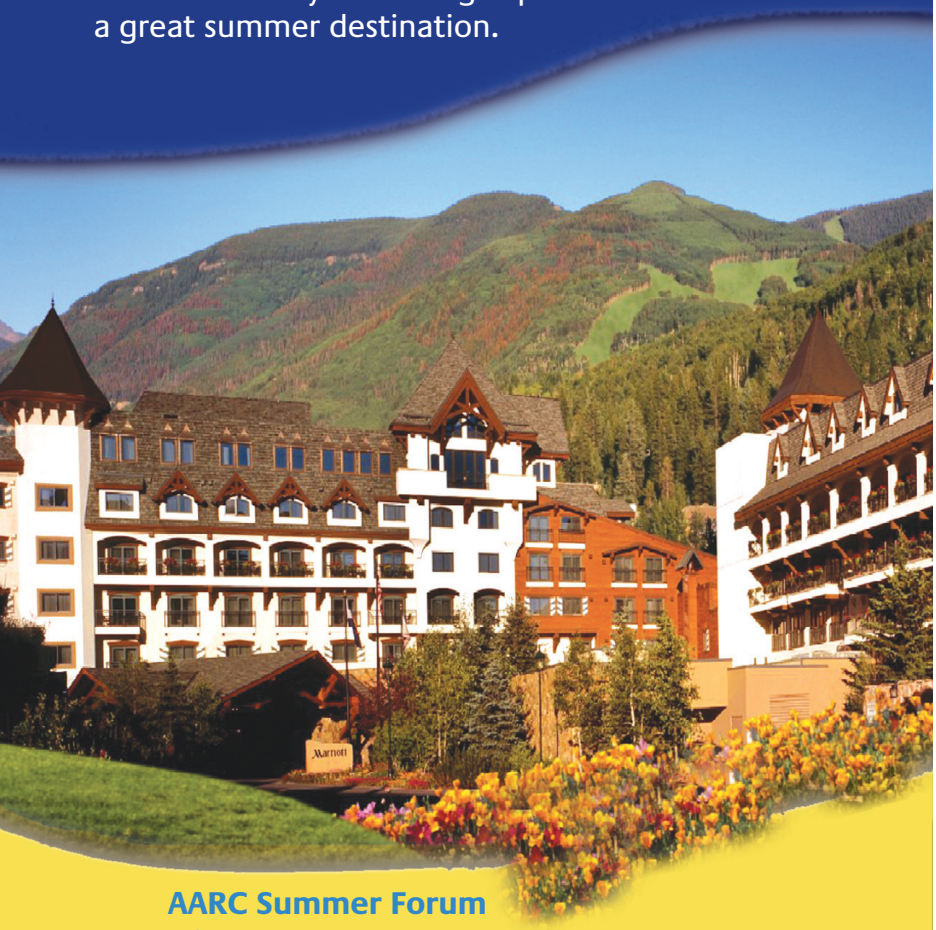

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Sleep-disordered Breathing in the Adolescent A Brief Literature Review

by Suzanne Bollig, RRT, RPSGT, R.EEGT

Sleep-disordered breathing (SDB) is a condition characterized by intermittent partial or complete obstruction of the upper airway during sleep. SDB ranges in severity from non-apneic primary snoring to obstructive sleep apnea (OSA) and may be associated with sleep disruption, daytime sleepiness, and intermittent hypoxemia and hypercapnia.[1] Using data from the Wisconsin Sleep Cohort Study, Young et al reported the incidence of SDB in middle-aged adults was estimated to be 9% in women and 24% in men. The estimated incidence of sleep apnea syndrome (defined in the Young study as an apnea-hypopnea index >5 and hypersomnolence) was 2% of women and 4% of men.[2] A more recent review of the literature reports estimates for the prevalence of OSA in adults ranging from 3%–7%.[3] While significantly fewer studies are available on the pediatric population, a recent review of studies evaluating pediatric SDB reported a prevalence ranging from 2%–20% dependent on study design and definition of disease.[4,5] Habitual snoring has been associated with SDB in both the adult and pediatric population.[2,6] In a large community-based study conducted in Detroit, snoring in adolescents was found to be very common with 20% of adolescents snoring occasionally and 6% classified as habitual snorers.[4] The occurrence of SDB varies with the age of the child and is also dependent on the underlying cause of the sleep apnea.

about the author...

Suzanne Bollig, RRT, RPSGT, R.EEGT, is the manager of the Sleep Disorder and Neurodiagnostic Institute, Center for Health Improvement, Hays Medical Center, in Hays, KS.

Anatomic factors in pediatric OSA

A recent study suggests that childhood OSA can be divided into four basic phenotypes. The first phenotype is associated with adenotonsillar hypertrophy,[7] which is considered the most common cause of upper airway obstruction and SDB in young children.[8] As such, the performance of an adenotonsillectomy is considered the first-line treatment for children with SDB, especially between the ages of two to six years when the adenoids and tonsils are large in comparison to overall airway space.[9]

The second phenotype[7] is associated with congenital abnormalities of the airway and face (e.g., Down syndrome, Pierre Robin sequence, and Apert syndrome). Children presenting with the second phenotype may benefit from surgical correction of the underlying abnormalities but may need the addition of positive airway pressure (PAP) therapy or ventilatory support for optimal treatment.[8]

The third phenotype[7] seen with neuromuscular conditions (e.g., muscular dystrophy, cerebral palsy) results in a decreased ability to ventilate due to decreased muscle tone and also may require the initiation of PAP or ventilatory support.

The fourth identified phenotype[7] of SDB in the pediatric patient is associated with obesity. This last phenotype most resembles that seen in the adult and is likely the most common cause of OSA in the adolescent or teenager.[10]

Obesity and SDB

According to the surgeon general, obesity has reached epidemic proportions in the United States and is a leading cause of disability, serious medical conditions, and cost to the health care system. According to the Centers for Disease Control and Prevention, results from the 2007–2008 National Health and Nutrition Examination Survey (NHANES) show that an estimated 17% of children and

adolescents are obese. Between 1976–1980 and 2007–2008, obesity in adolescents increased from 5% to 18.1%.[11] The rise in obesity for adolescents has contributed to the onset of medical conditions in this age group that are typically associated with adulthood, such as hypertension,[12] cardiovascular disease,[12,13] diabetes,[14] and metabolic syndrome.[14] Obesity is known to be associated with OSA in adults; however, previous studies showed conflicting results in the pediatric population. A recent study published in 2009 showed that the risk of OSA was increased 3.5-fold with each standard deviation increase in body mass index z-score in the adolescent patient but was not significantly increased in younger children.[10] Although adenotonsillectomy is considered the first-line treatment for OSA in the pediatric population, it may be less effective if the child is also obese.[15,16] With this in mind, weight loss and PAP therapy may be indicated as a first-line treatment for OSA in the obese child or adolescent.[17]

Academic performance and SDB

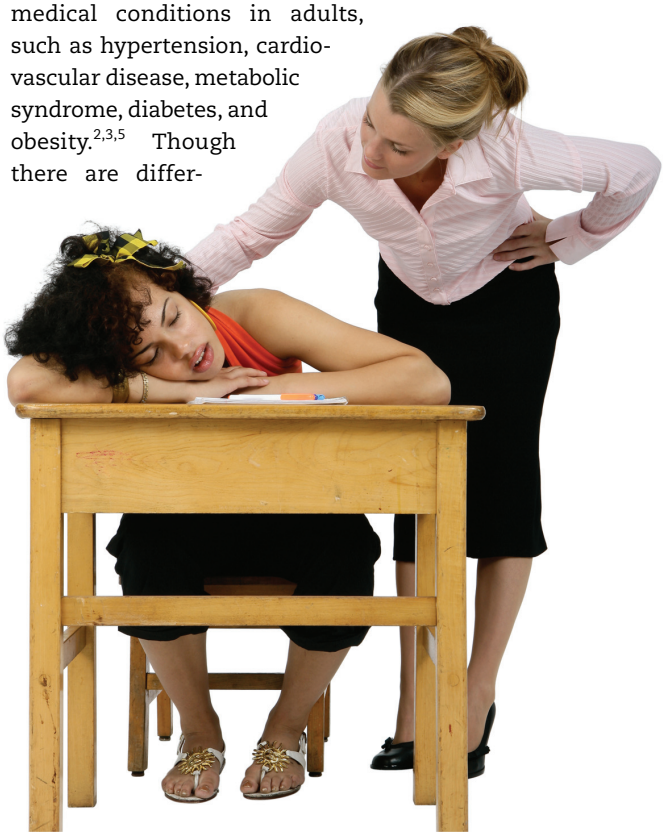
Gozal and Pope published an article in 2001 evaluating the academic performance of adolescents in middle school. They found that children with low academic performance in middle school were more likely to have reported snoring during early childhood and to have received tonsillectomy for treatment of snoring than their higher performing classmates.[18] A Korean study of approximately 4,000 high school students showed that habitual snoring was common (11.2%) and that students with low grades reported an increased frequency of habitual snoring.[19] Johnson and Roth's epidemiologic study published in 2006 reported that adolescents with SDB were more than twice as likely to have excessive daytime sleepiness, poorer grades, and Attention Deficit Hyperactivity Disorder symptoms of the inattention rather than the hyperactive type.[4] Finally, in 2010 Beebe et al published a paper evaluating the association between SDB, behavioral functioning, and school performance in overweight adolescents.[20] His study showed an association between the presence of SDB in the overweight adolescent with lower academic grades, teacher-reported attention and learning problems, and parent-reported hyperactivity, anxiety, and learning problems. Beebe concluded that "Poor school performance may be particularly important during middle to late childhood … [as] those with grade point averages below a C are unlikely to attend college, highlighting the potential real-world, long-term consequences of unaddressed SDB. These findings support the routine clinical screening for SDB during this developmental period, especially among those who are overweight and are struggling academically."[20]

Additional Impacts

The amount of sleep needed and sleep patterns change over a person's lifespan. While Mary Carskadon, PhD, established many years ago that adolescents need between 9.25 to 10 hours of sleep on a regular basis to perform and function at their best, very few adolescents get that much sleep. According to the National Sleep Foundation, the average teenager gets less than seven hours of sleep on a daily basis, leaving them obviously sleep deprived. One of the characteristic changes that occurs as individuals go through puberty is the tendency to develop a condition known as Delayed Sleep Phase syndrome. Briefly, this is the tendency for the body to delay the onset of sleep and, therefore, the time of awakening by several hours. This may translate into teenagers finding it difficult to fall asleep at an early enough time to achieve adequate sleep if they continue to rise at the time necessary to meet school obligations. This tendency for every teenager to be sleep deprived and potentially sleepy during the day may make it more difficult to recognize those individuals who are sleepy due to a pathologic condition such as OSA.

Implications for the respiratory therapist

The consequences of untreated SDB and OSA in the adult population include the development of significant medical conditions in adults, such as hypertension, cardiovascular disease, metabolic syndrome, diabetes, and obesity.[2,3,5] Though there are differ-



ences in the presentation of SDB and OSA between adults and younger children, as children enter into adolescence, many of the signs, symptoms, and consequences of SDB that are more typically found in adults become evident.[4,8,13] Awareness of the signs and symptoms of SDB and OSA will allow the respiratory therapist the opportunity to identify at-risk patients and assist in further evaluation and their care. Respiratory therapists working in the acute care environment have had a key role in the development of OSA screening protocols and action plans for adult patients, though the protocols are often not used uniformly throughout all patient care areas. Considering the prevalence of SDB in the pediatric population, inclusion of the pediatric patient in the routine OSA screening protocol may be appropriate. ■

REFERENCES

1. Redline S, Tishler PV, Schluchter, et al. Risk factors for sleep-disordered breathing in children. Associations with obesity, race, and respiratory problems. Am J Respir Crit Care Med 1999;159(5 Pt 1):1527-1532.
2. Young T, Palta M, Dempsey J, et al. The occurrence of sleep-disordered breathing among middle-aged adults. N Engl J Med 1993; 328(17):1230-1235.
3. Punjabi NM. The epidemiology of adult obstructive sleep apnea. Proc Am Thorac Soc 2008; 5(2):136-143.
4. Johnson EO, Roth T. An epidemiologic study of sleep-disordered breathing symptoms among adolescents. Sleep 2006; 29(9):1135-1142.
5. Young T, Peppard PE, Gottlieb DJ. Epidemiology of obstructive sleep apnea: a population health perspective. Am J Respir Crit Care Med 2002; 165(9):1217-1239.
6. Rosen CL. Obstructive sleep apnea syndrome in children. ACCP AAP Ped Pul Brd Rev 2010; 1:59-70.
7. Arens R, Muzumdar H. Childhood obesity and obstructive sleep apnea syndrome. J Appl Physiol 2010; 108(2):436-444.
8. Marcus CL. Sleep-disordered breathing in children. Am J Respir Crit Care Med 2001; 164(1):16-30.
9. American Academy of Pediatrics. Clinical practice guideline: diagnosis and management of childhood obstructive sleep apnea syndrome. Pediatrics 2002; 109(4):704-712.
10. Kohler MJ, Thormaehlen S, Kennedy JD, et al. Differences in the association between obesity and obstructive sleep apnea among children and adolescents. J Clin Sleep Med 2009; 5(6):506-511.
11. Centers for Disease Control and Prevention website. Childhood overweight and obesity. Available at: www.cdc.gov/obesity/childhood *Accessed Jan. 31, 2011*
12. Kwok KL, Ng DK, Chan C. Cardiovascular changes in children with snoring and obstructive sleep apnea. Ann Acad Med Singapore 2008; 37(8):715-721.
13. Larkin EK, Rosen CL, Kirchner HL, et al. Variation of C-reactive protein levels in adolescents: association with sleep-disordered breathing and sleep duration. Circulation 2005; 111(15):1978-1984.
14. National Heart, Lung, and Blood Institute. Science Advance: teenagers with sleep apnea are at risk for heart disease and diabetes. January 2008; 8(3):3.
10. Kohler MJ, Thormaehlen S, Kennedy JD, et al. Differences in the association between obesity and obstructive sleep apnea among children and adolescents. J Clin Sleep Med 2009; 5(6):506-511.
15. Ievers-Landis CE, Redline S. Pediatric sleep apnea: implications of the epidemic of childhood overweight. Am J Respir Crit Care Med 2007; 175(5): 436-441.
16. Sulit LG, Storfer-Isser A, Rosen CL, et al. Associations of obesity, sleep-disordered breathing, and wheezing in children. Am J Respir Crit Care Med 2005; 171(6):659-664.
17. Verhulst SL, Franckx H, Van Gaal L, et al. The effect of weight loss on sleep-disordered breathing in obese teenagers. Obesity (Silver Spring) 2009; 17(6): 1178-1183.
18. Gozal D, Pope DW Jr. Snoring during early childhood and academic performance at ages thirteen to fourteen years. Pediatrics 2001; 107(6):1394-1399.
19. Shin C, Joo S, Kim J, Kim T. Prevalence and correlates of habitual snoring in high school students. Chest 2003; 124(5):1709-1715.
20. Beebe DW, Ris MD, Kramer ME, et al. The association between sleep disordered breathing, academic grades, and cognitive and behavioral functioning among overweight subjects during middle to late childhood. Sleep 2010; 33(11):1447-1456.

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Caring for the Caregiver

by Debra Koehl, MS, RRT-NPS, AE-C

A few years ago our pulmonary rehabilitation program realized that we spent lots of time teaching our patients and their families about the disease process and management of their lung disease, but we spent little time discussing the role of the caregiver. That did not mean we did not discuss it with people informally, but we never "put it out there" in a formal lecture and discussion format. We decided it was time to change that — caregivers are important people in the lives of our patients. Consider these facts from the National Family Caregivers Association: Over 65 million people care for someone at home for an average of 20 hours per week. The value assessed to these caregiving activities is $375 billion per year, which is twice as much as is spent on nursing home care.

Role and development of caregivers

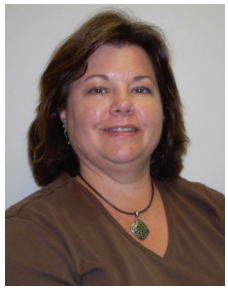
The role of a caregiver comes in many different ways. It can be that of a husband, wife, or significant other. It can be a sibling, your child, an aunt or uncle, a neighbor, or a best friend. They can offer a person around-the-clock support or just assistance when it is asked for or needed. We often think that a caregiver performs just tasks for a person, but the role is often more than that. The caregiver can offer emotional support and an ear for listening. Often the caregiver gives up so much that they forget about themselves. People are often thrown into the role of caregiver due to a new diagnosis or illness. When this happens there is often little to no preparation. So how can we help the caregivers?

Caregiver roles are often defined differently in different cultures. For example, in the United States and other Western societies we stress individualism,[1] which is defined as the needs of the individual over the needs of the group. Other cultures, such as those found in Asia and the Pacific Islands, are defined as collective societies. That means that the needs of the family or group are placed higher than the needs of the individual. These observations can also allow us as health care providers to understand our patients better.

In our individualistic society, we see older adults living independently and managing their lives as long as they see fit. In the United States, when a caregiver is needed, it is often the eldest daughter (or daughter-in-law) who takes on the role of caregiver for the activities of daily living while the eldest son helps to manage the financial estate.[1] This may also present problems as people in the United States have become a more mobile and independent society, and intergenerational households and reliance on family members is really no longer the norm. However, in some ethnic groups this is not necessarily the tradition. It has been shown that African Americans maintain extensive family networks, which often include community institutions such as the church. Mexican Americans have strong family ties and solidarity as well.[1]

In the more collective societies, the resources of the older adults are pooled with the other family resources. The activities of daily living are shared, and often expenses are reduced because the older adult is living with the family.

about the author...



Debra Koehl, MS, RRT-NPS, AE-C, is the pulmonary rehabilitation and patient education program coordinator at Clarian Health, Methodist Hospital in Indianapolis, IN, and chairs the AARC Continuing Care-Rehabilitation Specialty Section. She also represents the AARC with the American Association of Cardiovascular and Pulmonary Rehabilitation.

As RTs, we know that if patients understand about their disease process, they can better manage it — the same is true for caregivers. Yet often no one asks them about their knowledge base. Take time to educate the caregiver and listen to their concerns.

The family elder is also considered an authority figure in some families.

Educating the caregiver

A caregiver is often thrown into this role with little to no preparation. Other times the role of caregiver happens slowly over time as the patient's condition worsens. In both situations it is important to make sure the caregiver is educated about the illness or condition. As health educators and respiratory therapists, we cannot assume the caregiver knows it all. We need to ask them and help them. We know that if our patients understand about their disease process, they can better manage it. The same is true for the caregiver. Yet often times no one may ask them about their knowledge base. Encourage the caregiver to attend classes with the patient. Recommend additional reading. Take time to educate the caregiver and to listen to their concerns.

We also need to remember that being a caregiver can be stressful; so while we are educating caregivers on the disease process and treatments, we also need to educate them on how to take care of themselves as well. Here are some ways we can educate them:

- Help the caregiver realize that this may be a stressful role at times.[1-3] Tell them it is OK to take the time to deal with their emotions as well.
- Coping with their emotions can be difficult. Suggest ideas such as journaling, support groups, and communicating with friends.
- Suggest setting realistic expectations; take one day at a time.
- Keep a sense of humor; make sure to laugh and giggle.
- They need to get enough rest; make sure it is a relaxing sleep.
- Eating right is critical to the caregiver's well being.
- Exercise not only helps with stress, it releases endorphins that help with the feeling of well-being. Break up exercise into manageable time. Rather than 30 minutes at one time, do it in 10–15 minute increments.
- Stay healthy. The caregiver must keep their doctor's and medical appointments, too.
- Take time for yourself. Watch TV, read a book, take a nap, schedule a lunch or dinner with others, listen to music.
- Practice stress-reduction techniques: breathing exercises, yoga, massage therapy, and meditation.
- Let others help. If they ask, let them help you. Make a list of the things they can do.
- Check into respite care, adult day care, and home health aides. If money is a problem, assistance may be available.
- Check out community/church support as well. Use the hospital's social work department to assist you.
- Watch for signs of depression. This can happen to both the patient and the caregiver. Don't be afraid to address this with your physician.
- Plan for the future. If you have not done things such as advance directives, living will, financial

planning, and budgets, now is the time. Engage family or professionals to help.

Being the caregiver at times can be very confusing. We often see our caregivers becoming too much of a caregiver. There is a fine balance between doing too much for the patient and not enough. Here are some great do's and don'ts you can give the caregiver to think about.

The "do list" for caregivers:

- Help
- Participate
- Discuss
- Compliment
- Notice
- Encourage
- Ask
- Share information
- Respect differences
- Listen
- Reassure
- Empathize
- Sympathize
- Cherish
- Allow the patient to do as much as they can for themselves.

The "don't list" for caregivers:

- Nag
- Shun
- Police
- Criticize
- Ignore
- Compare the patient with others who have lung disease
- Lecture
- Compete
- Expect similarity
- Complain
- Don't be the enabler — don't do it all.

As you can see, the "do list" is much more positive than the "don't list." But as caregiver's tire, they may start with the don't list. If they recognize this in themselves, it may be time for a respite or a break from the caregiving.

Your role as a respiratory therapist

In summary, caregivers are an important part of the health and well-being of those they are caring for. Both the patient and the caregiver need to value and respect one another. They need to remember to communicate with each other, often when it is quiet and relaxing for both of them. They also need to realize that neither of them is alone in the journey. Neither should be afraid to ask for help.

From our experience, those who work closely with pulmonary patients can spot caregiver burnout. Don't shy away from talking to those caregivers; they may not know where to go or whom to ask for help. As a respiratory therapist, this may not be your area of expertise, but be able to recognize when someone is having problems and help point them to some resources or to someone from your institution who can help. There are many websites listed at the end of this article; write them down, because you never know when you just might need to pass on the information. Your reward may be a simple thank you that will make your day. ■

ONLINE RESOURCES

American Association for Respiratory Care
www.AARC.org

American Lung Association
www.lungusa.org

Centers for Medicare and Medicaid Services
www.cms.gov

COPD Foundation
www.copdfoundation.org

Family Caregiver Alliance
www.caregiver.org

Comfort of Home
www.comfortofhome.com

National Family Caregivers Association
www.thefamilycaregiver.org

Leeza's Place
www.leezasplace.org

Caregiver Stress Quizzes
www.aarp.org/relationships/caregiving
www.mayoclinic.com/health/caregivers/my00395

REFERENCES

1. Robnett RH, Chop WC. Gerontology for the health care professional, 2nd ed. Sudbury MA: Jones and Bartlett Learning; 2010.
2. Krames Patient Education. Caregiver's guide for chronic lung disease. Available at www.krames.com *Accessed Feb. 14, 2011*
3. Meyer MM, Derr P. The comfort of home for chronic lung disease, a guide for caregivers. Available at www.comfortofhome.com/bk/co *Accessed Feb. 14, 2011*

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Clinical Perspectives

Bronchiolitis and the Respiratory Therapist: Some Convenient Truths

by John Salyer, MBA, RRT-NPS, FAARC

Viral bronchiolitis in infants is a disease that has a very large impact on the practice of respiratory therapy in pediatric care environments. About 145,000 infants are hospitalized each year with bronchiolitis. I estimate that the total cost of hospitalization of this population exceeds $1 billion annually. These admissions typically occur in an 8– to 12-week period during the winter influenza season, which can stretch the resources for emergency rooms in-patient pediatric care. In my experience, many children's hospitals around the country added additional in-patient beds over the last 20 years, in part to accommodate this surge of bronchiolitis patients.

Respiratory syncytial virus (RSV) is one of the organisms that causes bronchiolitis but only accounts for 60–80% of bronchiolitis cases. Adenovirus, rhinovirus, influenza, and parainfluenza have also been associated with bronchiolitis. The disease is characterized by a very recognizable pattern of signs and symptoms that are described in Table 1.

The focus of this article is bronchiolitis in uncomplicated infants less than a year of age. By uncomplicated, I mean patients *without* comorbidities like prematurity, congenital heart disease, cancer, or chronic pulmonary disease. Bronchiolitis in patients with comorbidities can be very difficult to manage and is often associated with poor outcomes. But in otherwise healthy infants, bronchiolitis is a disease that typically has good outcomes, runs a predictable course, and few interventions (from a respiratory therapy perspective) have ever been shown to substantially alter the course of the disease.[1-5] Table 2 describes a generally accepted set of recommendations regarding interventions in bronchiolitis. Note the frequent recurrence of the phrase "not recommended."

In spite of evidence-based guidelines, the history of the treatment of the disease is a *tour de force* in overutilization of unproven interventions. Until recently 80–90% of hospitalized uncomplicated bronchiolitics received every two hours chest physiotherapy and inhaled bronchodilators in spite of a lack of supporting evidence. There is still significant overutilization of respiratory interventions in this population, but respiratory therapists are helping to lead the way in developing standardized treatment protocols that are helping to reduce unwarranted variation in the treatment of these infants.[6]

It is interesting to ponder why there is so much over-utilization in this population. For one thing, an infant who presents with bronchiolitis often has pronounced adventitious breath sounds. These are often concentrated in the upper airway, which becomes filled with exudates and detritus that are the by-products of airway inflammation. This can make the infants sound sicker than they really are. And the fact that they are infants contributes to our tendency to intervene because of our natural inclination to be overprotective of children. We practice in an "interventionist" culture where we often feel compelled to do *something*. However, to quote a famous line by Paul Newman in "Cool Hand Luke:" "Sometimes nothing can be a real cool hand." And sometimes nothing, or right next to it, is mostly what bronchiolitic infants need. Overtreatment with chest physiotherapy and bronchodilators is probably more therapeutic to the order-

about the author...

John Salyer, MBA, RRT-NPS, FAARC, is the director of respiratory therapy at Seattle Children's Hospital and Research Institute in Seattle, WA.

Table 1. Etiology, Signs and Symptoms of Bronchiolitis

Acute inflammation	Grunting and retractions
Airway edema	Expiratory wheezing
Airway necrosis	Tachypnea
Increased mucus production	Hypoxia
Rhinitis	Lung hyper-expansion
Poor feeding	Fever

ing practitioners and distraught parents than it is to the patients. Generally, the most effective interventions in bronchiolitics are hydration, oxygen therapy, and upper airway clearance. Beyond these basic supportive measures, nothing has ever been proven effective.

The most effective technique for clearing the upper airway is nasopharyngeal (NP) suctioning. Specifically, this involves passing an appropriately sized suction catheter gently through each nare into the hypopharynx. Some have mischaracterized this technique as "deep" suctioning, but there is no need to go past the pharynx. There is a lot of urban myth about NP suctioning in infants. Some clinicians believe it is too traumatic for infants, both physically and psychologically. I have reviewed the literature on the treatment of bronchiolitis for many years and have never encountered any systematic assessment of the risk of trauma to the upper airway of infants who are NP suctioned.

The respiratory therapy department at Primary Children's Medical Center in Salt Lake City, UT, began to systematically NP suction bronchiolitics under the aegis of a protocol in the mid 1990s. For years they gathered observations on thousands of suctioning episodes and published their findings in a series of abstracts in the journal Respiratory Care.[7-10] They showed that the use of NP suctioning often reduced or eliminated the need for oxygen, improved symptom scores, and was very safe. Further, they showed that using NP suctioning and a bronchiolitis scoring system in a simple algorithm reduced or eliminated the need for treatment with bronchodilators. Figure 1 on page 32 illustrates the simple protocol. Use of a similar protocol at Seattle Children's Hospital resulted in significant reductions in the numbers of bronchodilator treatments used (see Figure 2). Some have argued that you can get the same benefit of NP suctioning by using a less invasive technique like a bulb-suctioning nasal aspirator, but that has not been my experience.

Chest physiotherapy (CPT) is another intervention widely over-utilized in infants with bronchiolitis. It has been clearly shown that CPT does not substantially alter the course of this disease.[11] You can see immediate improvement in airway clearance by NP suctioning an infant *before* a CPT treatment, but doing NP suctioning *after* a CPT treatment leads to the false impression that the CPT treatment has actually helped clear the infant's airway.

The use of aerosolized inhaled hypertonic saline (3% solution) has been studied in the treatment of bronchiolitis.[12] While extant studies have limitations (e.g., sample size and outpatient focus), it appears that hypertonic saline may accelerate recovery. This is presumably accomplished by reducing mucous viscosity by increasing osmotic flow of water from the mucous membrane to the secretions, thereby hydrating them. Our medical group does not believe there is sufficient data yet to make a broad recommendation for the use of hypertonic saline. Questions remain about how best to give the drug, including frequency and whether or not it should be combined with a bronchodilator. ■

Table 2. Recommendations for Bronchiolitis Care

Oxygen and hydration	Recommended
Routine RSV lab testing	Not recommended
Chest radiographs	Not recommended
Capillary or arterial blood gases	Not recommended
Chest physiotherapy	Not recommended
Cool mist	Not recommended
Bland aerosol therapy	Not recommended
Bronchodilators	Not recommended, unless used as a trial and discontinued immediately if no response noted
Nasopharyngeal suctioning	Recommended
Steroids	Not recommended
Antibiotics	Not recommended
Ribavirin	Not recommended
Continuous pulse oximetry	Not recommended

Figure 1. Algorithm for use of a bronchiolitis scoring system, nasopharyngeal suctioning, and inhaled albuterol. The patient was considered to have improved if the bronchiolitis score increased by one point.

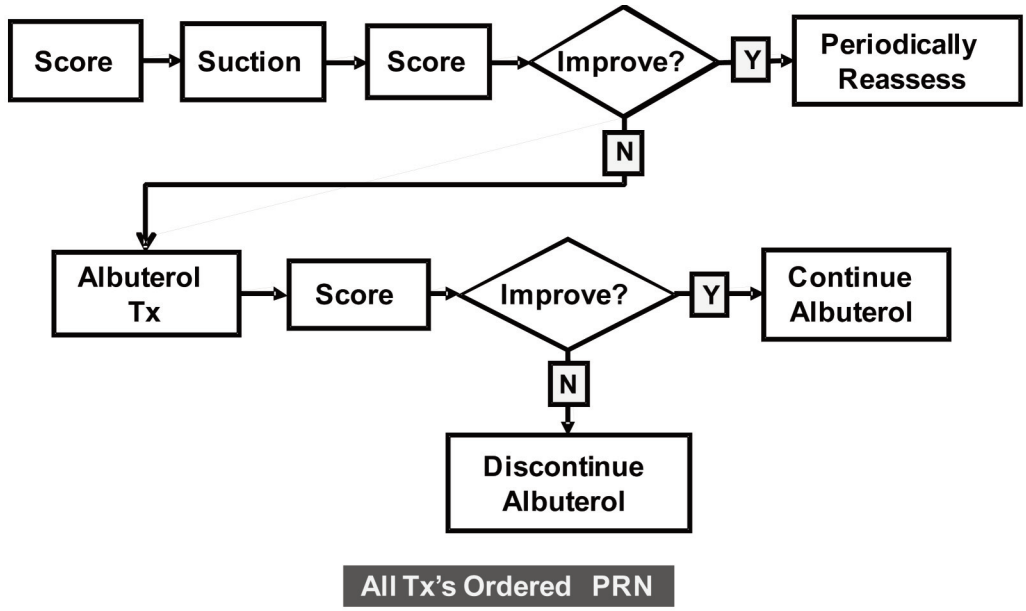
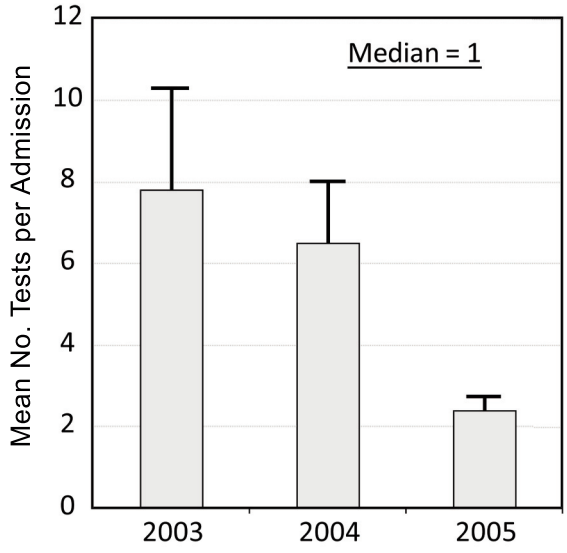


Figure 2. Number of bronchodilator (albuterol) treatments per bronchiolitis in-patient admissions among patients who received any bronchodilators



REFERENCES

1. Zorc JJ, Hall CB. Bronchiolitis: recent evidence on diagnosis and management. Pediatrics 2010; 125(2):342-349.
2. American Academy of Pediatrics Subcommittee on Diagnosis and Management of Bronchiolitis. Diagnosis and management of bronchiolitis. Pediatrics 2006; 118(4):1774-1793.
3. Panitch HB. Treatment of bronchiolitis in infants. Pediatr Case Rev 2003; 3(1):3-19.
4. Perlstein PH, Kotagal UR, Bolling C, et al. Evaluation of an evidence-based guideline for bronchiolitis. Pediatrics 1999; 104(6):1334-1341.
5. Kellner JD, Ohlsson A, Gadomski AM, Wang EE. Bronchodilators for bronchiolitis. Cochrane Database Syst Rev 2000; (2):CD001266.
6. Conway E, Schoettker PJ, Moore A, et al. Empowering respiratory therapists to take a more active role in delivering quality care for infants with bronchiolitis. Respir Care 2004; 49(6):589-599.
7. Bennion K, Salyer JW. Nasopharyngeal (NP) suctioning and albuterol in bronchiolitics (Abstract). Respir Care 2000; 45:1009.
8. Zemlicka-Dunn T, Ballard J, Salyer J. The association between nasopharyngeal suction and oxygen requirements in bronchiolitis patients (Abstract). Respir Care 2001; 46:1071.
9. McKinley G, Ballard J, Salyer J. The effect of NP suctioning on symptom scores in bronchiolitis patients (Abstract). Respir Care 2001; 46:1071.
10. Bennion K, Ballard J, Salyer J. The interaction of nasopharyngeal suction and albuterol in the treatment of bronchiolitis: a two year comparison (Abstract). Respir Care 2001; 46:1072.
11. Perrotta C, Ortiz Z, Roque M. Chest physiotherapy for acute bronchiolitis in paediatric patients between 0 and 24 months old. Cochrane Database Syst Rev 2007; (1):CD004873.
12. Zhang L, Mendoza-Sassi RA, Wainwright C, Klassen TP. Nebulized hypertonic saline solution for acute bronchiolitis in infants. Cochrane Database Syst Rev 2008; (4):CD006458.

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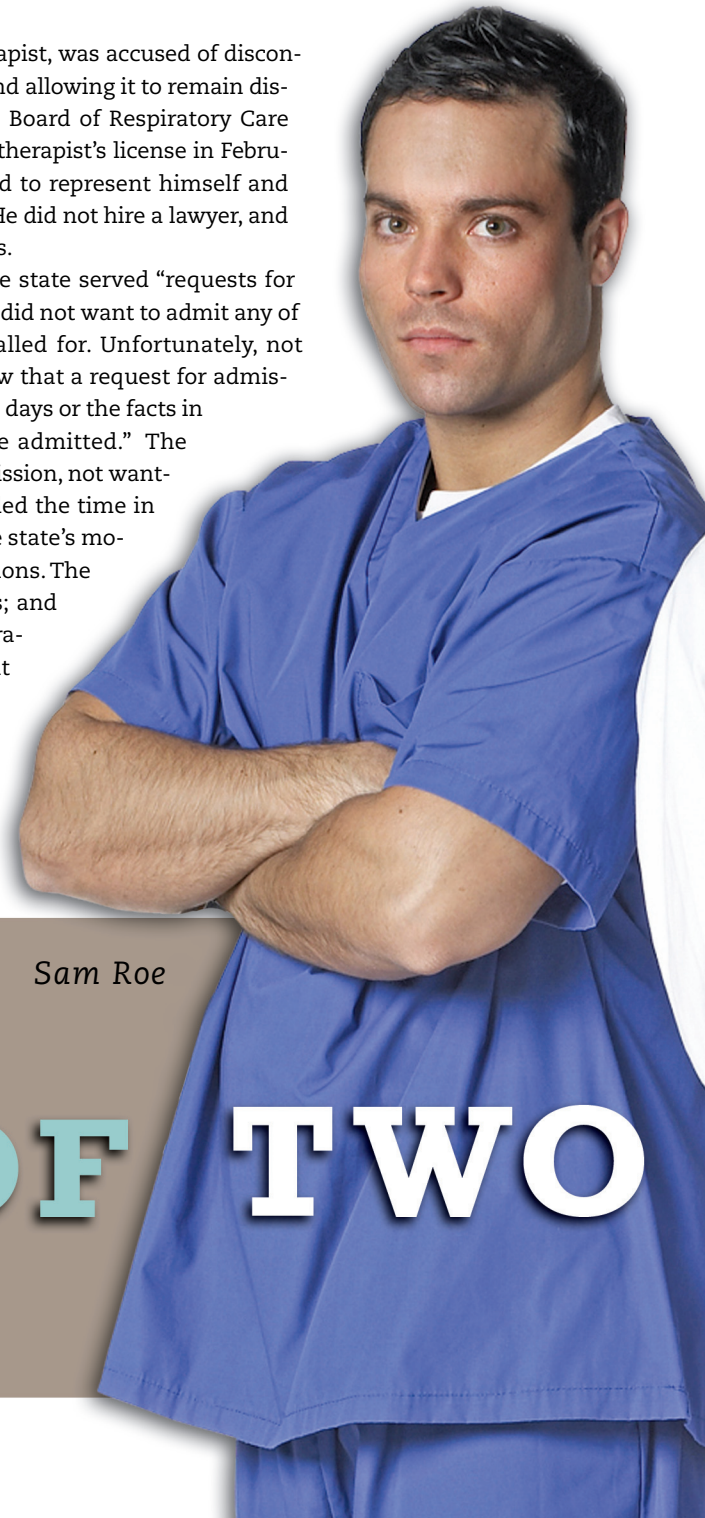
About the Author
Anthony L. DeWitt, JD, RRT, FAARC, is an attorney and a partner in the firm Bartimus, Frickleton, Robertson & Gorny, PC, and resides in Jefferson City, MO. He has also authored two books and numerous legal journal articles. This article is not a substitute for legal advice.

A career shattered!

Jerry Doe, a respiratory therapist, was accused of disconnecting a patient's ventilator and allowing it to remain disconnected for four hours. The Board of Respiratory Care filed its complaint against the therapist's license in February 2005. The therapist decided to represent himself and contest the issues in the case. He did not hire a lawyer, and he did not understand the rules.

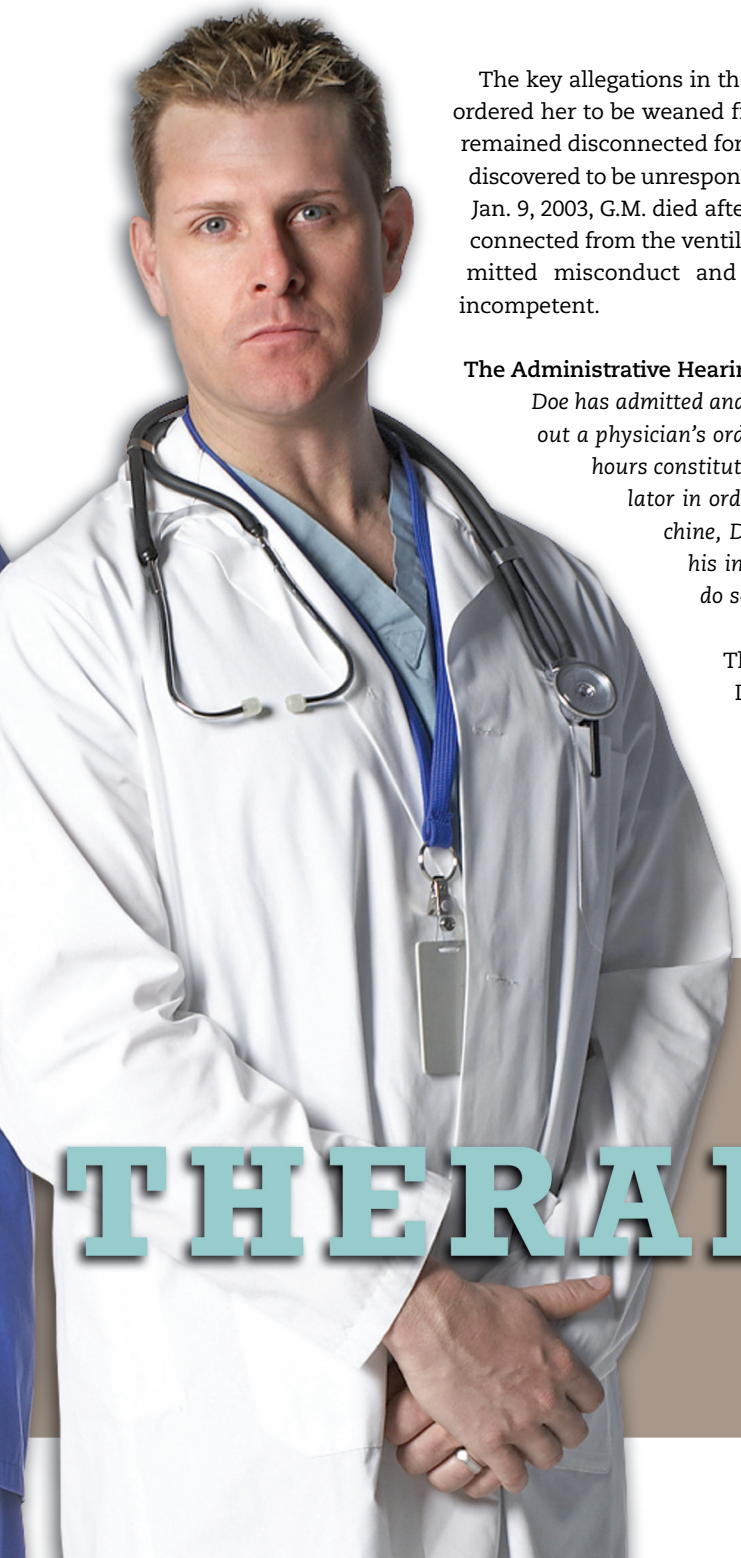
The attorney general for the state served "requests for admission" upon Doe, and Doe did not want to admit any of the things that the request called for. Unfortunately, not being a lawyer, he did not know that a request for admissions must be denied within 30 days or the facts in the request are "deemed to be admitted." The Administrative Hearing Commission, not wanting to be unfair to Doe, extended the time in which he had to respond to the state's motion and challenge the admissions. The therapist let the deadline pass; and as a result, the Board of Respiratory Care got the admissions it desired. The facts became "undisputed" and formed the basis for discipline.



Sam Roe

A TALE OF TWO

by Anthony L. DeWitt, JD, RRT, FAARC



THERAPISTS

Jerry Doe

The key allegations in the complaint alleged that the patient's physician had not ordered her to be weaned from the ventilator. The Board alleged that the ventilator remained disconnected for several hours and that as a result, the patient, G.M., was discovered to be unresponsive with no pulse or spontaneous breathing. On or about Jan. 9, 2003, G.M. died after suffering severe brain damage as a result of being disconnected from the ventilator. By not responding to the requests, the therapist admitted misconduct and also admitted that he was grossly negligent and incompetent.

The Administrative Hearing Commission found:

Doe has admitted and we find that disconnecting a patient from a ventilator without a physician's order to do so and leaving the ventilator disconnected for four hours constitutes misconduct. By admitting that he disconnected the ventilator in order to wean the patient off of the oxygen concentration machine, Doe admits that his conduct was intentional. Regardless of his intent, this was a wrongful act absent a physician's order to do so.

Therapist Jerry Doe's license was subject to discipline. The record is silent on the type of discipline imposed on Doe, but license revocation for this kind of offense would be standard in nearly any jurisdiction. An opinion bearing the therapist's name is a part of the permanent record, open to anyone, and he will likely be placed on the excluded providers list, meaning he can never administer care to a Medicare patient. In short, the therapist's career is shattered.

A career saved!

Therapist Sam Roe was also accused of taking a patient off a ventilator and causing her death. The Board of Respiratory Care took him to a hearing in front of the Administrative Hearing Commission. That Commission found the following facts:

- On Sept. 4, G.M. became a resident at Happydale Acres Skilled Care ("Happydale Acres") in SmallTown, MO. During her time at Happydale Acres, G.M.'s physician was A.D., MD.
- Roe and G.M.'s son talked about G.M. being weaned off the ventilator. Roe thought G.M. was a good candidate for being weaned.
- On Sept. 4, Dr. A.D. ordered "Trach. Collar during P.T. to walk as tolerated."
- On Sept. 11, Dr. A.D. signed a "Physical Therapy Plan for Treatment and Certification" for Sept. 11 through Oct. 9. The plan was premised on G.M.'s expressed desire to be able to walk around her room. The plan says nothing about taking G.M. off her ventilator for any period of time.
- The physician's progress notes from Sept. 18 to Oct. 2 say nothing about taking G.M. off her ventilator. The physical therapy was to take place five times per week for four weeks. The "Rationale for Skilled Services" provides: *Cont[inue] P.T. to Increase Ex[ercise] tolerance while off ventilator But on Breathing Collar. Progress to AMB[ulate] around Room… [illegible].*
- Dr. A.D. signed off on the following sentence: "I have reviewed this plan of treatment and re-certify a continuing need for services."
- Roe, in concert with the four other respiratory therapists at Happydale Acres, attempted to reduce G.M.'s dependence on the ventilator by removing G.M. from the ventilator and allowing G.M. to breathe on her own for periods of one to two hours when she was not in physical therapy. Roe always put the breathing collar on G.M. when she was off the ventilator. Roe checked G.M.'s saturation while she was off the ventilator.
- Roe documented his care for G.M. on the "ventilator monitoring record." For instance, on the Jan. 2, 2003, ventilator monitoring record, Roe wrote, as he translated the medical shorthand at the hearing: *It says resident placed on trach collar 50% times 1 hour 15 minutes, tolerated well. Heart rate increased to 106. RT placed resident back on vent at 12. RT will increase wean time gradually.*
- Any time that Roe took G.M. off the ventilator, he put a breathing collar on her.
- G.M. was taken to the hospital on Jan. 6, 2003, and died on Jan. 10, 2003. G.M. was not in Roe's care when she was taken to the hospital.
- Pursuant to a "hotline call," an investigator went to Happydale Acres. She found G.M.'s file disorganized; it was missing "respiratory notes" that have never been found. She found physicians' orders with dates on them. She could not determine whether any physicians' orders were missing from the file.
- Roe said there was a written order to wean G.M. from the ventilator.

Because the written order to wean could not be found in the medical record, Roe was charged with professional misconduct by the Board of Respiratory Care. He represented himself in front of the Administrative Hearing Commission. He did not hire an attorney. He opted to tell his side of the story at a hearing before the Commission. The Commission, which has very lax rules regarding evidence, allowed Roe to testify about what he saw, did, and heard at the skilled nursing facility.

The Board attempted to prove no order existed. They relied primarily on the absence of a written order in the physician order section. Yet, both the therapist and the son of the decedent testified that the physician had authorized the weaning. The physician was not called as a witness. Oddly, the Board never called any of its own members or any other respiratory therapist to testify as to the standard of care of a therapist during ventilator weaning. No one presented any evidence about verbal orders. The Board relied chiefly on the record and the testimony of the decedent's son.

In the end, the case came down to the burden of proof. The Board could not show through the physician's testimony or the disorganized state of the medical record whether an order had been written and taken out of the chart, or had never been written. There were two significant findings in the record that mattered to the commissioner who heard the case. First, there was other evidence in the record (the physical therapy notes) that indicated the physician knew of the weaning and approved. Second, the therapist had charted his ventilator care very carefully and stood behind what was written. The commissioner may have thought that it would be odd for a therapist to do that where there was no order. The Commission found no cause to discipline the therapist's license.

What's the difference?

What is interesting is that the Doe and Roe cases were filed on the same day, with sequential file numbers, and involved the same patient and the same skilled nursing facility. They were prosecuted by the same attorney general's office. They were decided by the same commissioner, although at different times.

The difference between the results in the case shocks the sense of justice. Yet, it is probably attributable to the fact that one therapist never challenged the Board's action; and the other challenged it hard, calling into question the evidence admitted by the Board. By not challenging those facts by answering the request for admissions, Doe allowed the Board to prove things it could never have otherwise proved. Once proved, they are proved for all time.

Sam Roe was really quite lucky. There was much that the Board's attorney could have done to preclude the admission of his evidence. The commissioner could not have given him any assistance in how to ask or answer questions or when to object to evidence. Being untrained in the law, Roe could have had a very hard time telling his story and casting doubt on the story told by the records. As it was, he was able to cast enough doubt on the Board's case to secure a favorable outcome. But this kind of result is rare.

Neither the Doe nor Roe cases relied on testimony by Board investigators. Frequently, Board investigators will question therapists without an attorney and will get them to admit things that seriously hurt the therapist's chances at trial. Yet, here it appeared that Roe was cooperative with the state investigator (who was not employed by the Board) and tried to help her find the records. Again, this is a rarity in most discipline cases. Because most of the damage that's done in a case is done before a therapist shows up in court, it is important (some would even say vital) to have an attorney at the first hint of trouble.

There are four golden rules when the Board comes calling. They are:

1. **Immediately hire an attorney who has experience in professional discipline cases.**
2. **Don't consent to an interview until you have counsel and counsel can be present.**
3. **Tell your lawyer everything, especially the bad things, so he is not surprised at the interview.**
4. **Listen to your lawyer, and do what he tells you.**

Sometimes therapists think that, like a criminal case, they don't have to answer questions and may invoke Fifth Amendment rights. While it may feel like a criminal prosecution, a Board action is a civil proceeding, not a criminal one. And while a therapist may have every right to invoke his Fifth Amendment rights, doing so where there is no criminal issue has the same effect as admitting guilt. In a civil case, the fact that a witness took the Fifth Amendment is evidence that a truthful answer would have hurt their case. Again, while lawyers know this, most therapists may not understand the civil-criminal distinction.

Many of the people charged with professional discipline are actually guilty of the offenses alleged. When the allegation relates to a criminal conviction (driving under the influence, for example) or some other misconduct (consuming alcohol prior to treating patients), a therapist might be tempted to think there is little a lawyer can do to prevent discipline. But the rules of evidence permit some things to be introduced and prohibit others, and sometimes those rules of evidence make all the difference. Just being willing to fight about the issues can sometimes cause the Board to recommend censure (effectively a letter of reprimand) or probation instead of suspension or revocation.

The most important reason to hire an attorney is to avoid procedural problems. Every court and tribunal has rules that allow questions to be asked and impose sanctions when answers are not forthcoming. It is quite possible, as Doe found out, to lose before you ever get to a place where you can tell your side of the story. For this reason, even if for no other, you need experienced counsel.

Every state's administrative procedures differ. In some states hearings are held in front of the Board; in others, like Missouri, they're held in front of a separate commission. If charged with a disciplinary offense, any health care professional needs a lawyer familiar with the process and one who has represented health care providers before. Most malpractice insurance policies provide coverage for professional discipline. ■

Great Opportunity for a

by Debbie Bunch

The extreme winter weather that plagued much of the United States this year has no doubt left most people ready for the spring thaw. But you know how it goes: By the time July rolls around with its scorching rays and soaring temperatures, today's desire for warmth will turn into an equally strong passion to be as far away from the heat and humidity as possible. This year's Summer Forum, scheduled for July 18–20 (Monday–Wednesday) in Vail, CO, will be the perfect place to cool down and enjoy a great family vacation while taking part in our premiere mid-year meeting for managers and educators.

The Program Committee is busy planning the event as this issue of the magazine goes to press, so we can't tell you what's on the program yet (watch for it in the May issue), but we do know it will cover the topics that you and your colleagues want to know more about because the sessions will be based (as they always are) on input received from the AARC membership earlier this year.

"The Program Committee received some great proposals for this year's Forum, and I can guarantee managers that they'll find what they need to meet the demands they're facing from changes brought about by the new health care reform law and other issues challenging their

AARC SUMMER MEETINGS
July 18–20, 2011 • Vail, Colorado

The family vacation

But what about that family vacation? Vail is sure to meet all expectations in that regard, as well. From its stunning sunsets over the Rocky Mountains to its nonstop opportunities for outdoor adventures, spouses and kids who tag along to the meeting will have plenty to keep them busy while you're engaged in the educational sessions. And there will still be lots of fun activities left after the meeting is over when you are ready to join them. Take a look at just a few of the things you and your family can see and do in Vail Valley:

VAIL GOLF CLUB:

Test your skills on this 18-hole, par 72 course and take in the breathtaking views of the majestic Gore Range at the same time — all at 8,200 feet, which means your ball will travel 10% farther due to the high altitude. Recognized by *Golf Digest* as a "Top 100 Resort Course."

BETTY FORD ALPINE GARDENS:

Named for the former first lady, these are the highest botanical gardens in the world, showcasing a unique collection of alpine and sub-alpine plants and flowers.

ADVENTURE RIDGE:

Kids and adults alike will love all the outdoor experiences available here, from horseback rides to guided tours to the top of the mountain in an open air vehicle. Plus there's a climbing wall, rebound trampoline, disc golf, lawn sports, guided nature hikes, and more. There's even a Discovery Center where you can learn more about the environment with interactive displays.

WORKING VACATION

AARC Summer Forum heads to Vail, CO, July 18-20

facilities," says AARC Management Section Chair William D. Cohagen, BA, RRT, FAARC. "Even if you've never attended a Summer Forum before, I urge you to join us in Vail to get up to speed on the key action items on all of our agendas this year."

Lynda Thomas Goodfellow, EdD, RRT, FAARC, chair of the Education Section, sends a similar message to educators in the profession. "The downturn in the economy may have made recruiting and retaining students for our programs easier, but educators are still facing a number of issues that the Summer Forum can help them resolve. Come to Vail this July and you'll not only have the opportunity to learn the latest from the brightest minds, you'll also have a chance to voice your opinions and concerns about the best way for our profession to move forward into the rest of the 21st century."

These days, everyone is looking for ways to stretch their dollars. Teaming up a fabulous family vacation with the AARC's premier summer conference is a great way to do just that.

FUN ON THE WATER:

Enjoy Vail's own Whitewater Park right in the heart of the village, or sign up for a full day, half-day, or multi-day rafting or kayaking trip guaranteed to thrill beginner and advanced paddlers alike.

RELAX AT A SPA:

Looking for something more laid back? Vail's many spas are just for you, offering everything from massages to Vichy and Swiss showers to hydrotherapy.

FLY FISHING:

A free fly-casting clinic is available in downtown Vail, so there's no excuse not to put a line in the waters of Gore Creek or one of the pristine alpine lakes in the vicinity.

LIVE MUSIC:

Vail Village is full of great night spots where you can hear live music, and the annual Jazz Festival will also be in full swing when the AARC is in town! Free shows are available every Sunday afternoon at the Vail Farmer's Market, and Jazz @ Vail Square takes up residence in the Arrabelle Hotel on Thursday nights.

SHOPPING PARADISE:

If shopping is your thing, you can spend literally all day strolling the quaint streets of Vail Village, with its unique array of specialty, souvenir, jewelry and art, and clothing and gear shops.

AWARD-WINNING EATS:

It goes without saying that Vail is a culinary delight. The Village is home to a wide range of restaurants, from four-star establishments to casual diners the whole family will love. ■

DON'T MISS IT!

We'll have much more on the Summer Forum and Vail in our May issue of *AARC Times*; but until then, go to http://summer.vail.com and start planning your working vacation today. See you in the mountains! ■

Respiratory Care Comes of Age

If you're a regular reader of Respiratory Care, you know that both the quantity and quality of the original research have increased by leaps and bounds over the past couple of years. Now you can find out why from the man at the helm of our science publication.

Respiratory Care has always been the premier science journal in our profession, but over the past few years it's risen in stature in the wider world of medical publications as well. *AARC Times* Editor Marsha Cathcart recently sat down with Journal Editor in Chief Dean R. Hess, PhD, RRT, FAARC, to talk not only about the transition but also about some new developments poised to take the Journal to even greater heights this year.

CATHCART: *Thanks for joining me here today to discuss some of the changes going on at the Journal. But first, tell our readers why the AARC publishes Respiratory Care for RTs and other respiratory professionals.*

DR. HESS: Respiratory Care is the official science journal of the AARC, bringing contemporary science to our members and our readers. For people who are not respiratory therapists, it is really the face of the profession. This is particularly true for physicians, physical therapists, and others outside of the United States. So the extent to which we do a good job with the Journal reflects very well on the profession and on the AARC.

CATHCART: *And, of course, it is peer reviewed.*

DR. HESS: Yes. Nearly every paper we publish goes through several rounds of peer review. Our peer reviewers come from our editorial board, but many are not members of the board. In the February issue of the Journal we listed all the peer reviewers we used in 2010. There were about 675 of them, and many are the leading authorities on the subject matter in the world. So when you send your work to Respiratory Care, it's likely that it will be peer reviewed by somebody whom all of us would say, wow, that is a clinical and academic leader on this topic.

Editor in Chief Dean Hess provides an inside look at the Journal and where it's headed

CATHCART: *The Journal really seems to have come of age over the past few years. What's changed to make this happen?*

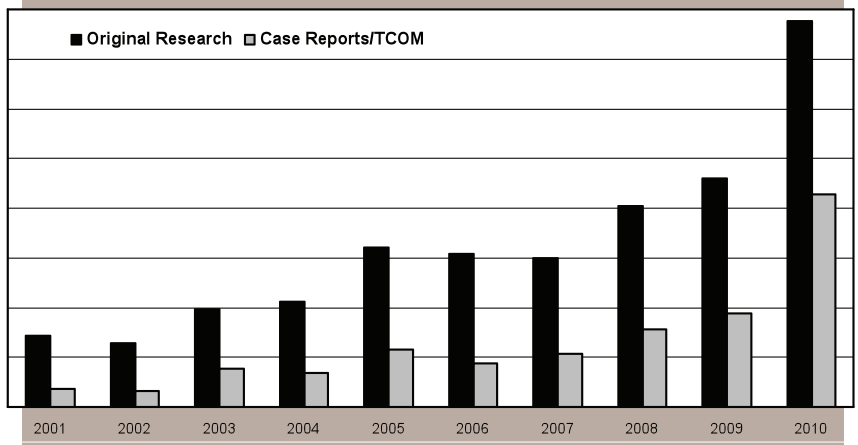
DR. HESS: Probably the biggest change we've seen is that the number of unsolicited submissions has increased several-fold. If you look back 10 years ago, it's probably fair to say that we now get as many submissions in a month as we published in six months back then. That means we can be more selective about what we publish, so the quality of the Journal is increasing.

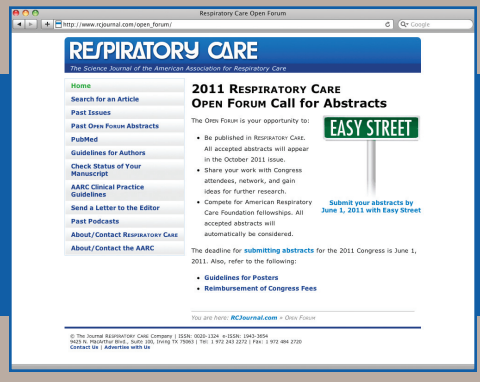
We're also getting submissions from everywhere around the world, so the Journal is becoming much more international. And we're getting an increased variety of submissions. Papers coming our way today relate to all aspects of respiratory care — adult care, neonatal, pediatrics, pulmonary function testing, home care — really all aspects of respiratory care.

CATHCART: *Has this increase in the number of articles published in each issue affected any of the features your readers have come to expect in the Journal?*

DR. HESS: Yes. We've had to evaluate our features and have eliminated some. For example, the front of the Journal used to have a number of abstracts from other journals. Beginning in January, we did away with that section because we needed those pages for other content. The book review section is going away for the same reason. But we are not going to do away with some of the very important features of the Journal that have been highly valued by our readers for many years. Those include the Journal Conferences, the publication of the New Horizons Symposium papers, and the Clinical Practice Guidelines. We'll also continue to publish the OPEN FORUM abstracts accepted for presentation at the AARC International Respiratory Congress and will continue to encourage OPEN FORUM presenters to develop their abstracts into full papers.

This chart shows how Journal submissions have grown over the past decade.





OPEN FORUM:

First Step to Publication for Novice Researchers

As RESPIRATORY CARE rises in stature, leading researchers from around the world are increasingly submitting their work for publication. But that doesn't mean there isn't room for new researchers to get their foot in the Journal door, and the OPEN FORUM held during the AARC International Respiratory Congress is still the number one means to that end.

"From the very beginning of the OPEN FORUM back in the 1970s, the Journal has overseen the process of selecting abstracts to be presented," says Editor in Chief Dean Hess, PhD, RRT, FAARC. "And that has helped many respiratory therapists, physicians, and others come to the forefront and get their work published, first as an abstract and then as a full paper. Many of the papers that I first published myself in the Journal started out as an OPEN FORUM abstract."

The deadline for submitting abstracts for this year's OPEN FORUM at the AARC Congress in Tampa, FL, Nov. 5–8, is **June 1**. Visit our OPEN FORUM page on www.rcjournal.com to learn more about submitting an abstract using our Easy Street submission portal. ■

CATHCART: *Why do you think you've seen such growth in the number of submissions? Have you just built momentum over the years?*

DR. HESS: I think some of it is that we're building momentum, so there's a snowball effect. But I also think much of it is due to the fact that we now live in a digital age and people can find us on the Internet. The submissions to the Journal are all made electronically, so somebody from halfway around the world can submit their manuscript essentially by a click of the mouse. Gone are the days when we, as authors, printed out our manuscripts, made three copies, put it in an envelope, addressed the envelope, and licked a stamp. It's a lot easier to submit to journals today than it was yesterday.

Being in PubMed — the government's electronic database of journals from all over the world — has helped as well. We've been in PubMed for about 11 years now, which means our content is accessible to anybody who has access to the Internet.

We are also in Web of Science, a Thomson Reuters service that provides access to the world's leading citation databases. Web of Science issues an "impact factor" to each journal it includes. The impact factor is important because it's one of the things academics and researchers look for when deciding where to submit their work. It's important for their careers to publish in journals that are cited by other journals. Our impact factor measures how often the papers we publish in the Journal are cited in other articles published not only in RESPIRATORY CARE but also in other journals. Right now our impact factor is 1.52, which I think is respectable for a journal of our type.

CATHCART: *The Journal now has a presence on Facebook and Twitter as well. Is that also helping you get more submissions?*

DR. HESS: I don't know that these have helped with submissions, but they have certainly improved the visibility of the Journal. So I would say those things are more valuable in attracting readers than in attracting contributors. But of course they work together, because readers become contributors and contributors are readers. And this does illustrate the fact that we have tried to get in line with what's happening in the digital age and in social media.

CATHCART: *Many of our 52,000 members currently opt to receive the print version of the Journal as part of their membership package. But the digital age you just spoke of is really changing the way people access the Journal. For one thing, I hear you're going to be changing your website. How's that coming?*

DR. HESS: We're in the process of reworking the website now in ways that I think will make it more user-friendly and provide more features that both AARC members and readers from outside our Association will be interested in. The website already allows access to full text of the Journal content going back to the January 1990 issue. Members have access to all of the content, of course, but other people now have free access to anything published at least one year ago.

We're also getting ready to roll out a digimag version of the Journal, similar to what is already available for *AARC Times*. This will allow our subscribers to read the Journal while at their computer screens, or using their iPads, in a format identical to the format they find in the print edition.

The other thing we're doing — and this is probably the most exciting — is working with a hosting site that will host a totally electronic version of the Journal. ingentaconnect™ is the name of the company that is building this for us. They have built similar sites for many other journals as well. Once this is completed, AARC members will be able to access the Journal content through Ingenta.

CATHCART: *Why would readers want to do that when they will also have the online digimag?*

DR. HESS: The digimag format will be great for people who want to turn the pages of the Journal on their computer screens just like they would turn the pages in the print version.

But the Ingenta site will allow us to post our content not only as a PDF file but also as an HTML file. And the benefit of the HTML file is that it provides links to other journals through the reference list in the article. So, for example, if you go to an article in the HTML format, you'll find that each of the references in that article is actually a hypertext link. You can click on those links and they will take you right to the articles that are being referenced. That's commonly referred to as cross referencing. The benefit of that for readers is that they can quickly access the referenced articles without having to go to their medical library and dig them up. Of course, the full text may not always be available for free, but if the content is important enough to them, they can pay a fee to access it. Or, many times the medical library in their hospital or university will have an online subscription. The other piece of this is that, because we will now be a part of this overall platform, people who are reading other journals where Respiratory Care is referenced can click on the hypertext link and get to us.

CATHCART: *So it will bring more readers to the Journal?*

DR. HESS: Yes, and that should further increase the visibility of the Journal as far as both readers and authors who might submit to the Journal are concerned. I suspect it may raise submissions to the Journal quite a lot.

CATHCART: *I also understand you are gearing up to provide "ePub" access to the Journal papers. Can you tell us more about that?*

DR. HESS: One of the problems that we've created for ourselves with all these increased submissions is that it can be as long as a year between the time a paper is accepted and the time it is published in the print edition. This is problematic for authors who depend on their publications to get research grants and promotions. Many other journals do online ePub versions of their articles (also known as "publish ahead of print") a few weeks after a paper is accepted. We have already published ahead of print close to 60 articles. That allows the author's work to appear in PubMed soon after it's accepted and is very attractive to authors who submit to the Journal. I think it is going to help us get even more submissions.

CATHCART: *Switching gears a little, I wanted to ask you about the changes that have recently taken place in CRCE Through the Journal. How have you revamped this popular feature, and how is it also taking advantage of the digital age?*

DR. HESS: Yes, that changed in January of this year. CRCE Through the Journal is now available on a month-by-month basis. Essentially, you read the Journal and then take a true/false test online. If you pass the test, you get one Continuing Respiratory Care Education® credit. You can do that every month and earn up to 12 credits in a year's time.

This is a big step-up in convenience for the reader. In the past, we would have the test in the August issue of the Journal and you would have to go back and dig through the last year's issues and find the articles and maybe reread them to answer the questions.

We decided to make this change for a couple of reasons. First, to make the process more streamlined and more timely, and second, to increase the number of continuing education credits that are available. I believe we doubled the number from six to 12. And now instead of charging $15 to take the test, it's all available online free of charge to AARC members.

CATHCART: *So the Journal is going digital on all fronts these days. Where do you see all this heading?*

DR. HESS: Yes. ingentaconnect fits with that, the digimag fits with that, the enhanced website fits with that, CRCE Through the Journal fits with that, and our podcasts fit with that. Authors submit to the Journal online; we're in PubMed and Web of Science. So clearly, the Journal is becoming more and more electronic.

I want to stress that, at this point, we have no plans to do away with the print edition of Respiratory Care. But I really believe the time will come when print journals in general will go away. Other journals are already doing it. And quite honestly, as a consumer of the medical literature myself, I use the electronic versions of all the journals I read — even Respiratory Care. When I'm attending to my clinical responsibilities at the Massachusetts General Hospital and I need to find an article that deals with the problem at hand, I don't go running to the library. I go to the nearest computer terminal, access PubMed, and pull up the article electronically. Many journals are available online through the Treadwell Library at the Massachusetts General Hospital.

Stay Tuned for More on Research in May

The May issue of *AARC Times* will continue to look at respiratory care research, with an article featuring several of today's leading RC investigators and lots of other content aimed at showing how scientific exploration is becoming a bigger part of the job for RTs all around the world. ■

CATHCART: *I'm sure a lot of other clinicians do the same thing.*

DR. HESS: Absolutely. I'll tell you an interesting story about that. At the Massachusetts General Hospital, they did away with many of the back issues of journals. For the most part, the library is now a virtual, electronic library. They took that space and converted it into a medical simulation center, because simulation is the hot thing now. Print journals are on their way to becoming dinosaurs.

CATHCART: *The Journal has certainly come a long way. What do you think when you consider all the changes it's gone through?*

DR. HESS: It always makes me think about those who have gone before me. I think of Philip Kittredge, whom I knew very well, and I sometimes think that if Phil could see the Journal today, he would be so proud. ■

Top 5 Career-Boosting Benefits of the AARC Congress

Respiratory therapists, physicians, nurses, and other health care professionals from around the world will travel to Tampa, FL, this Nov. 5–8 for the 57th AARC International Respiratory Congress, and all of them will be bringing their own set of expectations about what the meeting can do for them. But chief on the list for just about everyone will be boosting their career potential, and this gold standard meeting in the respiratory care profession is guaranteed to get the job done. To prove the point, we came up with a "top five list" of ways the AARC Congress can put you on the path to a more fulfilling professional life, and then we asked a few members of this year's Program Committee to weigh in with their thoughts. Check it out:

There are many good reasons to attend this November's AARC International Respiratory Congress in Tampa. Here are five career-building features that stand out from the crowd.

by Debbie Bunch

1. Organizational Value

If your organization is like most these days, it's looking for added value at every turn; and there's no better place than the AARC Congress to pick up the knowledge and skills you need to demonstrate your worth back home. With more than 250 lectures covering the latest scientific information in all of the practice areas in the profession, you'll walk away with a long list of ideas to share with your colleagues back home. Whether you are a manager seeking new ways to increase productivity in your department, an educator looking for the latest information on educating the next generation of RTs, or a bedside clinician going after evidence-based practices, you'll find it here.

> "All of the presentations at the AARC Congress come from proposals submitted by the membership, so you know you are going to hear about the topics that are most relevant to your day-to-day practice. We had a record number of submissions for the 2011 meeting, so get ready for a program that will address all of your key areas of concern."
>
> – Program Committee Chair Cheryl Hoerr, MBA, RRT, FAARC

> "We've heard time and again about Congress attendees who went home from the meeting with a new job offer or a chance to interview for a new position. Being able to meet and talk to people in person makes all the difference."
>
> – Program Committee Member Patrick Dunne, MEd, RRT, FAARC

2. Networking, Networking, Networking

Sure, you can network with your colleagues online — certainly, the AARC, with its new AARConnect social networking site, provides virtually unlimited opportunities to do just that. But there is nothing like meeting fellow clinicians face-to-face. With thousands of RTs and other health professionals all in the same place at the same time, the AARC Congress offers the opportunity to catch up with old friends, make new ones, and even meet and greet those online friends you've been connecting with over the course of the year. As regular attendees will attest, often your next best career move is no further away than these informal sessions.

3. Star-Studded Faculty

The AARC Congress attracts leading lecturers from here in the United States and abroad, but unlike a lot of meetings where the biggest names in the house take off as soon as the last PowerPoint slide has clicked off the screen, they stick around to make themselves available to anyone who would like to ask an additional question, seek advice about a particular situation, or just share a professional experience. Who might be in Tampa? It's too soon to name any names because, at this writing, the program is still being planned. But last year's meeting in Las Vegas saw sessions by everyone from Neil MacIntyre, MD, chief of clinical services at Duke University Medical Center in Durham, NC; to Michael Anderson, MD, vice president and associate chief medical officer at University Hospitals in Cleveland, OH; to Stefano Nava, MD, from the Instituto Scientifico di Pavia in Pavia, Italy.

> "If you want to drop a few names when you get home, the AARC Congress is the place to be. Just imagine catching your boss or medical director in the hallway and being able to say, 'I'd like to share with you what I learned during my conversation with Dr. Neil MacIntyre...'"
>
> – Program Committee Member Garry Kauffman, MPA, RRT, FAARC

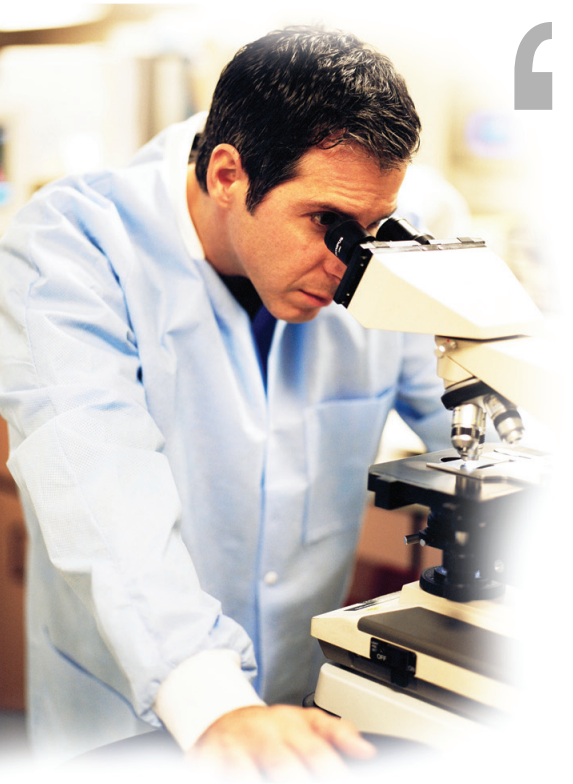
4.

Original Research

AARC 57th International Respiratory Congress

Nov. 5–8, 2011
(Saturday–Tuesday)
Tampa, FL

When you have a question about respiratory care, to whom do you turn? If you're like most folks, it's another respiratory therapist — whether a colleague in your own facility or a fellow AARC member online. It stands to reason, then, that the most relevant research in respiratory care is often that which comes directly from RTs or other clinicians who are directly involved in the care of respiratory patients. The Open Forum symposia at the AARC Congress feature more than 300 original presentations that drill down to the topics that mean the most to you on the job. Delivered in brief, 15-minute sessions with time allotted at the end for questions from the audience, these presentations provide the kind of information you can take home and put right to work in your health care organization.



> **The Open Forums are one of the greatest things about the meeting, because that's where you can hear specific details of research projects from around the country and identify whether or not similar projects or programs could be implemented at your facility as well.**
>
> **– Program Committee Member Michael Gentile, RRT, FAARC**

5.

The Latest Technology

Learning the latest information about respiratory care will take you a long way toward your respiratory care career goals. Seeing and touching the latest equipment in the profession is the other half of the equation. With hundreds of exhibitors, including all of the major companies in the business, the AARC Congress Exhibit Hall is the perfect place to take in the most recent advances in the profession all under one roof. And special features make the Exhibit Hall even more valuable to your career. The "Buying Show" concept lets you negotiate pricing and allows you to make purchases on site, usually at discounts well below what is offered to hospitals, even those participating in group purchasing organizations. ■

All the CRCEs You Need

Did we mention the CRCEs? The 57th AARC International Respiratory Congress will be approved for more than all the continuing education credits most therapists will need to maintain their state license to practice. ■

> **Attendees who take advantage of all the Exhibit Hall has to offer can go back to their facilities as the resident expert on what's available and how their organizations can make the most of it.**
>
> **– Program Committee Member William Galvin, MSEd, RRT, FAARC**

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7 FUN Things To Do in Tampa

When the AARC descends on Tampa, FL, this Nov. 5–8, the weather should be just about perfect — average temperatures range between a low of 61 and a high of 78, and the average rainfall for the month is only 1.62 inches. That bodes well for anyone who would like to spend a few days before or after the Congress seeing the sights. Here are seven fun things you won't want to miss!

1. American Victory Museum & Ship:

New to Tampa since the AARC last hosted a Congress in this city, the SS American Victory is a 455-foot vessel constructed in 1945. Slated for the scrap yard in 1996, it was rescued and established as a museum in the Channelside District of downtown Tampa. Now visitors can experience a fully functioning 1940s era steamship (there's even a hospital on board), then browse through exhibits featuring photographs, uniforms, medals, documents, and naval equipment.

www.americanvictory.org

2. CHANNELSIDE BAY PLAZA:

This $35 million, 230,000-square-foot entertainment center located on Tampa's downtown waterfront includes a nine-screen cinema, 3D IMAX theater, Splitsville bowling and billiards lounge, Tina tapa's, Thai Thani, Howl at the Moon, and Tampa Bay & Company's official Visitor Information Center.

www.channelsidebayplaza.com

3. THE FLORIDA AQUARIUM:

One of the top 10 aquariums in the United States, this attraction features interactive programs like "Swim with the Fishes," a 30-minute surface swim in the aquarium's largest exhibit, and "Dive with the Sharks," where certified scuba divers come face-to-face with five different species of shark from around the world. You'll also find exhibits like "Penguins: Backstage Pass," which brings you closer to penguins than ever before. The new Wild Dolphin Ecotour boat takes visitors on daily excursions from the aquarium to Tampa Bay on board a 72-foot-powered catamaran.

www.flaquarium.org

4. BUSCH GARDENS:

The ultimate family adventure park, Busch Gardens features an unparalleled combination of animal encounters, live entertainment, and world-class thrill rides. It's also considered one of the top zoos in North America, bringing visitors face-to-face with more exotic and endangered animals than any destination outside of Africa. Attractions range from the Broadway-style "KaTonga — Musical Tales from the Jungle" to "SheiKra," America's first dive coaster, to "Jungala," where you can discover a colorful village nestled among towering trees, explore a three-story playland of climbing nets and exploration tunnels, soar above the treetops on a zip-line adventure, or launch into the sky from inside a 35-foot waterfall.

www.buschgardens.com

5. Yacht StarShip:

America's first AAA three-diamond rated dining yacht, the StarShip cruises daily out of the Channelside Bay Plaza in downtown Tampa. From narrated lunch and brunch cruises to elegant dinner cruises, Yacht StarShip offers four-star cuisine, top quality service, dazzling entertainment, and spectacular views from the promenade deck.

www.yachtstarship.com

6. TAMPA WATER TAXI COMPANY:

With service to all the waterside hotels and nightspots in the city, the Tampa Water Taxi Company is a great way to get around, plus it also offers harbor tours, history tours, eco tours, sunset tours, special children's tours, and transportation for small or large groups. **www.tampawatershuttle.com**

7. SEGWAY TOURS:

Enjoy the sunny days and warm weather that Tampa will have to offer by hopping on an electric powered Segway and touring the town. Several tour operators are available, offering guided tours through the most popular spots, including Bayshore Boulevard, Davis Island, Harbour Island, the Tampa Convention Center, and Tampa Riverwalk.

You can learn more about tourist activities that are in Tampa and the surrounding area at www.visittampabay.com/. ■

PLAN NOW TO ATTEND CONGRESS 2011

Now is the time to plan your trip to Tampa for the 57th AARC International Respiratory Congress. As new information becomes available, the AARC website will post updates at **www.AARC.org** (click on the blue "Meetings" tab at the top). See you in November! ■

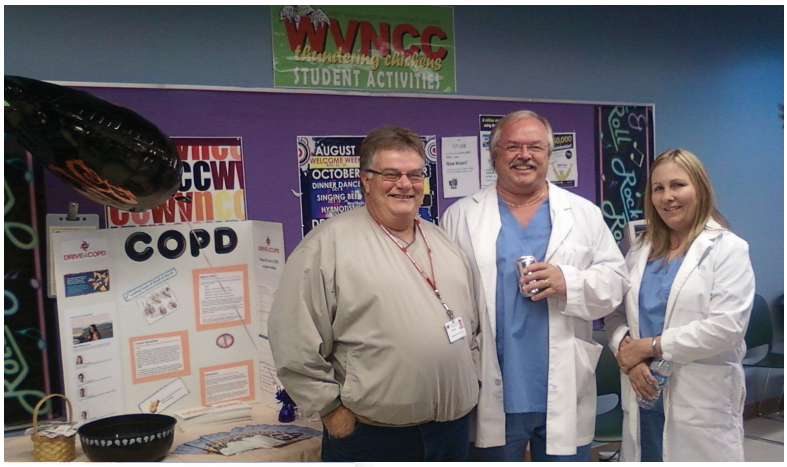
by Debbie Bunch

State Societies Make It Happen

Here are 3 shining examples showing how they do it — and why

We've all heard that a chain is no stronger than its weakest link, and no where does that concept resonate more clearly than with a professional organization like the AARC. Without the active support of members on the state and local level, the Association would not be able to accomplish its goals and objectives for the respiratory care profession.

2009–2010 AARC President Timothy Myers, BS, RRT-NPS, congratulates Chuck Menders and the entire WVSRC for winning the DRIVE4COPD trophy in the state society contest.



West Virginia Northern Community College volunteers spread the word about COPD at a community event.

At the heart of this philosophy are our 50 state societies. From Maine to California, these organizations provide everything from local leadership to educational opportunities to the ability to network face-to-face with colleagues. They also work tirelessly to deliver the AARC message to their communities of interest, jumping enthusiastically onto the bandwagon whenever they are called into duty. In this feature story, we salute all of our state societies by zeroing in on specific accomplishments made by several among their number last year. Take a look and we think you'll agree — the AARC state societies make it happen for the profession of respiratory care.

Grassroots Efforts Drive COPD Campaign

Over the years the AARC has asked a lot of things of its state societies, but in 2010 the Association took it up a notch by reaching out to all 50 of them in a nationwide effort to identify more people in the early stages of COPD. As a key partner in the DRIVE4COPD campaign, the AARC was to help screen people all across the nation using a simple, five-question population screener; and the only way that could happen was if the state societies got involved big time.

Get involved they did. Over the course of just a few months, state society members screened thousands of people, putting a big dent in the campaign's overall goal of screening a million people in a year's time. To spur the project, the AARC decided to sponsor a little friendly competition among the states to see which ones could turn in the most screeners — and West Virginia and Pennsylvania came out on top.

Small state, big impact

"The DRIVE4COPD campaign was announced at our state board meeting at the end of July," recalls Chuck Menders, BA, RRT, who served as the West Virginia Society for Respiratory Care (WVSRC) state captain. "Our board was very excited about this project… we could immediately see how utilizing a public awareness campaign such as this would not only benefit the general public but would also be a great tool to galvanize therapists throughout the state to come together for a common goal."

Menders and his colleagues got the ball rolling by sending emails to members, hospitals, and schools throughout the state, then followed up with one-on-one contact with key members. Screening events were scheduled at health fairs and festivals and during many of the fall respiratory care observances — National Respiratory Care Week, Lung Health Day, and World Spirometry Day. Members also promoted the drive during their annual state respiratory conference, state sleep conference, state asthma coalition conference, and several hospital conferences.

"Emails continued going out every week to 10 days letting folks know

A visitor picks up information on the DRIVE4COPD campaign during an event held by the Carver Respiratory Therapy Program.

what place we were in, how many screeners we had received, recognizing those individuals and facilities who had made a big impact on our numbers, and encouraging others to get involved," says Menders. "Frequent communication and updates on our progress helped to get therapists excited about what we were doing and gave everyone feelings of pride and accomplishment that a small state like West Virginia could be making such a big impact."

Their ultimate success in the competition — the WVSRC won in the "Highest Percentage of Screeners to Members" and "Highest Ratio of Screens to Over 35 Population" categories — is the sum of many factors, says Menders. But if he had to come up with the top three reasons why the state took top honors, he says they would have to be "respiratory care students, respiratory care students, and respiratory care students." A little over half of the screeners turned in by West Virginia came directly from RC students who rallied to the cause to make a difference in the lives of people at risk for COPD. The WVSRC board of directors did sweeten the pot a little by offering a $500 scholarship to the school that turned in the most screeners per student, but Menders believes most of the students would have jumped at the chance to get involved anyway. "Most of the schools chose this project to fulfill their public service requirements, and they did so with dedication, enthusiasm, and professionalism. In one of the weekly email updates to therapists across the state, I even commented how, as professional respiratory therapists, we're supposed to be leading and mentoring the students, but so far they're teaching us a thing or two about patient advocacy."

Menders is proud of all the WVSRC members who stepped up to help raise awareness of COPD and screen. "A recent study shows that nearly everyone knows about diabetes and breast cancer, but only 70% of people are aware of COPD, which affects more people than diabetes and breast cancer combined. As respiratory therapists, we need to take ownership of this. We need to be the ones providing the education, understanding, and awareness of the disease in order to have a similar impact on public awareness that the advocates for diabetes and breast cancer have had. It won't happen if we don't get involved."

PFTs were offered in the lobby of Charleston Area Medical Center.

Unprecedented effort in Pennsylvania

While Menders and his colleagues were busy racking up screeners down in West Virginia, AARC members up in the Pennsylvania Society for Respiratory Care (PSRC) were working overtime to win the competition as well. "The PSRC board of directors was happy to hear of a national initiative that would involve our members," says Society President Steven Mosakowski MBA, RRT-NPS, CPFT. "Our members have a history of really stepping up and taking action when asked to do so, and the board expected no less for this initiative."

PSRC Executive Director Thomas Lamphere, BS, RRT, RPFT, spearheaded the state effort, ordering literally thousands of screeners from the AARC and then distributing them to members around Pennsylvania, who used them during a wide variety of events — including at a concert by Patty Loveless (one of the campaign's celebrity spokespeople) at the Sellersville Theater.

Students from the West Chester University/Bryn Mawr Hospital RC program helped put the PSRC over the top in the AARC competition, collecting nearly 1,900 screeners.

Thomas Lamphere accepted the "Most Screeners Completed" award on behalf of the PSRC.

Mosakowski credits Lamphere for keeping the whole operation on track, and he also gives high marks to all of the RTs in Pennsylvania who rose to the challenge. "We literally had members from all four corners of our state and in the middle participating in the campaign."

Mosakowski and his group found RC students to be among their greatest assets in carrying out the campaign. "In particular, the students from the West Chester University/Bryn Mawr Hospitals respiratory therapy program, under the leadership of Brian Kellar, MS, MEd, RRT-NPS, really went way above and beyond the call of duty by submitting nearly 1,900 completed screeners." That certainly helped the state society walk away with the third award in the competition — "Most Screeners Completed."

Mosakowski says getting so many members involved in a single initiative was really unprecedented for the PSRC, but the payoff was well worth the effort involved. "Our profession exists because of our patients. We are the only professionals who fight for their rights and advocate on their behalf," he notes. Mosakowski congratulates the AARC for rallying RTs across the nation via DRIVE4COPD and showing everyone what a big impact RTs can make when they work together for a common cause. "By harnessing the power and voices of the 50,000-plus members in the AARC, we can make a difference, and the DRIVE4COPD campaign is one of what we hope will be many more campaigns that allow us to continue making that difference."

Karen Blum, RRT, and her daughter Ally (on the far left), join Gwynedd Mercy College student Jessica Goelz, CRT (center) and PSRC Executive Director Thomas Lamphere and his daughter Amanda in the theater lobby of the Patty Loveless concert.

Attendees at the Patty Loveless concert take a few moments to fill out the DRIVE4COPD screener.

Getting the annual proclamation from the governor in honor of National Respiratory Care Week is just one way the MSRC tries to recognize this pursuit of excellence among its members.

Reaching the Summit

Every year at the AARC International Respiratory Congress one state society is honored with the coveted Summit Award, and the most recent winner epitomizes the intent of this annual competition. The Michigan Society for Respiratory Care (MSRC) was recognized for a plethora of activities aimed at promoting the profession and advocating for patients.

What does it take to be recognized as the top state society in the AARC? Here's a quick look at just some of the things the MSRC did to take home the award, according to MSRC Public Relations Chair Gary Jeromin, MA, RRT:

- Appointed a committee to work with the Michigan Department of Community Health's Respiratory Care Board to develop an advanced Professional Development Portfolio concept.
- Ranked first among all the AARC state societies in membership messages sent to Congress via Capitol Connection to support the Medicare Respiratory Therapy Initiative bills.
- Scored in the top 15 in the Association's DRIVE4COPD screenings competition.
- Joined a broad coalition that worked with Michigan state legislators to successfully oppose a bill that would have amended the Michigan Consumer Protection Act to expose licensed professionals to further possible litigation.
- Wrote to Michigan state legislators in support of a bill to allow Michigan community colleges to begin offering bachelor degree programs. (The bills passed the House but stalled in the Senate.)
- Requested a governor's proclamation in recognition of National Respiratory Care Week.
- Sent out press releases to local newspapers and TV stations promoting RC Week.
- Hosted the Kimmel Golf Outing to raise funds for Sputum Bowl teams, attracting 100 golfers.
- Formed a partnership with the Faces Foundation, a group that presents the PHIL Award to outstanding RRTs in Michigan.
- Partnered with the Michigan Association of EMTs to identify potential educational opportunities and begin discussions on the professional scopes of practice.
- Began work with the nurse associations in Michigan, with an ultimate goal of coalition building and developing a working relationship between the professions.

Michigan Governor Jennifer Granholm proudly displays the document she signed proclaiming National Respiratory Care Week last fall.

Par for the course

Anne Hamilton, BS, RRT (MSRC's current pulmonary rehab chair and former MSRC president in 1999), says she and her colleagues were thrilled to receive the recognition but that the initiatives which earned them the award are just one part of how they conduct themselves on an ongoing basis. "Our leadership and member volunteers put in countless hours every year for educational seminars/conferences, legislative monitoring, public awareness initiatives, and to fulfill other annual goals and objectives," she explains.

For the most part, these activities are part of a strategic plan formulated by leaders to guide the state society through its key issues. "Some of the activities we engaged in last year were already planned, such as the AARC PACT trip to Washington, DC," says 2011 President Alicia

The MSRC Executive Board worked hard on all the initiatives that ended up earning their state society the 2010 Summit Award.

Wafer, BS, RRT. "Other items were goals from our long-term plan that our association leadership executed with a deliberate strategy."

District 4 Representative Timothy Heinz, MA, RRT-NPS, AE-C, credits the state society's success to its members, whom he says are a dedicated group of people who encourage and mentor each other to excel. "As we grow, we see new members volunteering to fill vacant positions and roles, bringing all of their enthusiasm and energy to the profession," he says. "It's nice to know that you have a group of colleagues who are there to educate, answer questions, and generally support the society."

Getting the annual proclamation from the governor in honor of National Respiratory Care Week is just one way the state society tries to recognize this pursuit of excellence among its members. "We've been successful in this endeavor each of the last six years now," says President elect Paul Loik, RRT.

Victory, despite challenges

With its state society roots going back to the late 1950s, Hamilton says the MSRC believes it's nearly always a contender for the Summit Award; but winning in 2010 was especially gratifying given the economic challenges facing the state of Michigan. "What makes it extra special this time was we were suddenly faced with one of the worst economies in the United States and we had to start slashing our annual budgets in half. Yet, as we worked through these difficult financial challenges, we continued to experience membership growth with record participation throughout our organization and its activities."

The MSRC plans to continue down the same path throughout 2011 and beyond also because it's good for their patients, not just good for the profession. "Public education and awareness of our profession should be among the top goals of any association," says Past President Steven Hamick, BIS, RRT, AE-C. "We know that we play important roles in health care, but our patients need to know the important roles we play in their health, too. After all, patients are the heart of health care."

(continued on page 70)

Past MSRC President Steven Hamick (right) visits with a colleague during an MSRC event.

Get-togethers like this luncheon in the fall of 2010 give MSRC members a chance to network with their colleagues from around the state.

Marketplace

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.

Hazmat Suit

The Dräger CPS 5900 is a new single-exposure, disposable, Level A gas-tight chemical protective suit for hazmat incidents. The lightweight garment is made of Zytron® 500, the softest laminate material on the market, and is compatible with various types of personal protective equipment, including the latest closed-circuit breathing apparatus. Available in five sizes, the CPS 5900 is designed to fit both male and female users of all sizes, and has an integrated waist belt for an optimal fit, a flexible and foldable scratch-resistant visor that offers a wide field of vision, a wide side entry with zipper fastener that makes it quick and easy to put on or take off, and integrated gas-tight socks with boot flaps. www.draeger.com

Automatic Oxygen Controller

CareFusion's Closed Loop Controller of Inspired Oxygen system, or CLiO2™, is the first automatic oxygen controller of its kind designed to keep blood oxygen levels within a safe range for newborns needing mechanical ventilation. An enhancement to the CareFusion AVEA™ ventilator, the CLiO2 system noninvasively and continuously measures the oxygen level using Masimo SET® Measure-Through Motion and Low Perfusion pulse oximetry technology. The system processes blood oxygen saturation levels by a computer algorithm that then anticipates trends and modifies the amount of oxygen delivered. If necessary, adjustments can be made on a second-to-second basis. www.carefusion.com

CPAP System

The IntelliPAP Standard Plus CPAP System from DeVilbiss Healthcare provides three pressure relief drops and six rounding options to independently adjust the transition between inhale and exhale. SmartFlex can be disabled or enabled for patient adjustment and is automatically disengaged in the absence of sufficient breath. Expanded reporting capabilities include apnea, hypopnea, nonresponding, snoring, and exhale puff event detection and leak reporting through the on-board SmartCode® Compliance Tracking and optional SmartLink® Therapy Management System. A Quick View allows users to view days on therapy, AHI, high leak, and average daily usage hours. www.devilbisshc.com

Hybrid Scope

The Olympus Airway Mobilescope provides airway management to a wide range of hospital staff who do not have immediate access to standard video equipment. With a monitor, LED light source, battery, and recording device in a single unit, this hybrid scope enables observations without peripherals or cables. Its 2.5 inch monitor controls operations in a single view, and an xD-Picture card enables you to capture both still images and video for easy referencing and management. www.olympusamerica.com

VAP Risk Reduction Kit

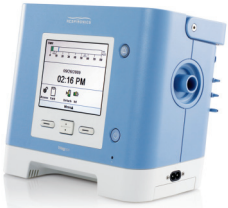
Teleflex has introduced the Gibeck Humid-Flo Passive Humidification Kit, an integrated system for VAP risk reduction that includes everything required to reduce the frequency of ventilator circuit breaks, allowing all components, including the heat and moisture exchanger, to remain in-line during the first 72 hours of mechanical ventilation, even when aerosol treatments are given. www.teleflexmedical.com

Nasal Pillows Just for Women

ResMed Corp.'s new Swift™ FX for Her nasal pillows system is designed specifically for female sleep apnea sufferers. The innovative mask comes packaged with two headgear color options so a patient can customize her mask to complement her personal style, along with two pairs of soft wraps also in color options to color coordinate with the headgear choice. www.ResMed.com

Portable Life-support Ventilator

The Trilogy200 portable life-support ventilator from Philips Respironics provides both invasive and noninvasive ventilation with added sensitivity for a wide range of adult and pediatric patients in the home and in alternative care settings. Using a new single-limb circuit and proximal flow sensor, Trilogy200 offers improved triggering and leak compensation, leading to decreased WOB and resulting in greater therapy comfort, better ventilation, and improved patient/ventilator synchrony. Weighing only 11 pounds, it features a unique six-hour battery system of internal and easy-to-swap detachable batteries. www.philips.com



Portable Oxygen Concentrator

The LifeChoice® portable oxygen concentrator from Inova Labs weighs in at less than five pounds and is about the size of a portable CD player. It features a pulse dose system designed for oxygen users with a prescription for 1 to 3 liters per minute and features highly sensitive Sleep Mode technology that ensures LifeChoice detects nighttime breathing and supplies the necessary oxygen therapy. www.lifechoiceoxygen.com

Industry Watch

HHS framework takes aim at chronic conditions

The U.S. Department of Health and Human Services has issued a new "strategic framework on multiple chronic conditions" that will be coordinated by HHS with input from agencies within the department and multiple private-sector stakeholders. The key goal will be to reduce the risks of complications and improve the overall health status of individuals with multiple chronic conditions by: fostering change within the system, providing more information and better tools to help health professionals and patients learn how to better coordinate and manage care, and facilitating research to improve oversight and care. "Individuals with multiple chronic conditions deserve a system that works for them," says Howard K. Koh, MD, MPH, assistant secretary for health. "This new framework provides an important roadmap to help us improve the health status of every American with chronic health conditions."

Veridex and MGH to develop new cancer test

Veridex LLC is collaborating with Massachusetts General Hospital to develop and commercialize a new blood test to find cancer cells in the body using next-generation circulating tumor cell technology. The partnership will involve Ortho Biotech Oncology Research & Development (a unit of Johnson & Johnson Pharmaceutical Research & Development). They will focus on developing a system that can be used both by oncologists as a diagnostic tool for personalizing patient care, as well as by researchers aiming to accelerate and improve the process of drug discovery and development. "This new technology has the potential to facilitate an easy-to-administer, noninvasive blood test that would allow us to count tumor cells and to characterize the biology of the cells," says Robert McCormack, head of technology, innovation, and strategy at Veridex. "Harnessing the information contained in these cells in an *in vitro* clinical setting could enable tools to help select treatment and monitor how patients are responding."

Monaghan takes BPA out of more products

Monaghan Medical Corporation recently announced that all of its AeroChamber Plus® Flow-Vu® and Z Stat® branded anti-static valved holding chambers are now free of bisphenol A (BPA). BPA is a chemical additive that increases durability and clarity in some plastic products but has been reported to block and/or disrupt normal body functions. Health concerns related to BPA include damage in brain development, reproductive development, reproduction and conception, miscarriage and Down's syndrome, heart disease, diabetes, obesity, cancer, behavioral impact in young children, and male virility. Monaghan reports it already offers several other BPA-free products.

Discovery Labs' KL4 surfactant combination receives patent

According to Discovery Laboratories Inc., it has received a patent from the U.S. Patent and Trademark Office that provides broad coverage for compositions that employ a combination of certain pulmonary surfactants with a broad array of protease inhibitors, administered as either a liquid or aerosol, for the treatment of pulmonary inflammation. Dr. Charles Cochrane, the original inventor of Discovery Labs' proprietary surfactant technology and co-founder of The Scripps Research Institute, is the inventor; and the institute has granted Discovery Labs exclusive licensing rights for the patent. Discovery Labs COO, Dr. Thomas F. Miller, notes, "Combining certain protease inhibitors with KL4 surfactant may facilitate more flexible delivery and meaningfully improve the clinical benefit to patients with respiratory disorders."

Covidien makes inroads into Europe

Covidien recently announced that the Puritan Bennett™ 520 portable ventilator is now available in the European Union. The company noted the availability of the new Infinity® MCable® with

Nellcor™ OxiMax™ technology as an integrated component of the Dräger Infinity Acute Care System™ in Europe, as well.

Invacare to join Cleveland's new Medical Mart

Invacare Corporation reports it has signed a letter of intent to join the first-of-its-kind Medical Mart project in Cleveland, OH. Slated to open in 2013, the Cleveland Medical Mart will be the world's only facility targeted specifically to the medical and health care industries, with approximately 120,000 square feet of permanent showrooms for major medical manufacturers and service providers. "We are proud to be a health care company based in Cleveland, and there is no better way to show our dedication to the city and the health care industry than to give our support to the Medical Mart," says Mal Mixon, chairman of the board at Invacare. The company will use the Medical Mart to highlight the value of home health care.

Vapotherm's Flowrest® receives CE marking

Vapotherm representatives report the company has received CE marking for Flowrest®, a device designed for home care and other low-acuity environments that delivers warmed, humidified, high-flow breathing gases for treating spontaneously breathing patients using a nasal cannula. "We are excited to expand our product portfolio and greet the pent-up demand for a high-flow therapy device that is comfortable, cost-effective, and easy to use specifically for patients in the home and other low-acuity environments," says Nick Macmillan, RRT, FAARC, home care segment manager at Vapotherm.

Linde launches fund for health care innovation

The Linde Group's global business unit, Linde Healthcare, has launched the Linde Healthcare REALfund to support and stimulate novel and innovative ideas, research, and projects relating to the use of gases in certain therapeutic focus areas of health care. Applications are open to health care practitioners, patient organizations, inventors, and academic researchers. The fund will support projects for new applications of gases, devices for safe and effective application of gases or monitoring of effects and success of gas-related therapies, and complementary products and services in the field. Focus areas include acute pain management, respiratory medicine, and gas-enabled wound care, although other innovative areas may be covered as well.

New acquisition for Royal Philips Electronics

Royal Philips Electronics reports it has acquired substantially all of the assets of medSage Technologies LLC, a leading provider of patient interaction and management applications. The acquisition will allow Philips to offer a Web-based solution that enables home care providers to manage ongoing compliance and replenishment services for individuals under treatment for OSA, diabetes, respiratory, and other conditions. The acquired business will become part of the sleep business within Philips Home Healthcare Solutions.

DeVilbiss redesigns website

DeVilbiss Healthcare has redesigned its website, www.DeVilbissHealthcare.com, to offer improved consistency with the DeVilbiss brand image, allow for easy navigation, and provide enhanced functionality. "Corporate websites have evolved to become a critical resource of information and education for customers, whether providers or end users," says Craig Haba, vice president of sales and marketing for Respiratory Solutions at DeVilbiss.

O2Delivery.net adds CMS provider info

In an effort to help oxygen-dependent patients navigate the new Medicare requirements, O2Delivery.net has added a "CMS Provider" label to its online directory. Now when users scan the list of providers for their area, they will be able to easily locate an approved resource via a map with all the geographically relevant listings within 20 miles of the user's location. A textual list of the providers appears below the map, and the "CMS Approved" icon is in the upper right corner of the listings.

AVI BioPharma, university, tackle XDR-TB

AVI BioPharma Inc. has begun collaborating with leading scientists at the Swedish medical university Karolinska Institutet to identify RNA-based therapeutic candidates for the treatment of extensively drug-resistant tuberculosis. The research will use AVI's proprietary, intrinsically charge-neutral, phosphorodiamidate morpholino oligomer (PMO)-based chemistry platform. The drug candidates will target individual human host and bacterial genes, as well as combinations of PMO-based drug candidates that target both host and bacterial genes.

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

RC Currents

IN THE NEWS

Committee Shapes Proposals into Congress 2011 Program

The Program Committee had their work cut out for them when they arrived for their annual planning meeting in Dallas. Over 800 individual lectures had been proposed by the membership. By the time they left town on Feb. 11, they had a good outline of the priorities they need to address in the 2011 meeting and even the topics and symposia that will be offered for the Nov. 5–8 AARC Congress. Among those, priorities will be: health care reform, patient safety, developing more patient education skills, helping RTs become part of the interdisciplinary team, cost avoidance, and raising professional stature.

This year's meeting, in Tampa, FL, will be earlier in the year than recent meetings and will be held on a Saturday through Tuesday. The format is expected to be the same: four days of lectures and programs, three days of exhibits. Registration is already open, and those who already know they will be attending can save up to $30 over regular rates by registering now until April 29.

Cheryl Hoerr, MBA, RRT, FAARC, 2011 Program Committee chair, explained that the committee does discuss each and every one of the submissions they receive. From there, recognizing themes and combining proposals into series helps incorporate many of the ideas that are submitted. "This committee puts in a lot of time over the whole year to get ready for our Congress," she said. Once the skeleton of the Congress is put together at this planning meeting, the real work of organizing the topics and speakers begins and continues up until meeting time.

In addition to the Congress, the Summer Forum agenda was also planned. More information on both meetings will be released as it becomes available. ■

Program Committee Chair Cheryl Hoerr makes notes for the book of proposals that are submitted by AARC members around the world.

9/11 Edition of *AARC Times* To Be Included in George W. Bush Presidential Library

When the planes hit the twin towers, the Pentagon, and a Pennsylvania field on Sept. 11, 2001, respiratory therapists joined their fellow health care professionals in caring for the victims, and *AARC Times* covered their heroic actions in the October 2001 edition of the magazine.

Earlier this year, *AARC Times* Editor Marsha Cathcart contacted archivists working to collect historical documents for the George W. Bush Presidential Library currently under construction at Southern Methodist University in Dallas, TX, to ask if they would like to have a copy of this unique edition for their archives. The answer was a resounding "yes" once they learned that the president and first lady had appeared on the cover of the issue and were featured in an article about meeting RTs and others at Washington Hospital Center on Sept. 13. The AARC sent the magazine to the National Archives and Records Administration (NARA) collection center, and a NARA archivist has now confirmed it will be included in the presidential library's vertical files when it opens in 2013.

"It's great to know that respiratory therapists' can-do spirit and selfless actions during the aftermath of Sept. 11 are being recognized," says Cathcart. "Having this edition of *AARC Times* accepted by the Bush Presidential Library is an honor."

You can read or revisit the October 2001 *AARC Times* coverage of the important role respiratory therapists played in the aftermath of Sept. 11 in the *AARC Times* archives online at www.aarc.org/members_area/aarc_times/10.01/contents.asp. ■

DRIVE4COPD

Take action today. Breathe better tomorrow.

DRIVE4COPD Reaches 1 Million Mark

AARC members can take pride in the fact that they helped achieve a milestone, as the DRIVE4COPD announced that it achieved its goal of screening 1 million Americans to determine their risk for COPD. The goal was reached exactly 365 days after the campaign launched.

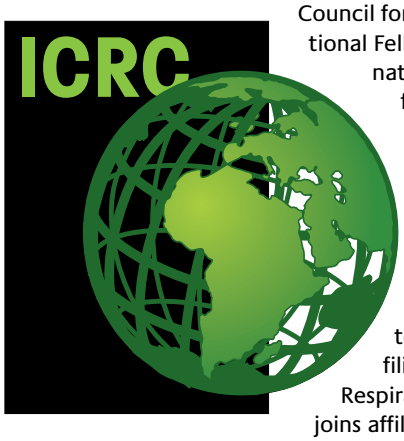
"We're gratified that we played a role in helping to reach 1 million people who may be at risk for COPD," says Thomas Kallstrom, MBA, RRT, FAARC, the AARC's chief operating officer.

While the state contest has ended, the AARC continues to work with the DRIVE4COPD program. With 1 million screened, this campaign is working to change the way COPD is viewed and addressed in America. "Our commitment with the DRIVE continues," says Kallstrom, "because much work remains." COPD is the only leading cause of death in America that is on the rise and still takes one life every four minutes.

This year, the AARC will continue to involve its members in screening activities and has plans for a student project that would get them active in DRIVE4COPD. ■

AARC Adds New International Affiliate

Respiratory therapy is a growing phenomenon in nations around the world, thanks in large part to the efforts of our International Council for Respiratory Care and International Fellowship Program. As these nations have developed the profession within their borders, so too have they established their own respiratory societies, and now many of these organizations are becoming affiliates of the AARC as well.



The most recent addition to our roster of international affiliates is the Saudi Society for Respiratory Care (SSRC). The SSRC joins affiliates from the United Arab Emirates, Mexico, and Italy, bringing the number of international affiliates in the Association to four.

International colleagues from these organizations work tirelessly to facilitate foreign submissions to Respiratory Care and re-publication of our journal articles in foreign publications. They also open doors for American RTs to participate in international speaking engagements, and they actively recruit international members. ■

Overheard: What's a "Good Day"?

Here's what we overheard on our Facebook page when we asked people to describe a good day.

- A 12-hour shift without CODES!
- Happy patients!
- Actually getting to sit down for lunch and being able to use the restroom when I have to!
- A wife's, husband's, son's, daughter's, mom's, dad's, brother's, sister's, or friend's smile or embrace for the help I've provided … Priceless!
- Any easy ABG poke without family and doctors staring the whole time.
- Not spilling Mucomyst on you.
- Getting to help wean patients who have been deemed unweanable for years and liberating them.
- Making a difference! And still wanting to after 23 years.
- When the "deer in the headlight" looks go away and the light bulbs come on, and they say "now I get it!"

You can be an AARC Facebook fan or get in on more all-in-the-family social networking by logging in to AARConnect (http://connect/aarc.org). Get online and get connected with the AARC. ■

Journal Issues Call for Open Forum Abstracts

A simple and convenient way for you to submit abstracts online for the Respiratory Care Open Forum for the AARC International Respiratory Congress is at http://aarc2011.abstractcentral.com. Easy online instructions will guide you through properly submitting abstracts for Respiratory Care 2011 in Tampa, FL, Nov. 5–8. The deadline for submitting Open Forum abstracts is **June 1**.

The Open Forum is your opportunity to gain national and international recognition for your work in cardiorespiratory care. Plus, accepted abstracts will be published in the October 2011 issue of Respiratory Care and will automatically be considered for research fellowships from the American Respiratory Care Foundation. ■

Industry Profile: Aerogen

John Power

Aerogen CEO John Power shares some information about his company in the following interview:

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

Power: Aerogen is a specialty drug-delivery company that has pioneered the advancement of aerosol drug delivery, particularly for patients with respiratory disorders in the critical care setting. We've been in business since 2000. Our number one product is the Aeroneb® Solo nebulizer, which enables silent drug delivery for infants through adults. The Aeroneb Solo uses vibrating mesh technology and creates a fine-particle, low-velocity aerosol optimized for deep lung deposition. It aerosolizes a broad range of formulations and maintains drug integrity as it does not heat, degrade, or shear medications.

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

Power: The intensive care setting is constantly evolving to better cater to patients' needs. We have worked closely with respiratory therapists to ensure that our products help provide the best possible care. This year we are introducing a continuous syringe and tube set designed specifically to be used with our Aeroneb Solo to ensure safe, continuous nebulization and prevent tubing misconnection. We have designed and produced our new continuous nebulization accessories to be compliant with guidance from the U.S. Food and Drug Administration not to use standard luer connectors in non-intravenous applications. This represents progress in meeting both the RTs' and the patients' needs.

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

Power: The Aeroneb Solo is a fast, convenient, and effective nebulizer option for getting medication into a patient's lower lungs. It is loved by RTs the world over because of its short drug-delivery time, its drug efficiency, and the fact it retains drug integrity without shearing or heating medication.

***AARC Times*:** Do respiratory therapists work for your company and, if so, in what capacity?

Power: Although Aerogen does not currently employ respiratory therapists, we consult with aerosol expert Jim Fink, PhD, RRT-NPS, FAARC, in all clinical matters. We endeavor to work closely with RTs to ensure that our products are reaching expectations of the intensive care work environment. The knowledge and experience of RTs is an integral part of Aerogen's product development process.

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

Power: The impact of the worst global economic crisis since the Great Depression and the introduction of the new health care reform bill will force medical device manufacturers to

clearly demonstrate improved patient outcomes. Devices with "bells and whistles" that have no real clinical impact will simply not cut it. RTs will need to know that the devices they are using are giving the best care possible, thereby recovering patients quicker and controlling, or in some cases reducing, the cost of care. In this regard, Aerogen is proud of the role the Aeroneb Solo has played in helping RTs achieve these objectives and the broader clinical and societal impact on recovering patients efficiently and quickly.

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

Power: In relation to respiratory care in the ICU, we see the respiratory device industry moving in line with the RT's clinical objectives of limiting intubated mechanical ventilation as much as possible. This includes an increase in the number of patients started on noninvasive ventilation (NIV) as a preventive to full intubation. A previous limitation of NIV has been the lack of an efficient means to deliver aerosol therapy to an NIV patient. In fulfilling this need, Aerogen has collaborated with Philips Healthcare to develop the NIVO nebulizer, the first customized nebulizer for effective nebulizer therapy in a noninvasive setting. ■

Writer's Corner
Celebrating RT Day in Singapore

by Herng Lee Tan, RRT

Celebrating Respiratory Therapy Day 2010 in Singapore has been especially memorable and exciting for all the RTs due to the banding together of RTs from all the different restructured hospitals in Singapore to organize an RT day event. This also marked the first event organized by the Association of Respiratory Therapists (Singapore) or ART(S), which was formed in February last year.

We chose Oct. 27, which was designated as Lung Health Day, to be Singapore's RT day; and ART(S) in collaboration with the Tan Tock Seng Hospital (TTSH) RT Department organized an event to celebrate this day. The event was held at TTSH atrium from noon to 5 p.m. to bring more awareness to the general public and other health care workers regarding the roles of the respiratory therapist and what we do to promote lung health. Despite the presence of RTs in Singapore for close to 20 years, it is still a relatively unknown profession to many, including doctors and other health care workers.

For this event, we had a series of posters on tracheostomy, oxygen therapy, mechanical ventilation, CPAP/bi-level PAP machines for OSA patients, and smoking cessation. From these posters, there was a quiz comprised of 10 questions for participants. Answers to these 10 questions could be found in the posters display. There were also two games — a pair of lungs jigsaw puzzle and a cut-out lungs maze — that the participants could try to solve.

Additionally, beside each poster display was a table-top space for vendors to display respiratory care related products. Gifts such as pens, notepads, highlighters, mouse pads, and woven bags (sponsored by the various vendor companies in Singapore) were given out free to participants. We all thoroughly enjoyed ourselves and were glad that months of planning for this event had come to fruition with a good turn out and support for this event from the general public and other health care workers.

It was indeed an exciting 2010 for many of the RTs in Singapore from the formation of ART(S) to the planning and success of this RT Day event. This year will be an eventful year for ART(S) as well, as we are going to have our first respiratory care conference on Oct. 1, 2011.

With the formation of ART(S) and as RTs in Singapore continue to grow with these events that we organize, we hope that more people and other health care workers will have a better understanding of the importance and roles of a respiratory therapist. For more information, please visit www.arts.org.sg or email us at info@arts.org.sg. ■

Herng Lee Tan, RRT, is president of the Association of Respiratory Therapists in Singapore.

Colorado Member Takes on Simulation Center

Allen Wentworth displays one of the simulators in the WELLS Center.

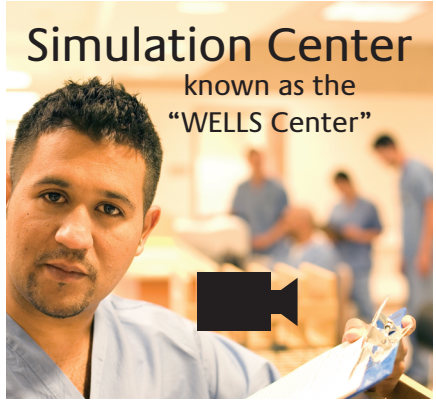
Last summer, the University of Colorado Hospital struck a deal with the Colorado Department of Labor and Employment to take over operations of the Work, Education and Lifelong Learning Simulation Center — known as the "WELLS Center" for short. The hospital's goal is to make the center into a hub for simulation training in the state; and when it came time to appoint a staff member to serve as director, administrators turned to Allen Wentworth, MEd, RRT.

"My boss, Carolyn Sanders, our vice president of patient services and chief nursing officer, came to me to ask if I'd be the director due to my previous history of being an educator," explains Wentworth. He agreed to add the responsibility to his current position as director of respiratory care, ancillary health technicians, and pulmonary diagnostics and pulmonary rehabilitation. He says he has enjoyed the challenge, noting the job description includes responsibility for everything from creating a business plan to managing the WELLS Center staff. "Most importantly, it involves maintaining the current customer base and recruiting new customers," he says.

Wentworth explains that the center serves as both a simulation facility where students and others can come to train — and also as a resource for hospitals and other organizations that own their own simulation equipment but need help programming the equipment and running simulations onsite. "We do a great deal of simulation in our customers' facilities," says Wentworth. "This provides a great opportunity for them to assess and correct system issues. They can transport from their ED to the cath lab using their own difficult airway kit. They can assess the performance of their own rapid response team or code team in their own environment."

A big proponent of simulation training for students and staff alike, Wentworth believes it gives participants a chance to assess and perform interventions in real case scenarios without putting patients at risk. "Simulation is also a great method of providing training for high-risk and uncommon pathologies; and another focus that is becoming more important is, by using standardized patients and family members, we can also provide participant feedback on patient and family interactions."

One of the best aspects of the training, however, is its ability to support the development of interprofessional teams. For example, when a group of student nurses came into the center last fall for an evening drill that had them doing everything from seeing patients in the ED to applying mechanical ventilation in the ICU, respiratory therapists, critical care nurses, an advance practice nurse, and an ED physician were on hand to show the students how care plays out in a real-world setting where many different professionals are involved. "We like RTs, RNs, physicians, EMTs — whomever the scenario calls for — to be involved in our simulations to work on team concepts and the team approach to medicine," Wentworth says. ■



Click icon on photo to see video

Student Members: Send Us Your Stories and Editorials

AARC Times is always looking for good stories from AARC student members that relate special experiences and give the RT student perspective on the respiratory care profession they have chosen as a career. We have published the stories of several student members in *AARC Times* this year, and we continue to encourage you to share your experiences.

Have you volunteered at a summer asthma camp or helped organize the DRIVE4COPD program in your state? Have you advocated for respiratory therapy in your state capitol or on Capitol Hill? Maybe you and your RC student friends have collaborated to build a house with Habitat for Humanity. Perhaps you witnessed a lifesaving event outside the hospital setting or experienced something that took your breath away. Whatever the story, we would like to review it.

If you have a story to tell, please contact *AARC Times* Editor Marsha Cathcart at cathcart@aarc.org and include in the subject line, "Student Member Story." Be sure to give us your full name, AARC member number, a brief description of the story subject, and why you would like to have it published. Then attach a Word document of the story. We hope to hear from you soon! ■

Read the Rest of the Story at AARC.org

- COPD patients go "full tilt" in YouTube video —www.aarc.org/headlines/11/02/full_tilt_boogie.cfm
- AARC considers formation of Oncology Roundtable — www.aarc.org/headlines/11/02/oncologyroundtable/index.cfm
- VAP workshops scheduled in Michigan, Wisconsin, Colorado, and Virginia — www.aarc.org/headlines/11/02/vap_workshops.cfm

▶Transitions


1

Gail Walker, MEd, RRT (left), and **Linda Thompson, MEd, RRT,** have both retired from the respiratory therapy program faculty at Madison Area Technical College in Madison, WI. Thompson, who began teaching in 1975, and Walker, who started in 1977, have been best friends for years and decided that when it came time to retire, they would do it together. (Photo 1)

Jan Duistermars, BS, RRT, has joined Pima Medical Institute in Mesa, AZ, as director of clinical education for the respiratory therapy program. Duistermars comes to the position from Arizona Promise Specialty Hospitals, where she served as director of the cardiopulmonary department.

Barbara DeLuca, RRT-NPS, has received the Gregory R. Hoye Award, an honor given each year by Mountain Valley Hospice in Gloversville, NY, and the Hoye family to an individual who has demonstrated sensitive and compassionate care to the needs of patients and families dealing with life-limiting illnesses. DeLuca is a respiratory therapist at Nathan Littauer Hospital who also serves as a volunteer and consultant for Mountain Valley Hospice.

David Hambel, RRT-NPS, has been promoted to director of respiratory care at Good Samaritan Hospital Medical Center in West Islip, NY. He previously served as assistant director of the department.


2

Alan Roth, MS, RRT-NPS, FAARC, has been awarded the Presidential Citation from the Society for Critical Care Medicine (SCCM) for his outstanding contributions to the SCCM and his work as part of the CA-6 disaster team that helped out after the earthquake in Haiti. Roth is director of respiratory care at Memorial Medical Center in Modesto, CA. (Photo 2)

Robert F. Culp died in late January following a prolonged illness. An Army veteran, Culp worked for many years as a Veteran's Affairs hospital therapist, including as director of respiratory therapy for the VA hospitals in the southern New York and New Jersey area. He was 68.

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

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

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

Pre-op Sleep Studies Predict Problems After Adenotonsillectomy

A new study in the *Archives of Otolaryngology–Head and Neck Surgery* suggests polysomnographic data may be helpful in predicting which children are most likely to experience adverse respiratory events following adenotonsillectomy.

The research was carried out among 151 children who underwent pre-operative polysomnography. Results showed those with a higher apnea-hypopnea index, higher hypopnea index, and lower nadir oxygen saturation were more likely to suffer from pulmonary complications following the surgery. These children were also more likely to have a higher body mass index.

Overall, 15.2% of the children experienced complications, with the most common being oxygen desaturation. However, one child developed pulmonary edema requiring an admission to the pediatric ICU. Children who developed complications were more likely to require longer hospital stays. ■

Contribute to Writer's Corner

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

▶ Strange But True…

Prodigious Pooch: A border collie named Chaser proves dogs may be smarter than you think. South Carolina researchers were able to teach her the names of more than 1,000 objects over a three-year period.

That's One Nasty Sneeze! An Italian man who was shot in the head on New Year's Eve surprised doctors in Naples by sneezing the bullet out of his nose. Turns out, the bullet had gone in through his temple behind the eye, then entered the nasal cavity and became lodged in his nostril. Aside from a headache and the need for surgery to clean up the wound site and remove some bullet fragments, the man was fine.

Boozy Birds: Dead birds found in Louisiana and Arkansas earlier this year mystified public health officials, but their colleagues in the Romanian city of Constanta had a ready answer when faced with dozens of dead starlings. Tests showed the birds were drunk on grape marc, a by-product of winemaking. They aren't sure where the birds imbibed but note they probably partook of the substance due to the harsh winter and lack of food.

Fighting Fire with Fire: You wouldn't think it wise to inject cancer patients with cancer cells, but that's what researchers at New York's Rogosin Institute are doing. The strategy involves taking cancer cells from mice and encapsulating them into sugar beads, then implanting the beads into the abdomens of cancer patients. Once inside, the cells secrete proteins capable of causing the existing cancer to stop growing, shrink, or even die. ■

A Look at the Latest CDC Stats on Asthma Prevalence

The latest statistics from the Centers for Disease Control and Prevention show asthma affects 24.6 million Americans, or 8.2% of the population. However, higher percentages are found in many groups, including women, children, non-Hispanic blacks, and Puerto Ricans. Rates are also higher among those living below the poverty line and people residing in the Northeast and Midwest.

The findings come from the National Center for Health Statistics 2011 report, "Asthma Prevalence, Health Care Use, and Mortality: United States, 2005–2009," which also noted 1.75 million ED visits and 456,000 hospitalizations for asthma in 2007, along with 14.2 million missed days of work and 10.5 million missed days of school due to asthma in 2008. ■

Private Rooms Cut Down on Infection Transmission

Private rooms in the ICU could significantly cut down on hospital-acquired infections, report Canadian researchers publishing online in January in the *Archives of Internal Medicine*. They compared infection rates in two nearby Montreal hospitals, one of which switched to all private rooms in the ICU in 2002. Results showed the infection rate fell by 54% in the hospital with all private rooms after the change, and the average patient in a private room stayed in the hospital 10% fewer days than the average patient in a multi-patient room. The study involved an analysis of 19,343 ICU admissions between 2000 and 2005.

The authors believe private rooms may promote better handwashing practices among staff and easier cleaning for the housekeeping crew, along with fewer patient transfers between rooms — all factors that could lower the hospital-acquired infection rate. Statistics show nearly one in three ICU patients will develop a new infection while in the hospital, leading to an average increase in length of stay of more than a week. ■

National Health Observances

- **National Public Health Week**; April 4–10; American Public Health Association; (202) 777-2425; www.nphw.org
- **Older Americans Month**; May; U.S. Administration on Aging; www.aoa.gov
- **Asthma Awareness Month**; May; U.S. Environmental Protection Agency; www.epa.gov/asthma/awm
- **World Asthma Day**; May 3; Global Initiative for Asthma; www.ginasthma.com; materials available
- **World No Tobacco Day**; May 31; Pan American Health Organization; www.who.int/tobacco/wntd.en

Honoring Military RTs

If you are a respiratory therapist currently serving your country in the military, *AARC Times* would like to publish a story and photo about your service or deployment.

Please go online at www.AARC.org/go/mm where you will find an online form you can fill out to provide information about your deployment. You can also download your photo there.

Once we receive your information, we may use it to prepare an "RC Currents" story about your service in the military. The AARC honors those who serve, and we would like to share your story with your respiratory care colleagues here and abroad. ■

Early Antibiotic Use Linked to Asthma

Research out of Yale University is clearing up some of the debate over whether antibiotic use in the first six months of life increases the risk for asthma and allergies by age six.

Previous studies have found a link between the two but have been criticized for not taking into account the fact that most antibiotics are given for a respiratory tract infection, which could be an early sign of asthma. These investigators controlled their results for the use of antibiotics for respiratory infections, finding even in children who did not experience respiratory infections, antibiotic use upped the chance the child would be diagnosed with asthma and allergies.

They also controlled the findings to take a family history of asthma into account. In this case, they found children without asthmatic parents were even more likely to develop asthma and allergies if they received antibiotics in the first six months of life than children with asthmatic parents.

The authors attribute the increased risk to the "hygiene hypothesis," which holds that early antibiotic use may suppress the immune system and produce a reduced anti-allergic response that leads to asthma and allergies. The research appeared online in the *American Journal of Epidemiology*. ■

Could Smoking Be on the Way Out?

All the hard work of anti-smoking activists may be paying off. According to a recent Citigroup analysis of the tobacco industry in Great Britain, declining smoking rates could spell a demise of the habit by the middle of this century. The report notes that only one in five Americans smoke today, down from nearly one in four 10 years ago; and even though that number seems to have stagnated for now, if the overall trend continues there could be no smokers left in 30–50 years' time. ■

State Societies

(continued from page 57)

Best Practices Don't End at the Bedside

We've all heard about "best practices" in clinical care. But being the best doesn't end at the bedside, and the AARC House of Delegates (HOD) has found a unique way to extend the concept into the AARC state societies.

"The HOD Affiliate Best Practices Committee was created to seek out best practices within the affiliates and share them with the delegates to take back to their state societies," says Committee Chair Karen Schell, MHSc, RRT-NPS, AE-C. The committee contacts each state asking for best practices and usually ends up with four to six presentations at the summer and winter meetings. From there, the best practices go into the HOD library on the AARC's new social networking site, AARConnect (http://connect.aarc.org), making it easy for delegates to retrieve the information and present it to their own boards of directors when they return home.

Schell says a best practice recently presented by Shantelle Graves, BS, RRT, from Louisiana, is a great example of what the AARC state societies are doing and how they are sharing it with their colleagues across the nation. At a recent HOD meeting, Graves explained how and why the Louisiana Society for Respiratory Care (LSRC) decided to establish a statewide "Hospital of the Year for Respiratory Care" award program, and what the affiliate received in return.

The LSRC developed criteria and categories based on importance for the patient, hospital, and the profession.

A win-win situation

"The society developed criteria and categories based on importance for the patient, hospital, and the profession," says Graves, LSRC president-elect. "Some of these categories are professional development, such as AARC membership and credentials; advanced care and services; patient-targeted care through evidence-based therapist-driven protocols; and appropriate collaboration among physicians and other health care providers." The criteria were circulated among the membership via state meetings and the affiliate website, and both a small hospital and a large hospital winner were selected. The hospital CEOs were notified and invited to attend an awards ceremony.

"The hospitals were awarded a trophy at the state society meeting, where RTs from across the state were in attendance, as well as the CEOs, vice presidents, medical directors, nursing administrators, human resources personnel, marketing representatives, and the respiratory department management," says Graves. "Each award-winning hospital marketed the award for their hospital, which promoted respiratory care through newspaper articles, t-shirts, and television and radio advertisements." It was a win-win situation all around. "The best part is the fact that the LSRC did not spend a dime on this media, and yet our name was mentioned in all of these ads."

Jim Lanoha, RRT, a delegate from Louisiana, says the Hospital of the Year program has proved effective in raising awareness of respiratory care in his state, and he believes it could easily be implemented elsewhere as well, thanks in large part to the HOD's Affiliate Best Practices Committee. "The PowerPoint presentation is available via AARConnect (http://connect.aarc.org) to all affiliate delegates to share with the state societies. I would like to see a mechanism developed to allow states that are willing to participate in, compare, and benchmark similar criteria to that of the LSRC's Hospital of the Year Award." ■

Representatives from Our Lady of the Lake Regional Medical Center in Baton Rouge and University Medical Center of Lafayette model their Hospital of the Year trophies at the LSRC state meeting.

New Members

Welcome to the AARC

U.S. Members

A

Barnes, Amanda, Livingston, Al
Coate, Stacy, Fairhope, Al*
Hartley, Brandi, Moundville, Al
Holley, Mark, McCalla, Al
Hubbert, Rebecca, Cottondale, Al
Kaiser, Crystal, Vance, Al*
Lamey, Thomas, Daphne, Al*
Miller, Sara, Cottondale, Al
Moore, Kimberly, Troy, Al*
Myers, Royce, McCalla, Al*
Norgard, Kelly, Phenix City, Al
Patel, Vidhi, Eufaula, Al*
Ray, Hacienda, Birmingham, Al*

Eldridge, Linda, Cabot, Ar*
Harp, Shauna, Bentonville, Ar*
Henderson, Carrie, Hope, Ar*
Jordan, Chris, Benton, Ar*
Willis, Chelsey, McRae, Ar*

Alger, Toni, Phoenix, Az
Berkheimer, Marcus, Gilbert, Az
Bishop, Jake, Mesa, Az
Braaksma, Robert, Gilbert, Az
Brun, Audra, Peoria, Az
Burke, Jennifer, Gilbert, Az
Buse, Afton, Mesa, Az
Byrd, Julianna, Mesa, Az
Cancino, Alex, Phoenix, Az
Cardona, Richard, Chandler, Az
Chapman, Christine, Glendale, Az*
Chov, Patty, Chandler, Az
Clontz, Justin, Mesa, Az
Coad, Kevin, Mesa, Az
Cross, Kindra, Queen Creek, Az
Darlington, Carrie, Queen Creek, Az
Derosa, Lindsay, Phoenix, Az
Doyle, Tanya, Surprise, Az*
Duke, Amber, Gilbert, Az
Ehlers, Christal, Tempe, Az
Eissfeldt, Susan, Gold Canyon, Az
Erickson, Michelle, Chandler, Az
Figueroa, Angela, Mesa, Az
Fila, Maritza, Tucson, Az*
Finch, Jackie, Mesa, Az
Frazier, Blake, Gilbert, Az
Frazier, Joani, Gilbert, Az
Furman, Cathrine, Chandler, Az
Gauger, Rachel, Queen Creek, Az
German, Erin, Gilbert, Az
Gervais, Matt, Tempe, Az
Gloschat, Erika, Mesa, Az
Granum, Jenna, Mesa, Az
Greenbeck, Lori, Scottsdale, Az
Guizar, Jenna, Tempe, Az
Hadzihasanovic, Amar, Tempe, Az
Hale, Debbie, Phoenix, Az
Hansen Goonis, Laura, Gold Canyon, Az
Haynie, Alan, Gilbert, Az
Holman, Erik, Queen Creek, Az
Horn, Shannon, San Tan Valley, Az
Huckey, Brian, Chandler, Az
Hulin, Bailey, Gilbert, Az
Hussain, Frasha, Chandler, Az
Jachimowicz, Theodore, Gilbert, Az
Kittleson, Denise, Scottsdale, Az
Kloft, Cody, Mesa, Az
Krizan, Lauren, Scottsdale, Az
Lagasca, Rj, Mesa, Az
Letizia, William, Gilbert, Az
Lopez, Elli, San Tan Valley, Az
Lott, Jan, Gilbert, Az
Luna, Maria, Mesa, Az
Malachowsky, Lisa, Phoenix, Az
Manley, Darren, Mesa, Az*
McKay, Robert, Gilbert, Az
Mike, Andes, Maricopa, Az
Mires, Holly, Chandler, Az
Mooar, Chris, Apache Junction, Az
Moorhead, John, Glendale, Az
Neihardt, Brad, Mesa, Az
Nieman, Jeremy, Mesa, Az
O'Dell, Chelsea, Mesa, Az
Olander, Lynn, Chandler, Az
Olds, Julieandi, Apache Junction, Az
Ottmann, Nancy, Scottsdale, Az
Page, Cara, Gilbert, Az
Pattie, Shawn, San Tan Valley, Az
Pearson, Kristen, Mesa, Az
Pemberton, Tyler, Chandler, Az
Perez, Ana, Queen Creek, Az
Pero, Ben, Florence, Az
Petersen, Amanda, Mesa, Az
Petty, Mike, Gilbert, Az
Player, Matthew, Mesa, Az
Porter, Brad, San Tan Valley, Az
Quinones, Valerie, Chandler, Az
Ransom, John, Phoenix, Az*
Robinson, Deanna, Mesa, Az
Rojo, Frank, Yuma, Az*
Ross, Christopher, Avondale, Az*
Sampson, Paula, Chandler, Az
Samuel, Kemeshaw, Mesa, Az
Schaaf, Paul, Mesa, Az
Schnepf, Tyler, Tempe, Az
Schraeder, Lynsey, Chandler, Az
Smith, Kelly, Mesa, Az
Smola, Gary, Glendale, Az
Sokolik, Milica, Chandler, Az
Spann, Jennifer, Chandler, Az
Sydoriak, Jennifer, Mesa, Az
Tagaban, Antonia, Phoenix, Az
Van Tassel, Kristin, Gilbert, Az
Vierra, Bethany, Mesa, Az
Villa Bowles, Sharryl, Mesa, Az
Wright, Jennifer, Mesa, Az
Wright, Misti, Florence, Az

C

Adia, Aniano, Los Angeles, Ca*
Aragon, Josephine, San Diego, Ca
Asai, Scott, Fresno, Ca*
Barnes, Christian, Ventura, Ca*
Benton, Karen, Carlsbad, Ca*
Brinker, Chris, San Diego, Ca
Chan, Dexter, Panorama, Ca*
Conde, Adriana, Palo Alto, Ca*
Conlon, Robin, Los Alamitos, Ca
Cruz, Wilfredo, Stevenson Ranch, Ca
Culley, Christina, Chico, Ca*
Dao, Maryll, San Diego, Ca
Dickens, Carol Lynn, Trabuco Canyon, Ca*
Doan, Tu, Rancho Coldova, Ca
Doon, Savannah, San Diego, Ca*
Edwards, Carlos, Corona, Ca*
Escalante, Jake, Elk Grove, Ca*
French, Steven, Castro Valley, Ca*
Giannelli, Chris, Citrus Heights, Ca
Godinez, Michael, Nipomo, Ca*
Heard, Pam, Palmdale, Ca*
Herriage, Lauren, San Diego, Ca
Higginbotham, Trisha, Riverbank, Ca*
Jackett, Heather, Clayton, Ca
James, Darryl, Modesto, Ca
Kennedy, Brandon, Aliso Viejo, Ca*
Lollis, Kevin, Madera, Ca*
Luva, Martha, San Bernardino, Ca
MacLean, Gina, Chico, Ca*
Mardanzai, Nezam, Antioch, Ca
Moyer, Leah, La Mesa, Ca
Norberg, Melissa, El Cajon, Ca
Olmedo, Jennifer, Calexico, Ca
Ramirez, Justin, Redondo Beach, Ca
Ratsythong, Chan, Merced, Ca*
Rivas, Mary Linda, South Gate, Ca
Rivera, Eric, Corona, Ca*
Roberts, Lance, Apple Valley, Ca*
Roman, Ricardo, San Diego, Ca
Salazar, Ruben, Fresno, Ca*
Sankitts, Karla, West Covina, Ca*
Strong, Heather, Roseville, Ca
Stutzman, Brian, Hilmar, Ca
Taylor, Jared, San Diego, Ca*
Temple, Evelynn, Oakland, Ca*
Tonge, Wallace, Chico, Ca*
Weaver Carnahan, Laura, Redlands, Ca*
White, Anita, Mather, Ca

Aguirre, Eliana, Erie, Co*
Aregi Cox, Roberta, Northglenn, Co*
Baughman, Melissa, Littleton, Co
Campbell, Shannon, Boulder, Co*
Cirilli, Kathleen, Colorado Springs, Co
Daniel, Stacey, Brighton, Co*
Fortier, Lawrence, Pueblo, Co*
Gibson, Tami, Northglenn, Co*
Goodman, Sharolene, Denver, Co*
Hanna, Kelly, Louisville, Co*

These individuals have been approved for membership in the AARC. Any member may object to a new membership by filing a written objection with the Executive Office within 30 days. *Active Members

Johnson, Deanne, Centennial, Co*
Nau, Lauren, Durango, Co*
Parks, Bettina, Denver, Co*
Pierick, Kayla, Arvada, Co*
Rucker, Lee, Aurora, Co*
Stout, Nancy, Littleton, Co
Treadwell, Travis, Aurora, Co*

Bartolomeo, Amy, Oakville, Ct
Correia, Joy, West Hartford, Ct*
Oliva, Lucrecia, Manchester, Ct*

D

Abraham, Kivette, Washington, DC*
Crawford, Valerie, Washington, DC*

Allen, Robert, Selbyville, De
Amaty, Nicole, Seaford, De
Atkinson, Brandy-Rae, Seaford, De
Austin, William, Lewes, De
Belov, Anton, Rehoboth Beach, De
Butler, Brandi, Dover, De
Clark, Leah, Frankford, De
Evans, Jack, Dover, De
Fretts, Olga, Dover, De
Jenkins, Victoria, Lewes, De
Lewis, Kristen, Clayton, De
Lynch, Alana, Laurel, De
Nowell, Bernadette, Greenwood, De
Oakley, Justin, Dagsboro, De
Savoie, Dennis, Frederica, De
Simowitz, Jennifer, Blades, De
Sturgis Fortt, Emma, Dover, De
Thomas, Mary Beth, Lewes, De
Wooten, Syreeta, Dover, De

F

Abass, Awad, Orlando, Fl*
Adams, Richard, Bradenton, Fl*
Alderman, Maisa, South Daytona, Fl*
Allison, Debra, Orange City, Fl*
Arnett, Kelsey, Orlando, Fl*
Barry, Maryann, Tamarac, Fl
Blankenberger, Lynn, Naples, Fl*
Brown, Quenton, Altamonte Springs, Fl*
Corneil, Tiffany, Largo, Fl*
Glasgow, Mark, Gainesville, Fl*
Greer, Doris, Eustis, Fl*
Hale, Ernest, Orange Park, Fl
Halliday, Sean, Largo, Fl
Jacobs, Kathy, Pensacola, Fl*
Johnson, Sandra, Tampa, Fl*
King, Eric, Jacksonville, Fl*
Kirkpatrick, Donald, Orlando, Fl
Kozee, Simone, Land O'Lakes, Fl*
Landmeier, Dennis, Altamonte Springs, Fl*
Lin, Yowwu, Winter Park, Fl*
Matthews, Michelle, Niceville, Fl*
Moore, Vicki, Gainesville, Fl
Nelson, Debra, Pensacola, Fl*
Nguyen, James, Jacksonville, Fl
Padin, Joseba, Royal Palm Beach, Fl*
Padot, Wendy, Fanning Springs, Fl*
Paglia, Lee Ann, Lake Mary, Fl*
Phelan, Janel, Jacksonville, Fl*
Pierre Jean, Frantz, Palm Coast, Fl*
Quinones, Melissa, Deltona, Fl*
Reese, Katrina, Grand Ridge, Fl
Richardson Reeves, Rikki, Ocala, Fl*
Rose, Pamela, Jacksonville, Fl*
Ross, Kevin, Gainesville, Fl*
Scatliffe, Claudette, Miami, Fl*
Sepulveda, Rafael, Miami, Fl*
Spann, Paula, Lake Mary, Fl*
Unruh, Deborah, Lehigh Acres, Fl*
Uribe, Donna, Port Salerno, Fl*
Willsey, Moria, Sorrento, Fl*
Wilmer, Renee, Gainesville, Fl*

G

Abubaker, Arafat, Lawrenceville, Ga
Adeyelu, James, Savannah, Ga
Anderton, Colleen, Lawrenceville, Ga
Averett, Connie, Macon, Ga*
Bangura, Edward, Stone Mountain, Ga
Bell, Audrey, Covington, Ga*
Brown, Tegen, Tallapoosa, Ga
Burks, Shasta, Columbus, Ga
Coleman, Karen, Braselton, Ga*
Crowe, Alice, Cartersville, Ga*
Delez, Alan, Savannah, Ga
Delva, Yveline, Kennesaw, Ga
Do, Cat Minh, Savannah, Ga
Evans, Charlie, Cataula, Ga
Fields, Connie, Ellenwood, Ga*
Frost, Krystle, Springfield, Ga
Gebreyohanis, Dawite, Clarkston, Ga
Gorgor, Yei, Decatur, Ga*
Ham, Anita, Kingsland, Ga
Haralson, Christa, Waycross, Ga
Hart, Maxine, Guyton, Ga*
Harter, Jodi, Acworth, Ga*
Hassan, Sandra, Decatur, Ga*
Heisner, Sandra, Columbus, Ga
Higgins, Patrick, Athens, Ga
Hilaire, Mews, Lawrenceville, Ga*
Humphrey, Joel, Savannah, Ga
James, Lindsay, Waycross, Ga*
Jenkins, Ke'andra, Macon, Ga
Jeune, Marie, Fort Benning, Ga
Karim, Nada, Marietta, Ga*
Langiotti, Heather, Lagrange, Ga
Lanier, Marlee, Metter, Ga
Lee, Joseph, Forsyth, Ga*
Lee, Kerri, Forsyth, Ga*
Mack, Antonio, Lawrenceville, Ga
Mayo, Lourdes, Columbus, Ga
Mazzola, Dana, Hamilton, Ga
McCracken, Alicia, Bogart, Ga*
Mengistu, Kefeyalew, Savannah, Ga
Mese, Amy, Savannah, Ga
Mitchell, Stephanie, Odum, Ga
Moore, Lindy, West Point, Ga
Morgan, Cindy, Valdosta, Ga*
Morris, Laquisha, Savannah, Ga
Naymick, Barbara, Calhoun, Ga*
Obakin, Florence, Atlanta, Ga
Patel, Shivani, Suwanee, Ga
Patterson, Jasmine, Atlanta, Ga*
Pierre Louis, Venel, Lawrenceville, Ga
Porter, Tamara Jo, Savannah, Ga
Powell, Amy, Rome, Ga*
Ray, Ashley, Savannah, Ga
Reid, James, Richmond Hill, Ga*
Sapp, Kali Megan, Pembroke, Ga
Scott, Amylia, Brooks, Ga*
Shibeshi, Merho, Savannah, Ga
Shirley, Stacie, Meansville, Ga
Smith, Ora, Lithonia, Ga*
Stanley, Loretta, Claxton, Ga*
Starling, Lucinda, Athens, Ga
Stearnes, Megan, Marietta, Ga
Teklea, Mussie, Savannah, Ga
Tesfamariam, Selamawit, Lilburn, Ga
Wells, Kelley, Columbus, Ga
Wells, Travis, Atlanta, Ga
White, Kelli, Fairburn, Ga*
Yonis, Nimo, Savannah, Ga
Young, Rebecca, Savannah, Ga

I

Johnson, Cassaundra, Windsor Heights, Ia
Reynolds, Robin, Lawton, Ia*

Allen, Scott, Rexburg, Id
Amaro, Brian, Boise, Id
Andersen, Nicholas, Boise, Id
Beagley, Levi, Nampa, Id
Boyer, Steve, Boise, Id
Brower, Debbie, Boise, Id
Crawford, Danielle, Emmett, Id
Dahle, Andrea, Burley, Id*
Dayhoff, Jennifer, Boise, Id
Draney, Melissa, Boise, Id
Gregg, Jon, Meridian, Id
Harrod, Dione, Meridian, Id
Holland, Karen, Boise, Id
Lee, Mark, Boise, Id
Lindberg, Randall, Meridian, Id
Loranger, Sam, Boise, Id
Lovsey, Lana, Kuna, Id
McDonough, Stacie, Nampa, Id
Neville, Amber, Boise, Id
Palmer, Isaac, Boise, Id
Palominos, Susan, Caldwell, Id
Petit, Lionel, Caldwell, Id
Price, Cindy, Kimberly, Id
Quimby, Shari, Boise, Id
Regent, Nicole, Eagle, Id
Roberts, Jason, Nampa, Id
Rough, Brad, Boise, Id
Semrau, Steven, Bosie, Id
Seward, Deborah, Kimberly, Id*
Thomas, Chelsie, Boise, Id
Thompson, Ginger, Caldwell, Id
Vandereyken, Eric, Bosie, Id
Ward, Jody, Boise, Id

Acosta, Rolando, Champaign, Il*
Andrews, Linda, Roxana, Il*
Bakiewicz, Dorota, Hickory Hills, Il
Beaird, Katherine, Pekin, Il*
Dent, Courtney, North Aurora, Il*
Hessee Curtner, Julie, Mattoon, Il*
Kolodziej, Karen, Chicago, Il*
Okolo, Dennis, Chicago, Il
Pattee, Beth, Orland Park, Il
Rothman, Marc, Oaklawn, Il*
Sadler, Timothy, Freeport, Il*
Staskewich, Robert, Winthrop Harbor, Il*

Brown, Tia, Jeffersonville, In
Collett, Nancy, Sheridan, In*
Conrad, Lindsey, Clarksville, In
Durbin, Karen, Greenville, In*
Hofstetter, Kevin, Bluffton, In*
McKenzie, Cathy, Elkhart, In
Mullins, Pamela, Indianapolis, In*
Pearson, Debra, Frankfort, In*
Pruitt, Larissa, Greenville, In
Sullivan, Dana, Madison, In
Velasquez, Belinda, Muncie, In

K

Austin, Arlette, Liberal, Ks
Coffman, Glenn, Wichita, Ks*
Johnson, Klay, Elkhart, Ks
Kollman, Joannie, Catharine, Ks*
Lisle, Nicole, Olathe, Ks*
Mages, Nathan, Garden City, Ks
McMurphy, Charlotta, Garden City, Ks

Morales, Brenda, Garden City, Ks
Partlow, Barry, Desoto, Ks
Quinonez, Irene, Garden City, Ks
Ryman, Jerry, Elkhart, Ks
Sawin, Jamie, Washington, Ks
Thompson, Richard, Overland Park, Ks
Wetter, Jessica, Riley, Ks*
Wiltshire, Lakeisha, Dodge City, Ks
Yoder, Kimberlee, Roeland Park, Ks*

Aliaga, Manuel, Louisville, Ky
Bell, Lauren, Louisville, Ky
Boykin, Pamela, Mt Washington, Ky*
Clark, Jennifer, Stearns, Ky*
Curran, Shannon, Louisville, Ky
Dearing, Timothy, Louisville, Ky
Douglas, Yakeisha, Louisville, Ky
Fey, Rebekah, Louisville, Ky
Hacker, Brian, Calvin, Ky*
Hayes, Laura, Louisville, Ky
Howard, Steve, Owensboro, Ky*
Kalwat, Jason, Louisville, Ky
Katnis, Jenna, Louisville, Ky
May, Jessica, Canada, Ky*
McHendry, Carolyn, Independence, Ky*
Miller, Paige, Louisville, Ky
Payne, Lauren, Bedford, Ky
Smith, Teresa, Shepherdsville, Ky
Thach, Sophia, Louisville, Ky
Walker, Joanne, Louisville, Ky
Whitlock, Matthew, Louisville, Ky

L

Fleming, Melanie, Sterlington, La
Herr, Paula, Longville, La*
Langley, Danielle, Elton, La
Lowery, Kristal, Haughton, La
Matthieu, Misha, Lafayette, La
Morrison, Vanessa, Lafayette, La
Parrott, Megan, Mamou, La
Richard, Candace, Lawtell, La
Ridgley, Rachele, Metairie, La*
Rouse, Andrew, Alexandria, La*
Seraille, Geneva, Crowley, La
Singh, Amritpal, Eunice, La
Stelly, Sarah, Crowley, La
Tassin, Dionne, Ponchatoula, La*
Thompson, Kimberly, Alexandria, La
Wimberly, Patricia, Lake Charles, La*
Yeagley, Derek, Oberlin, La

M

Bonanno, Steven, Raynham, Ma
Martin, Tom, Marlborough, Ma*
Oleksak, Jenna, Westfield, Ma*
Omoregbee, Joshua, Hyde Park, Ma*
Xia, Qin, Malden, Ma*

Bass-McDonald, Elana, Capitol Heights, Md*
Bearinger, Matthew, Glen Burnie, Md*
Blumenthal, Judy, College Park, Md*
Brecht, Louis, Mardela Springs, Md*
Callis, Bryan, Oakland, Md*
Caron, Noelle, Odenton, Md*
Haskins, Jennifer, Frederick, Md
Mathewos, Tsegehanna, Kensington, Md
Pega, Bryan, Fort Washington, Md*
Sadik, Mssie, Columbia, Md*

Bartman, April, Canaan, Me
Desrosiers, Dakasha, Monmouth, Me*
Foley, Kathryn, Portland, Me*
Hay, Norma, South Portland, Me*

Aarup, Pamela, Laingsburg, Mi*
Adams, Michael, Erie, Mi
Andrews, Renee, Ida, Mi
Arntz, Jennifer, Jackson, Mi
Bales, Joanna, Flint, Mi
Basile, Erica, Taylor, Mi
Bell, Bobbie, Durand, Mi
Benner, Sean, Davison, Mi
Bernas, Stephanie, Brownstown, Mi
Birmingham, Melissa, Goodrich, Mi
Blosser, Jonathan, Monroe, Mi
Bly, Misty, Temperance, Mi
Boggess, Terrance, White Lake, Mi
Boguszewicz, Matthew, Wyandotte, Mi
Bonawitt, Richard, Temperance, Mi
Brady, Joie, Lincoln Park, Mi
Cantrell, Nicole, Carleton, Mi
Carter, Melanie, Livonia, Mi
Cary, Stacy, Clarkston, Mi*
Chapman, Jessica, Taylor, Mi
Charlton, Julie, Gibraltar, Mi
Chen, Liang, Brownstown, Mi
Ciotta, Erica, Livonia, Mi
Copeland, Latiese, Detroit, Mi
Crandall, Carolyn, Jackson, Mi
Cuddihy, Billy, Ypsilanti, Mi
Desser, Jaclyn, Monroe, Mi
Dillard, Lakia, Mount Morris, Mi
Dishaw, Michelle, Lansing, Mi
Duvall, Bethany, Monroe, Mi
Ellison, Andrea, Brooklyn, Mi
Ellwood, Carrie, Rochester, Mi*
Faist, Lorenda, Pleasant Lake, Mi
Faulkner, Jennifer, Flint, Mi
Finegan, Linda, Litchfield, Mi
Fisher, Erica, Traverse City, Mi
Fletcher, Brian, Jackson, Mi
Forbes, Travis, North Adams, Mi
Foskett, Tristen, Flint, Mi
Frederica, Collett, Rochester Hills, Mi*
Gilbert, Valerie, South Lyon, Mi*
Green, David, Lapeer, Mi
Hannah, Benjimin, Owosso, Mi
Harrington, Amanda, Genesee, Mi
Harris, Brendon, Jackson, Mi
Hart, Ashley, Clayton, Mi
Hawker, Rebecca, Fenton, Mi
Hintz, Angela, Corunna, Mi
Howell, Erin, Reading, Mi
Hutchinson, Kelly, Adrian, Mi
Ingersoll, Mary Ellen, Lowell, Mi*
Johnson, Jillian, Jerome, Mi
Johnson, Kellie, Flint, Mi*
Kimball, Timothy, Hudson, Mi
Kroll, Ruben, Adrian, Mi
Leitz, Amber, Gowen, Mi*
Lewis, Nathan, Jackson, Mi
Lopiccola, Sarah, Rochester Hills, Mi
Love, Latisha, Flint, Mi
Lutzen, Spring, Saint Joseph, Mi*
Maat, Chuck, Grass Lake, Mi
Mariano, Tanya, Saint Clair Shores, Mi*
Martin, Tammy, Commerce Township, Mi
Mattiello, Judith, Ann Arbor, Mi
McCloe, Lara, Brooklyn, Mi
Mende, Michelle, St Clair Shores, Mi
Milton, Yolandes, Flint, Mi
Morningstar, Lora, Addison, Mi
Palmer, Sara, Burton, Mi
Pollard, Cheryl, Warren, Mi*
Proffitt, Luann, Jerome, Mi
Raser, Timothy, Jackson, Mi
Repasy, Scott, Jackson, Mi
Roberts, April, Horton, Mi
Sheret, Peter, Marquette, Mi*
Slabaugh, Kyle, Chesterfield, Mi*
Stone, Denise, Lansing, Mi

Strachn, Carl, Jackson, Mi
Studt, Donald, Muskegon, Mi*
Taylor, Heidi, Ypsilanti, Mi
Temple, Mark, Muskegon, Mi*
Torres, Laura, Adrian, Mi
Vanlangevelde, Kari, Waterford, Mi*
Wasper, Adam, Jackson, Mi
Weasel, Kellie, Blissfield, Mi
Whittaker, Tiffany, Montrose, Mi
Wood, Rachelle, Flint, Mi
Yorks, Brandon, Grand Blanc, Mi

Cossette, Ryan, Saint Paul, Mn*
Cota, Ashley, Fisher, Mn*
Molas, Fatima, Columbia Heights, Mn*
Orr, Sandra, New Ulm, Mn*
Thompson, Christy, East Grand Forks, Mn

Anderson, Susan, Excelsior Springs, Mo*
Barnhart, Bryan, Union, Mo*
Bourn, Stacy, Kansas City, Mo*
Fritz, Robert, Kimberling City, Mo*
Frost, Greg, Wentzville, Mo
Hamilton, Casandra, Saint James, Mo*
Keel, Kathryn, Excelsior Springs, Mo*
Lapierre, Benjamin, Saint Louis, Mo*
Minter, Kari, Kansas City, Mo*
Mize, Jef, Kansas City, Mo*
Patterson, Lynda, Lees Summit, Mo*
Schwab, Kellie, Excelsior Springs, Mo*
Swaters, Leslie, Lees Summit, Mo*
Thatcher, William, Cape Girardeau, Mo*
White, Frederick, Blue Springs, Mo*

Alvarado, Rachel, Biloxi, Ms*
Arterberry, Gloria, Jackson, Ms*
Cagle, Bonnie, Hattiesburg, Ms*
Herchenhahn, Gina, Petal, Ms*

Ziska, Nolly, Billings, Mt*

N

Baylon, Francis, Durham, NC*
Church, Brian, Wilkesboro, NC
Crowder, Gregory, Monroe, NC*
Gragg, Joann, Arden, NC*
Johnston, Paula, China Grove, NC*
March, Kathy, Raleigh, NC*
Ney, Richard, Winston Salem, NC*
Nowrey, Kelly, Belhaven, NC*
Phillips, Lloyd, Raleigh, NC*
Searcy, Frances, Fletcher, NC*
Smith, Sean, Durham, NC
Williamson, Jennifer, Greensboro, NC*
Wodziak, Frank, Raleigh, NC

Rasmusson, Carrissa, Grand Forks, ND*

Willis, Sondra, Gretna, Ne*

MacNeil, Bruce, Nashua, NH*
Stone, Sarah, Alstead, NH*

Dentley, Cheryl, Irvington, NJ*
Fabiani, Michael, Gibbstown, NJ*
Fletcher, Alii, Tinton Falls, NJ*
Kavaler, Michael, Manalapan, NJ*
Moore, Aneesah, Newark, NJ*
Noguera, Mary, Franklin, NJ*
Okparaeke, Princewill, Mount Laurel, NJ*
Raschilla, Mary, Berlin, NJ*
Rios, Robert, Mantua, NJ*

Addy, Sarah, Rio Rancho, NM*
Baeza, Yvette, Mesquite, NM*

Duran, Celena, Las Cruces, NM*
Taylor, John, Albuquerque, NM*

Bishop, Stephanie, Sparks, Nv
Dautrich, Dorla, Henerson, Nv*
Etue, John, North Las Vegas, Nv
Greene, Alita, Carson City, Nv*
Haley, Eileen, Las Vegas, Nv*
Liggins, Kamala, N Las Vegas, Nv*
Medina, Bonnie, Henderson, Nv*
Nevarez, Magalys, Las Vegas, Nv*
Steljes, Darlene, Las Vegas, Nv*

Almonte, Shailyn, Central Islip, NY*
Boice, Tim, Rochester, NY*
Bruzzese, Natale, Brooklyn, NY*
Charles, Medhy, Brooklyn, NY*
Chetram, Vaughn, Jamaica, NY*
Chowdhury, Mohammed, Jamaica Estates, NY*
Chung, Miranda, Elmhurst, NY*
Cornish, Florence, Port Chester, NY*
Douglas, Karen, Bronx, NY*
Funke, Patti, South New Berlin, NY*
Gerace, Michelle, E Syracuse, NY*
Henry, Jason, Troy, NY*
Kramer, Viviana, Waterford, NY*
Lydon, Darren, Delmar, NY*
Martin, Lory, Syracuse, NY
Nistor, Darlene, Hamburg, NY*
Olivencia, Barbara, New York, NY*
Oneal, Julie, Franklinville, NY*
Osmanaj, Anjeta, Astoria, NY*
Rogers, Judi, Delmar, NY*
Thomas, Priya, Mineola, NY
Tomasso, Bernadette, Churchville, NY*
Topgyal, Tsering, Brooklyn, NY*
Wilson, Jeanne, Albany, NY*

O

Barcroft, Cody, Mansfield, Oh
Barker, Kendra, Ostrander, Oh
Blank, Michael, Galloway, Oh
Boie, Catherine, Dayton, Oh
Caisse, Jessica, Lancaster, Oh
Caronis, Christy, Logan, Oh*
Crofutt, Amanda, Ashland, Oh
Crowl, Chloe, Mansfield, Oh
Davis, Grover, Cincinnati, Oh*
Dewalt, Kari, Canton, Oh
Doria, Jeanette, Akron, Oh
Eibon, Karen, Amherst, Oh*
Ellis, Amanda, Columbus, Oh
Estep, Bethani, Reynoldsburg, Oh
Freije, Karis, New Bremen, Oh*
Gounder, Sukumaran, Dublin, Oh
Guice, Mecah, Pickerington, Oh
Haught, Donald, Ashland, Oh
Hayes, Aleta, Mansfield, Oh
Hayes, Ray, Galloway, Oh
Hightower, Ashley, Marion, Oh
Hoffer, Lauren, Crestline, Oh
Holland, Janice, Louisville, Oh*
Holloway, Dustin, Canal Winchester, Oh
Hughes, Theresa, Toledo, Oh*
Humble, Diana, Columbus, Oh*
Hunnell, Lucas, Columbus, Oh
Jaudon, Joseph, Elyria, Oh
Jenkins, Paula, Delaware, Oh
Kelly, Kristin, Shelby, Oh
Kilgore, Christa, Bellville, Oh
Knuckles, Ashley, Mansfield, Oh
Konnerth, Marjorie, Vermilion, Oh*
Korbas, Bradley, Shelby, Oh
Lane, Karreen, Columbus, Oh
Llewellyn, Jane, Albany, Oh*
Maoudda, Youssef, Columbus, Oh
Matteson, Valerie, Richwood, Oh
McClure, Kimberly, Ashland, Oh
McIntosh, Michelle, Mansfield, Oh
Mensah, Anthony, Columbus, Oh
Miller, Tony, Columbus, Oh
Monhollen, Marjorie, Walbridge, Oh*
Muse, Ahmed, Hilliard, Oh
Musse, Mohamed, Westerville, Oh
Myers, Matt, Martinsvilee, Oh*
Nedbalski, Mary Lou, Brook Park, Oh*
Norris, Sandra, Cleveland, Oh*
Patrick, Ashley, Mansfield, Oh
Paulus, Zackary, Grove City, Oh
Saunder, Melissa, Bellville, Oh
Schlievert, Julie, Bluffton, Oh
Selbee, Elise, Rittman, Oh
Shelton, Jamie, East Cleveland, Oh*
Smart, Hannah, Ashland, Oh
Smith, Andrea, Mogadore, Oh
Splittstoesser, Mark, Powell, Oh
Sponcil, Christina, Reynoldsburg, Oh
Stephens, Jessica, Columbus, Oh
Taylor, Heather, Crestline, Oh
Towett, Erika, Galion, Oh
Vandiver, J'me, Columbus, Oh
Weaver, Leslie, Vermilion, Oh*
Wigal, Trisha, Reynoldsburg, Oh
Wooten, Sheila, Lockbourne, Oh
Wyman, Terri, Dayton, Oh

Hayward, Laura, Fairland, Ok*
Hestily, Tara, Durant, Ok*

Amburn, Jennifer, Harrisburg, Or
Anderson, Katie, Eugene, Or
Baker, Gretchen, Eugene, Or
Bloodworth, Amy, Hood River, Or
Boeckman, Jackie, Eugene, Or*
Bonaduce, Christine, Gresham, Or
Brauer, William, Eugene, Or
Carreira, Karen, Milwaukie, Or
Castaneda, Nancy, Hillsboro, Or*
Chiu-Huynh, Anita, Portland, Or*
Corner, Tiffany, Eugene, Or
Dean, Denise, Westfir, Or*
Eley, Jessica, Springfield, Or
Franks, Tracy, Junction City, Or
Grasty, Stacie, Redmond, Or*
Gwynne, Joe, West Linn, Or
Khalsa, Siriwhaguru, Veneta, Or
Kirschbaum, Mary, Portland, Or*
Knight, Ryan, Boring, Or
Kromer, Danice, Portland, Or*
Kuecker, Matt, Springfield, Or
Larson, Brooke, Eugene, Or
Lewis, Colette, Gresham, Or
Lindsay, Kasey, Eugene, Or
Maddron, Aaron, Eugene, Or
Maida, Rachel, Eugene, Or
Martinez, Arron, Tigard, Or
Mathews, Susan, Gresham, Or
Moore, Elissa, Springfield, Or*
Myers, Jennifer, Springfield, Or
Parker, Lindsey, Salem, Or*
Serrano, Javier, Nyssa, Or
Snocker, Frank, Eugene, Or
Sviridyuk, Tatyana, Troutdale, Or
Watson, Julie, Springfield, Or

P

Ahrens, Shannon, York, Pa*
Angiolelli, Robert, Reynoldsville, Pa*
Ashok, Amal, Drexel Hill, Pa*
Bair, Carrie, Johnstown, Pa*
Barnett, Jennifer, Mechanicsburg, Pa
Carney, John, Irwin, Pa*
Chaffee, Susan, Industry, Pa*
Cioccio, Rebecca, Pittsburgh, Pa*
Coan, Thomas, Glen Mills, Pa
Darabant, Glenn, Waynesburg, Pa*
Davis, Varun, Philadelphia, Pa*
Dice, Laura, Greencastle, Pa*
Ewing, Karen, Philadelphia, Pa*
Finley, Megan, Lancaster, Pa
Gibboney, Tracey, Dover, Pa*
Guinther, Devon, West Chester, Pa*
Harter, Eric, East Norriton, Pa*
Hartz, Steven, Pittsburgh, Pa*
Jarick, Nathan, White Haven, Pa*
Jones, Holly, Coatesville, Pa*
Karr, Jamie, Washington, Pa*
Kellison, Karrie, Wellsville, Pa
Kolp, Nicole, Marietta, Pa
Lamb, Maureen, West Chester, Pa*
Lisanti, Michael, Pittsburgh, Pa*
Lovell, Daniel, Fleetwood, Pa
Mahoney, Deborah, Saegertown, Pa*
McBride, Stephen, Perkasie, Pa*
Murray, Sharon, Coatesville, Pa*
Nelson, Luquona, Bloomsburg, Pa*
Paul, Annetta, Greensburg, Pa*
Reneker, Yvonne, Dillsburg, Pa
Rengel, Lisa, Gibsonia, Pa*
Rippel, Megan, Red Lion, Pa*
Robinson, Amy, West Chester, Pa*
Shklovin, Marina, Hollan, Pa*
Stephens, Michael, Greensburg, Pa*
Trask, Nicole, Littlestown, Pa
Wegrzynowicz, Sara, Mountain Top, Pa*
Wiedeman, David, Peach Bottom, Pa*
Zeek, Francine, Cheltenham, Pa*
Ziegler, Patti Jo, Cochranville, Pa*

Medina, Lillian, Bayamon, PR*
Molina-Rivera, Effie, San Juan, PR*
Osorio, Sheila, Loiza, PR
Ramos, Roberto, Gurabo, PR*

S

Alls, Kimberly, North Charleston, SC
Ball, Misty, Boiling Springs, SC*
Barlow, Jamye, Ladson, SC*
Burden, Sharon, Saluda, SC*
Errington, Terri, Simpsonville, SC*
Farris, Catherine, Tamassee, SC*
Fogarty, Jennifer, Greenville, SC*
Frattaroli, Amy, Irmo, SC*
Fuzy, Nancy, Clemson, SC
Gaffney, Jamie, Chesnee, SC*
Hanley, Timothy, N Charleston, SC*
Latimer, Tarisha, Greenwood, SC*
Lowrey, Tom, Summerville, SC*
McGrier, Cynthia, Greenwood, SC*
Oser, Tina, West Columbia, SC
Peace, Donald, Anderson, SC*
Pinckney, William, Hilton Head Island, SC
Porter, Karla, Boiling Springs, SC*
Powell, Dana, Leesville, SC
Renew, Elizabeth, Lexington, SC
Scott, Tesha, Florence, SC*
Smith, Molly, Hopkins, SC

T

Bowden, Terri, Jamestown, Tn*
Brooks, Lamont, Memphis, Tn*
Creswell, Chet, Lebanon, Tn
Gautz, Falin, Hendersonville, Tn

Hancock, Sheila, Jamestown, Tn*
Hughes, Christina, White House, Tn
Martin, Sarah, Bartlett, Tn*
Miller, Jeffrey, Greeneville, Tn*
Norvell, Brittany, Fairview, Tn
Patterson, Timothy, Lebanon, Tn
Randolph, Justin, Cottontown, Tn
Smith, William, Knoxville, Tn*
Sneyd, Joseph, Unicoi, Tn

Bain, Leslie, Kyle, Tx*
Balli, Cristina A, San Antonio, Tx
Barnett, Chris, Kingwood, Tx*
Berend, Andrea, Windthorst, Tx*
Bhusal, Sanjaya, McAllen, Tx
Brown, Tammy, Port Lavaca, Tx*
Cram, Joseph, Rockwall, Tx*
Fennell, Richard, Lufkin, Tx*
Gabel, Jaime, Naples, Tx*
Hagenbuch, Sheryl, Midlothian, Tx*
Hammond, Judy, Arlington, Tx*
Houston, Nikki, Dallas, Tx*
Hughes, Elaine, Arlington, Tx
Jahn, Amy, Pearland, Tx*
Ma, Jennifer, Spring, Tx*
Manly, Dallas, Sunnyvale, Tx*
Moreno, Manuel, Mission, Tx*
Nevels, Wendell, San Antonio, Tx*
Olivarez, Lydia, Corpus Christi, Tx*
Papadimitriou, Isabelle Hilton, Irving, Tx*
Rajtak, Lilianna, Pearland, Tx*
Silva, Gabriela, El Paso, Tx*
Starr, Janeth, Temple, Tx*
Walker, Wonda, Desoto, Tx*
Zachariah, Ani, Lewisville, Tx*

U

Crawford, Kelly, Ogden, Ut*
Mills, Jonathan, Sandy, Ut
Pretlow, Heather, Salt Lake City, Ut*
Stevensn, Lesley, Pleasant Grove, Ut
Thomas, Kyle, Orem, Ut

V

Anderson, Angelia, Christansburg, Va*
Baines, Septabra, Richmond, Va
Bedward, Cornel, Richmond, Va
Bennett, Jonathan, Danville, Va
Benton Mayo, Ada, Richmond, Va*
Booker, Allen, Alexandria, Va*
Bowe, Cliffton, Petersburg, Va
Brown, Kari, Stuarts Draft, Va
Brown, Kelley, Alexandria, Va*
Carey, Kassaundra, Evington, Va*
Carter, Sarah, Fredericksburg, Va
Carter, Shannon, Kenbridge, Va
Carthan, Shamieka, Virginia Beach, Va*
Chenault, Erica, Richmond, Va
Cockman, Terri, Ringgold, Va
Coles, Tyeshia, Richmond, Va
Colon, Eddie, Chesapeake, Va*
Dever, Ruth, Midlothian, Va*
Dumont, Michelle, Charlottesville, Va*
Evans, Michelle, Richmond, Va
Ferrell, Chereka, Richmond, Va
Garrett, Sheena, Dry Fork, Va
Gebreyesus, Yonas, Richmond, Va
Giovannetti, Jessica, Mechanicsville, Va
Gordon, Ashley, Harrisonburg, Va
Hamlin, Trena, Danville, Va
Hansen, Renee, Mechanicsville, Va
Hardy, Jerry, Madison Heights, Va*
Harrison, Brooke, Wilsons, Va
Housh, Wendy, Elkton, Va
Jackson, Darleesa, Richmond, Va
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Calendar of Events

AARC & State Society Programs

March 28–30
Dearborn, MI
MSRC Spring Conference and VAP Workshop
Contact www.MichiganRC.org

April 14–15
Cocoa Beach, FL
Space Coast Cardiopulmonary Conference
Contact Dennis Willerth at (866) 534-6172 or www.fsrc.org

April 14–15
King of Prussia, PA
Eastern Regional Conference
Contact Tom Lamphere at (215) 687-2904 or www.psrc.net

April 14–15
Park City, UT
UTAHSRC's "Reach Out"
Contact Kim Bennion at (801) 347-1269 or www.utahsrc.org

April 18–19
Grand Forks, ND
NDSRC Meeting and Conference
Contact Jana Becker at (701) 780-5531 or www.ndsrc.org

April 20–22
Ames, IA
Preparing for the Future: Moving Forward Together as a Team
Contact Rebecca Poe at www.iasrc.org

April 20-22
Missoula, MT
Montana Society of Respiratory Care
Contact Casey Phalen at (406) 853-3284 or www.msrcmt.com

April 25–27
Wisconsin Dells, WI
North Regional Respiratory Care Conference and VAP Workshop
Contact www.wsrconline.org

April 27–29
Baton Rouge, LA
41st LSRC Annual Education Meeting
Contact Raymnond Pisani at (985) 380-4517 or www.lsrc.net

May 3–4
Plantsville, CT
CTSRC Super Symposium XXIX
Contact Susan Albino at (203) 527-8317 or www.ctsrc.org

May 4–6
Breckenridge, CO
CSRC State Conference and VAP Workshop
Contact Mindy Lemons at (303) 765-3854 or www.colosrc.org

May 4–6
Osage Beach, MO
40th Annual MSRC Conference and Business Meeting
Contact Lisa Newcomer at (573) 331-5191 or www.mosrcstatemeetings.com

May 9–11
San Diego, CA
43rd Annual CSRC Convention
Contact Abbie Rosenberg at (888) 730-CSRC or www.csrc.org

May 21–22
Anchorage, AK
ASRC Annual Educational Conference
Contact Liz Collins or Paul Drake at (907) 714-4438

May 23–25
Virginia Beach, VA
VSRC Annual Spring Beach Symposium and VAP Workshop
Contact www.vsrc.org

June 1–3
Oak Brook Terrace, IL
ISRC 43rd Conference and Exposition
Contact www.isrc.org or Kelli DeBerry at (708) 423-8888

July 18–20 (Monday–Wednesday)
Vail, CO
AARC Summer Forum
Contact AARC, (972) 243-2272, www.aarc.org/education/meetings

August 16–18
Prescott, AZ
ASRC's 45th Annual AzSRC Conference
Contact www.azsrc.org or Amy.Bardin@yahoo.com, (623) 205-4930

October 23–29
Respiratory Care Week
Contact AARC, (972) 243-2272, www.aarc.org

October 26
Lung Health Day
Contact AARC, (972) 243-2272, www.aarc.org

November 5–8
Tampa, FL
AARC International Respiratory Congress
Contact AARC, (972) 243-2272, www.aarc.org/education/meetings

Submissions for the next available issue are due April 24.

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

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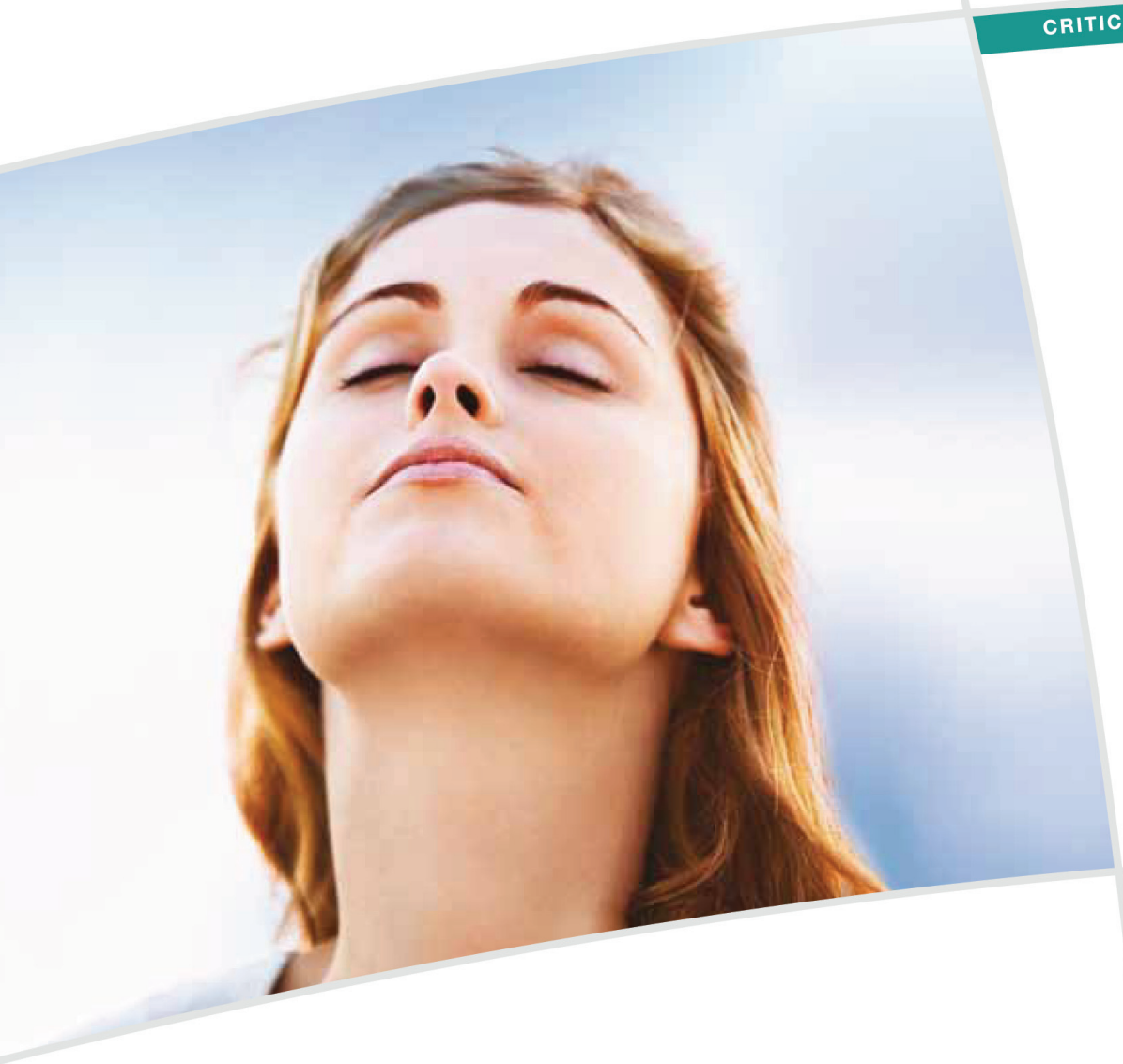

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1. Hasani A, Chapman TH, McCool D, Smith RE, Dilworth JP, Agnew JE. Domiciliary humidification improves lung mucociliary clearance in patients with bronchiectasis. Chron Respir Dis 2008; 5: 81-6
2. Rea H, McAuley S, Jayaram L, Garrett J, Hockey H, Storey L, O'Donnell G, Haru L, Payton M, O'Donnell K. The clinical utility of long-term humidification therapy in chronic airway disease. Respir Med 2010; 104: 525-533

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